

Issues in Clinical Child Psychology

Steven W. Evans
Julie Sarno Owens
Catherine P. Bradshaw
Mark D. Weist *Editors*

Handbook of School Mental Health


Innovations in Science and Practice

Third Edition

 Springer

Issues in Clinical Child Psychology

Series Editor

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The *Issues in Clinical Child Psychology* book series represents a broad spectrum of professional psychology books, integrating clinical psychology with the development of children, adolescents, and their families and developmental psychopathology. The age coverage ranges from infancy to childhood to adolescence. Populations of interest include normally developing children and those exhibiting problems in developmental, behavioral, psychological, health, and academic realms. Settings include schools, mental health clinics, independent practice, pediatric offices and centers, and juvenile facilities. Topics of interest include developmental psychopathology, externalizing and internalizing disorders, assessment and diagnosis, interventions and treatments, consultation, prevention, school mental health, normal and abnormal development, family psychology, service delivery, diversity and cultural differences, and ethical and legal issues in clinical practice and research.

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Steve

To my late parents Mel and Donna who gave me the foundation upon which everything else followed.

Julie

Dedicated to the educators, students, and families who make our research possible.

Catherine

I would like to dedicate this book to my daughter, Sophia Lucille McCaughey, who has gracefully navigated a tough few years; despite that, she has continued to be a source of support, strength, and inspiration to me regarding the importance of promoting balance and mental health – both at home and in my work.

Mark

For Amber.

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Part I

**State of the Science for School Mental
Health Interventions**



How Do We Know If a School Mental Health Intervention Is Effective: An Introduction to the Section on the State of the Science for School Mental Health Interventions

Steven W. Evans and R. Elizabeth Capps

There are a variety of reasons why students are provided with interventions for emotional and behavioral problems at school. Some of the reasons are related to distress. Very frequently the distress is that of a teacher. A student's misbehavior can make it very difficult for a teacher to teach and if the teacher's attempts to manage the student's behavior fail, teachers often become frustrated and refer a student for services. Parents may follow a similar path to requesting services stemming from their frustration trying to effectively parent a child. Most often these caretakers (parents and teachers) want the student to be successful but are frustrated in their attempts to help the child achieve that goal. A student's own distress can also lead to the initiation of interventions. Self-referrals tend to be more common in secondary schools than elementary schools but relieving a student's distress may also be an intention of services. This is most common when the presenting problems are related to depression, anxiety, victimization, and trauma. These common scenarios suggest two purposes for intervening. The first involves helping the student be

successful and the second involves reducing the distress of the student, teachers, and parents.

Many times, achieving these two goals can be accomplished fairly easily if one is focused on achieving short-term success and immediate reduction of distress for all involved. For example, let us consider the situation of Greg who is in seventh grade and has been a reasonably well-behaved student who earns grades in the B and C range. In seventh grade, he is encouraged to take a foreign language. He enrolls in Spanish, encounters difficulty with the subject, and comes to despise the class. He does not complete his work, is disruptive in class, and does not like the teacher. Greg does reasonably well in his other classes, completes work, and is not disruptive. The simplest "intervention" for Greg's problem is to remove him from Spanish class. From a short-term perspective, this immediately relieves the distress of Greg, his parents, and his teacher. The "intervention" is easy to provide, and improvement is instantaneous. In contrast, from a long-term perspective, this "intervention" failed miserably. First, if it is important for Greg to learn Spanish or even how to cope with academic challenges, this opportunity was removed. Second, Greg learned that being disruptive and uncooperative are effective approaches for dealing with situations that are difficult and distressing.

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Additionally, let us consider the situation of Neveah who is in fourth grade, behaves well in school, and earns A's and B's. Recently, Neveah began to experience intense anxiety at school, throwing tantrums when her mom takes her to school, complaining of stomach aches when she wakes up for school, and begging her mom to let her stay home. For Neveah, the simplest intervention may be allowing her to stay home and perhaps looking at online school options. In the short term, this immediately reduces Neveah's and her mom's distress. In the long term, staying home from school could present other problems for Neveah's mom (e.g., legal, financial). In addition, staying home from school and pursuing online school removes an opportunity for Neveah to learn how to cope with her anxiety and connect with teachers and peers in person. This intervention also teaches Neveah that avoidance of anxiety-provoking situations is an effective way to relieve distress.

This approach could be very problematic for Greg and Neveah in the future. Interventions such as remedial instruction, tutoring, organization, and study-skills training that could have helped Greg be successful in Spanish were ignored. Interventions such as cognitive behavioral therapy and exposure could have helped Neveah learn to identify her emotions and cope in helpful ways while still being in school. Providing these interventions over the time needed for Greg and Neveah to be successful requires substantial effort and change will likely be slow and inconsistent. During this time, persistent academic struggles may lead them to become disengaged with school. Those involved could have argued that the amount of effort needed for Greg to achieve success in an elective course was not worth the time and effort of an intervention, especially when Greg could reconsider taking the course in later grades. Or it could be argued that a temporary removal to online school for Neveah could help her get through immediate distress and still come back to school later. In these contexts, it may be understandable to remove the child from the problematic situation; however, unfortunately, this approach is often taken when the long-term costs are much greater.

Opportunities for students to learn how to independently meet age-appropriate expectations, how to persist in the face of challenges, and how they can leverage their skills to face challenges are skipped and instead the challenging expectations of the student are reduced or eliminated. Further, equipping students with the skills required to meet age-appropriate expectations encourages students to engage with school, connecting them with interventionists who aid their skill development and encourage participation in rather than avoidance of some of their challenges. A complete reliance on reducing expectations has the potential to lead to further disabling a student and failing the mission of parents and educators to prepare the child for a successful transition to adulthood.

The Life Course Model (LCM; Evans et al., 2014) addresses these two approaches to intervening. The model is based on the premise that professionals providing services to students with emotional and behavioral problems should prioritize those services that are most likely to help students independently meet age-appropriate expectations. Thus, interventions that enhance competencies should be prioritized over those that reduce expectations. For example, one common service for secondary students with attention deficit hyperactivity disorder (ADHD) is to provide them with a copy of the teacher's notes or a peer's notes so they are not expected to take them. This is intended to give the target student access to the content of the class discussion given that their disability interferes with their ability to take notes. This approach eliminates the need for the student to meet age-appropriate expectations (i.e., taking notes). According to the LCM, the preferred approach is to train the student with ADHD to take accurate notes as initial evaluations of note-taking training indicate that students with ADHD can learn to do this (Evans et al., 1995). If this training is effective, then the student is able to independently take notes and this provides the student with access to the content of the class discussion. Training a student to efficiently take accurate notes takes time and effort on the part of a teacher and the student, but choosing to provide notes for the student requires

very little effort and immediately reduces impairment. The long-term payoff is that the student who completes the training has a skill set that can be used in many other classes across their schooling and the need for services diminishes. This represents an investment in the student, who learns to approach challenges by gaining skills rather than avoiding life's challenges. The student who is provided copies of notes will need this approach in all or almost all subsequent classes and will leave high school without this skill set.

According to the LCM, there are some students who have multiple problems and there may not be adequate resources to provide interventions for all of the problem areas at once. It is recommended that a couple of the problem areas are prioritized for interventions (e.g., note-taking, cognitive behavioral therapy) and others are approached with reduced expectations (e.g., providing student with teacher's notes). As the interventions are successful, services for some of the other problem areas can be modified so they become interventions and are no longer accommodated.

Without a persistent approach to improving competencies through training, therapy, and remediation, educators and school mental health professionals (SMHPs) often feel left with very few options other than reducing expectations. This pattern of reducing expectations in response to problems can become part of the expectations of the students and parents. In other words, they may come to expect that when the child has problems, is in trouble, or fails at something, the expectations should be reduced due to the student's disability. Even if this approach may characterize the child's time in schools, it is a poor mindset for approaching adulthood because expectations for following rules, performance on a job, and interacting with others cannot simply be removed. Further, students who are used to having expectations reduced for them may come to refuse interventions designed to improve their ability to succeed independently (see example in Harrison et al., 2022). Too many students have had expectations reduced to the point that they are educated in alternative settings or online

classes at home. This trajectory often leads to dropping out and a host of problems that often follow quitting school. For some students with emotional and behavioral problems, restrictive settings are certainly necessary; however, for some, it would be interesting to know if they would have needed such a setting if from the very beginning of their schooling people would have invested in them through interventions aimed at helping them independently meet age-appropriate expectations and the message that goes with that approach—that the student can find a way to be successful in spite of problems.

What Do We Want to Change?

When school mental health was first emerging as a practice and focus of research, I (Evans) worked with students in an inner-city middle school. One of the students was a male who had problems related to depression. As is often the case today, we did not diagnose the student with clinical depression, but it was clear that his problems were related to feeling depressed. As was common practice in many clinics, I asked the student to complete a self-report depression rating scale every couple weeks while I was working with him so I could track progress. The child study team at the school was scheduled to discuss the student at a meeting so I prepared a graph of the self-report data over time showing the student's progress. The discussion at the meeting was focused on problems the student was exhibiting at school, interactions with his mother, and serious behavior concerns expressed by one of his teachers. I shared my graphs and briefly described my work with the student. The others on the team politely listened, complimented the graphs, and then went back to their discussion of the real problems. I learned two lessons from that meeting. First, the individual sessions I was having with the student were only minimally relevant to the students' day-to-day problems. I had to better connect what I was doing with the student to his experiences. Second, measuring outcomes by assessing symptoms is secondary to addressing the concerns that school staff had about the stu-

dent. I had to find a way to connect gains made in reductions of depressive symptoms with the problems teachers were having with the student in class. This meeting substantially altered my approach to school mental health practice and research.

In contrast to the lessons learned from that meeting, a very large portion of the intervention evaluation research literature includes the assessment of symptoms of a disorder as a key outcome to determine if the intervention is effective. Although measuring symptoms has a place in determining the benefits of an intervention, the role for this is limited in school mental health. Measuring the school-related manifestations of symptoms or disorders is the priority. Effective interventions for students with emotional and behavioral problems in schools may or may not reduce symptoms, but they do improve functioning at school. Functioning at school includes how well a student interacts and forms relationships with peers and teachers (social functioning), how well the student learns from instruction and practice (academic), and how well the student completes assigned work, follows rules, and exhibits other behaviors that support learning (academic enablers).

In order for a school mental health intervention to benefit these areas of functioning, SMHPs need to be integrated into the school day and with school staff. In other words, effective SMHPs take advantage of the opportunities to observe students in situations that challenge social and academic functioning. They watch students attempt to use new strategies that they developed in sessions in the actual setting in which it is needed. Effective SMHPs collaborate with the educators working with the student to help them understand the target of the intervention in context. Collaboration with educators can also help to intervene through monitoring for specific behaviors, prompting coping strategies, and noticing clues about why problems occur. These resources are unique to school mental health services (as opposed to clinic-based care) and offer important benefits that can enhance the effectiveness of services. Importantly, these resources expand the network of support for a student by

involving multiple school staff that can help connect the student to school and increase their success. Unfortunately, too many SMHPs still rely on individual meetings with students as the entirety of their intervention and thus, they remain isolated from much of the school and minimally relevant to care.

In addition, effective school-based interventions can also take advantage of integrating parents and caregivers into intervention that occurs in and outside of school. Just because school mental health interventions are situated in schools does not mean parents and caregivers are necessarily absent from intervention. Indeed, effective SMHPs can leverage parent involvement in intervention by having parent meetings at school, connecting parents and caregivers with educators and other school staff, and increasing parents' knowledge of their child's academic and social functioning at school. SMHPs can serve a unique role of bridging communication between parents and educators in service of student success, particularly when parents express frustration toward the school. Further, SMHPs can work with parents to ensure a student gains skills not just at school but also at home by coaching parents to prompt students to use skills and even equipping parents with skills to intervene to support student success. For example, several school-based interventions for students with ADHD incorporate parent involvement by hosting parent training meetings at school (see Evans et al., 2011; Langberg et al., 2008). Further, parents have been involved in school-based substance use prevention intervention to reduce students' risk of substance use with promising effects (see Dishion & Kavanagh, 2003; Dishion et al., 1999). In this way it is possible to incorporate multiple aspects of a student's ecology to increase the effectiveness of intervention.

The chapters that follow are written by some of the top experts in school mental health interventions for a variety of presenting problems. Many of them focus on interventions that would be considered targeted (tier 2 or 3), but some describe universal approaches. While reading these chapters we encourage you to consider the nature of the intervention and how they may ben-

efit students. To what extent do the interventions target changes in meaningful behaviors in school? Do they take advantage of the context of a school to implement and/or measure the impact of the intervention? Do they incorporate parents to increase the reach of the intervention? To what extent do they enhance competencies in contrast to reducing expectations? We propose that these are important considerations when critically considering the potential value of school mental health interventions described in this section as well as those occurring every day in schools.

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Universal, School-Based Social and Emotional Learning Interventions and Their Potential to Improve Students' Mental Health

Neil Humphrey

What Do We Mean When We Talk About Mental Health, and Why Does Mental Health Matter?

In this chapter I adopt the 'complete state' view of mental health (Keyes, 2005), also sometimes referred to as the 'dual factor' model (Petersen et al., 2020), in which mental health is theorised as simultaneously comprising our experience of symptoms of psychological distress (e.g. anxiety, depression) *and* well-being (e.g. life satisfaction, positive affect). These are not proposed to form a single bipolar dimension, but rather correlated unipolar dimensions that together form a complete state of mental health.

These dimensions share a complex relationship, with different determinants. For example, it is possible to experience elevated symptoms of mental health difficulties alongside high levels of well-being. In dual factor nomenclature, this stratum of the population is referred to as the *symptomatic but content* class, whose social determinants are distinct from other symptomatic groups (such as those who are *troubled*, experiencing high symptoms and low well-being) (Petersen et al., 2020). The complete state perspective is a particularly useful model when

thinking about population mental health, where it can capture greater variability than a solely symptom-driven approach (Alexander et al., 2020).

The societal significance of complete mental health (e.g. high well-being, low symptoms) cannot be overstated. Mortality studies demonstrate that well-being is associated with longer life (Chida & Steptoe, 2008). In children, higher levels of well-being are concurrently and prospectively associated with better academic attainment (Gutman & Vorhaus, 2012). By contrast, mental health difficulties lead to reduced quality of life, destabilisation of communities, and higher rates of health, education and social care utilisation (Humphrey, 2018). The global direct (e.g. health-care) and indirect (e.g. productivity and income loss) economic cost of these difficulties is estimated at US\$2.5 trillion (Trautmann et al., 2016), and they account for 13% of disability-adjusted life years (Vigo et al., 2016). The case for investing in prevention is therefore extremely strong, particularly during the school years. Approximately one in eight children and adolescents across the world experience clinically significant mental health problems (Polanczyk et al., 2015), and where recent data are available, prevalence appears to be increasing over time, particularly since the COVID-19 pandemic began (e.g. in England; Vizard et al., 2020). Furthermore, most lifetime cases of mental illness have their first onset in adolescence (Jones, 2013). Those

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who experience mental health difficulties during childhood and/or adolescence go on to experience poorer physical and mental health, are less likely to be employed and more likely to incur additional societal costs (e.g. criminal justice) as adults (D'Amico et al., 2014; Goodman et al., 2015; Knapp et al., 2011). Finally, from birth to midlife, less than 20% of people experience 'enduring mental health' (that is, they never experience a period of significant distress), making at least one episode of impairing mental health difficulties the norm, rather than the exception (Schaefer et al., 2017).

Why Are Schools Important Settings for the Promotion of Mental Health?

School is a critical developmental context for children and young people (Bronfenbrenner, 2005), in which many key determinants of mental health are primarily situated (e.g. bullying) (Patalay & Fitzsimons, 2016). Schools benefit from very wide reach, a prolonged period of engagement and a central role in most communities (Greenberg, 2010). If parents are concerned about their child's mental health, they are most likely to contact their teacher(s) as a first port of call (Ford et al., 2007).

Furthermore, children's mental health and their learning are concurrently and temporally related; for example, girls' academic attainment in middle childhood predicts later emotional symptoms, even after accounting for prior symptom levels and risk factor exposure (Panayiotou & Humphrey, 2018). Collectively, these findings support the view of school as an important setting for the promotion of well-being and prevention of the development, maintenance or escalation of mental health difficulties among children and young people (Greenberg, 2010). Accordingly, there has been an increased policy emphasis on this issue in recent years. For example, in England, mental health education was made compulsory in all schools in 2020 (Department for Education, 2019); alongside this, an ongoing plan to transform children and young people's

mental health provision includes the requirement for every school to have a designated mental health lead, and the creation of mental health support teams, managed jointly by schools and the National Health Service (Department for Education/Department of Health, 2017). However, such developments place increasing demand on the teaching workforce without guaranteeing any additional resources to support this. More generally, we know that many teachers feel inadequately prepared to engage with mental health issues in the classroom, though the extent of training available at the school level appears to be related to their perceived capacity in this regard (Mansfield, et al., 2021). In other words, the more mental health training available in a given school, the more teachers within it report feeling that they have the capacity to undertake mental health-related practices as part of their role.

The role of school staff in promoting mental health can arguably be distilled into four distinct but related areas of work. First, they can provide a nurturing environment in which children and young people feel safe and happy. Second, school staff can monitor and assess mental health needs in the student population, and identify those with emerging or established difficulties. Third, they can provide support for mental health needs. Fourth, where necessary, school staff can refer children and young people to external services and agencies (e.g. child and adolescent mental health services) for more specialised and intensive intervention than they are able to provide themselves (NatCen Social Research & the National Children's Bureau Research and Policy Team, 2017). In this chapter, my focus is universal interventions, and so the discussion that follows pertains primarily to the first and third areas noted above. However, it is important to note that these interventions do not occur in a vacuum. Schools are complex ecological systems, and provision in the second and fourth areas, in addition to the broader socialisation practices and interactions that occur in school (e.g. that which is 'caught' as opposed to being 'taught'), will have a strong bearing on students' experiences and outcomes relating to their mental health.

The Rationale for Universal, School-Based Interventions

Universal, school-based interventions are defined as those that are for all students, regardless of need. They are therefore distinct from targeted/selective (for those at increased risk or with emergent difficulties) and indicated (for those with established/diagnosed difficulties) interventions (Foxcroft, 2014). In the literature discussed throughout this chapter, reference is variously made to ‘school-wide’, ‘whole-school’ and ‘multi-component’ approaches. Although there are some important distinctions between these terms (e.g. whole-school is used in Europe to describe programmes characterised by work across multiple system levels in a school to enact change – hence an intervention may technically be universal but not whole-school; Demkowicz & Humphrey, 2019), they are united by their fundamental emphasis on *all* rather than *some* students. The rationale for universal interventions is multifaceted. First, use of universal interventions aligns with the public health approach to mental health promotion (e.g. Embry’s [2011] notion of ‘behavioural vaccines’). Second, they are potentially more cost-effective than targeted/indicated approaches because even though treatment effects are expected to be more modest, universal interventions are much less resource-intensive (McLaughlin, 2011). Third, universal approaches may serve to reduce stigma (Greenberg, 2010). Conversely, targeted/indicated interventions may yield unintended negative consequences (e.g. iatrogenic ‘deviancy training’ effects; Evans et al., 2015). Finally, universal school-based interventions can influence outcomes for children and young people who would not otherwise access the support they need through usual care pathways (given that most who experience significant mental health difficulties do not get specialist support; NHS Digital, 2018).

However, the above arguments are counterbalanced by a series of concerns about the predominance of universal provision. First, the low prevalence of mental health difficulties means that much of the effort in universal approaches is expended on children who are unlikely to

develop difficulties (Greenberg & Abenavoli, 2017). Second, the relatively ‘light touch’ approach taken in universal interventions (compared to targeted/indicated approaches) means that children who *are* at risk may not benefit (Greenberg, 2010). Though the assumption that students will not all respond to an intervention in a uniform manner is sound, we still do not know enough about exactly *who* benefits more or less from universal interventions (Durlak et al., 2011). Third, if targeted and/or indicated interventions are always needed as part of a tiered approach to intervention (as is the case in education systems around the world), one might ask what exactly the universal layer is preventing (Humphrey et al., 2013)? Finally, the assumption that universal interventions are cost-effective remains largely untested (McCabe, 2008). These are issues to which I will return later in the chapter.

Even a cursory glance at the evidence base reveals a very wide range of universal, school-based interventions that may influence student mental health outcomes. A useful distinction to be made at this point is between those where mental health is the primary focus and those where it is a secondary focus. Examples of the former include those where intervention content and processes focus directly on the development of protective strategies to prevent the emergence of symptoms of anxiety and depression (Johnstone et al., 2018), and those that focus on mental health education/literacy (Wei et al., 2013).

Examples of the latter include interventions focused on social and emotional learning (SEL) (Wigelsworth et al., 2016), substance abuse prevention (Onrust et al., 2016) and behaviour management (Korpershoek et al., 2016). Although the range of available programmes does not neatly reside within a single category, the distinction remains an important one, not least in terms of expectation management regarding the magnitude and timing of intervention effects on mental health outcomes. In other words, we would naturally expect more substantial and immediate intervention effects on student mental health in interventions where this is the principal focus,

compared to those where it is a secondary consideration.

In this chapter, my focus is primarily on those classified as social and emotional learning interventions; accordingly, the following section provides an overview of this body of work.

What Are Social and Emotional Learning Interventions?

Universal, school-based social and emotional learning (SEL) interventions aim to develop the social and emotional skills (e.g. self-awareness, self-management, social awareness, relationship skills, responsible decision-making) of students through explicit instruction in the context of learning environments that are safe, caring, well-managed and participatory (Humphrey, 2013; Weissberg et al., 2015). These skills have considerable utility. They help children to effectively navigate the social world and promote resilience to bullying and victimisation, violence and a wide range of other negative processes and outcomes (Sklad et al., 2012). Crucially, SEL skills also facilitate learning in the classroom (Durlak et al., 2011). Learning is a social process and it stands to reason that improved social and emotional competence will facilitate academic success. Furthermore, longitudinal studies highlight the predictive utility of childhood social-emotional competencies for mental health and labour market outcomes in later life (Goodman et al., 2015). Accordingly, effective promotion of SEL skills has emerged as a policy priority in education systems around the world (Marcelino Botin Foundation, 2015). Below I provide two brief case examples of SEL interventions. The interested reader can find further examples in the Collaborative for Academic, Social and Emotional Learning's (CASEL) programme guide (CASEL, 2013).

Zippy's Friends

Implemented in early elementary education (ages 5–7) settings across Europe (e.g. the United

Kingdom, Ireland, Netherlands, Denmark, France) and the world (e.g. the United States, Chile, India), Zippy's Friends (ZF) aims to equip children with the social and emotional skills that enable effective coping in difficult circumstances. This intervention is characterised by eight key principles, as follows: (i) children choose their own solutions; (ii) positive skills are reinforced; (iii) repetition and continuity are essential for learning; (iv) abilities are developed in different settings; (v) children are active participants; (vi) children help each other; (vii) children evaluate their own success; and (viii) teachers are open to listening to children (Partnership for Children, 2016). The intervention follows a modular approach built around six stories about Zippy, a stick insect and his friends (a group of children). The stories focus on feelings, communication, making and breaking relationships, conflict resolution, dealing with change and loss, and coping. Each story is explored over the course of four weekly sessions, wherein part of the story is read by the teacher and children then participate in a range of activities including games, drawing and discussion. Sessions follow a common format that begins with a review of previous learning and ends with each child providing feedback to reflect their feelings (Partnership for Children, 2016).

Promoting Alternative Thinking Strategies

The Promoting Alternative Thinking Strategies (PATHS) curriculum aims to help children aged 4–11 to manage their behaviour, understand their emotions and work well with others (Greenberg & Kusche, 1993). It has been implemented in a variety of countries around the world, including the United States, the United Kingdom, Switzerland and Croatia. PATHS is delivered by class teachers and includes a series of lessons on topics such as identifying and labelling feelings, controlling impulses and understanding other people's perspectives, with associated physical resources and artefacts (e.g. Feelings Face cards, Feelings Dictionaries and posters relating to

PATHS concepts and strategies). Lessons are intended to be delivered approximately twice a week throughout the year. These are supported by generalisation activities and techniques that support the application of new skills during the school day, and parent materials that aim to extend learning to the home environment. In addition to this, a daily procedure of compliment-giving is encouraged using the ‘Kid of the Day’ system, in which children are randomly selected and wear a badge or identifier to be recognisable to other pupils and staff around the school. The Kid of the Day may be assigned special roles and responsibilities, and other pupils and staff complete a compliment sheet for them. Teachers in PATHS schools usually are aided by trained external coaches, who offer ongoing technical support and assistance (e.g. lesson modelling, observation and feedback) throughout the school year as a means to optimise implementation (Humphrey et al., 2018).

How and Why Might SEL Interventions Improve Students’ Mental Health?

Before we examine evidence on the efficacy of SEL interventions in improving students’ mental health, it is important to first consider underpinning theory. SEL theory (e.g. the SEL logic model; CASEL, 2007) and models of risk and resilience processes in human development (e.g. Wright et al., 2013) both highlight the importance of social–emotional competence in serving important promotive and protective functions, and accordingly, they have been described as, ‘the skills and competencies that underlie mental health’ (Weare & Markham, 2005, p. 14). As previously noted, SEL skills help children and young people to navigate their social environment successfully, particularly in difficult or challenging circumstances. Students who are able to understand, articulate and manage their emotions, while also being better equipped to develop and maintain positive social relationships (including social problem solving), are more likely to experience greater levels of positive affect: ‘Emotions

can need regulating when they threaten to overwhelm or need to be amplified... these [social–emotional] skills help them to experience more well-being and maintain satisfying relationships with others’ (Denham, 2006, p. 70). Research on the determinants of well-being provides support for these propositions. For example, our own research has demonstrated an inverse relationship between SEL skills and mental health difficulties, both concurrently (Humphrey & Wigelsworth, 2012) and longitudinally (Panayiotou et al., 2019b).

What Does the Evidence Base Tell Us About the Potential of Universal SEL Interventions to Improve Students’ Mental Health?

The SEL evidence base has grown exponentially in the last three decades. Unsurprisingly, this has resulted in the publication of multiple meta-analyses (Corcoran et al., 2018; Durlak et al., 2011; Sklad et al., 2012; Taylor et al., 2017; Wigelsworth et al., 2016). These provide rigorous evidence that illustrates the impact of SEL interventions on a range of outcomes, including social and emotional skills, school attitudes, academic performance and, importantly, mental health. In terms of the latter, aggregated effect sizes (ES) observed in relation to internalising problems (e.g. anxiety) range from 0.19 (Sklad et al., 2012; Wigelsworth et al., 2016) to 0.24 (Durlak et al., 2011). Larger but more variable ES are reported for externalising difficulties (e.g. conduct problems), ranging from 0.22 (Durlak et al., 2011) to 0.43 (Sklad et al., 2012). Meta-analyses of longer-term follow-up studies indicate that intervention effects are still evident, but attenuate somewhat over time. Thus, Sklad et al. (2012) reported average intervention ES of 0.1 and 0.2 (for internalising and externalising difficulties, respectively) in studies where measures were taken at least seven months after a given intervention was concluded.

Analysing studies with a follow-up period of at least 24 weeks post-intervention, Taylor et al. (2017) reported average intervention ES of 0.16

for internalising symptoms and 0.14 for externalising problems. None of the SEL meta-analyses published to date has reported aggregated effects on well-being, probably owing to a lack of primary studies. However, findings from individual studies are promising. For example, Panayiotou et al. (2019b) found that the aforementioned PATHS curriculum produced an intervention ES of 0.17 in relation to children's well-being.

To what extent can these intervention effects be considered meaningful? A preliminary caution here is to resist the temptation to reflexively resort to the effect size thresholds outlined by Cohen (1992), since these are completely devoid of context and are misaligned with empirically derived intervention effect sizes in prevention science (Tanner-Smith et al., 2018). Instead, we might start by asking how the magnitude of SEL intervention effects on mental health outcomes compares to those observed in the broader field of universal school-based interventions (which includes, for example, those designed to promote healthy eating, prevent substance abuse or manage behaviour in the classroom). Here, there is reason for optimism; even when one adopts a conservative approach (e.g. the smallest average ES noted above for internalising [0.19] and externalising [0.22] problems), one places SEL interventions above the 50th percentile in the distribution of effect sizes for these outcomes among all universal school-based interventions (Tanner-Smith et al., 2018). An alternative perspective is to consider what these intervention effects mean in practical terms – in other words, do they translate to genuine, noticeable effects in daily life? This is, of course, highly subjective, but Durlak et al. (2011) argue that the kinds of gains evidenced for SEL interventions would be noticeable in typical classroom contexts. For example, the most conservative estimate for the impact of SEL on externalising problems noted above translates to a 9-percentile point improvement (Durlak, 2009). Given the fact that even very modest decreases in externalising problems can have positive consequences for the broader school environment (e.g. up to an hour of learning a day may be lost as a consequence of persistent disruptive behaviour; Office for Standards in

Education, 2014), and the likelihood of later escalation of such problems and the huge societal costs that can accrue as a result if they are not effectively addressed at an early stage (e.g. Scott et al., 2001), the effects of SEL interventions must be considered very promising indeed. However, it is important to remember that such effects are not uniform. The next step in this chapter, therefore, is to consider some common intervention effect modifiers.

Intervention Effect Modifier 1: Implementation Variability

Implementation is, 'the process of putting a practice or program into place' (Forman, 2015, p. 10). Dimensions of implementation include behaviours of the implementer, such as fidelity (whether prescribed procedures were followed), adaptations (what changes were made to an intervention), dosage (how much of an intervention was delivered) and quality (how well an intervention was delivered), and those of recipients, such as reach (whether intended recipients were present when the intervention was delivered) and responsiveness (the extent to which recipients engaged with an intervention) (Berkel et al., 2011). Increasingly, contextual factors such as programme differentiation (the extent to which an intervention is distinct from existing practice) are also considered under the implementation rubric. It is now widely accepted that these dimensions are likely to vary when SEL interventions are implemented in schools. Thus, in studies where implementation data are recorded, nearly 40% report problems relating to one or more of the dimensions noted above (Durlak et al., 2011; Wigelsworth et al., 2016). Research has demonstrated clearly that this variability influences the achievement of intended outcomes (Durlak, 2016). For example, in Durlak et al.'s (2011) SEL meta-analysis, the average intervention ES on emotional symptoms in studies reporting no implementation problems was 0.35, compared to 0.15 in studies where implementation problems were noted. Early evidence indicates a similar pattern in relation to well-being.

In their aforementioned trial of the PATHS curriculum, Panayiotou et al. (2019a) observed that the magnitude of intervention ES on well-being grew from 0.17 in their intent-to-treat analysis to 0.43 when complier average causal effect estimation (CACE) was employed in order to take account of variability in dosage.

Intervention Effect Modifier 2: Subgroup Effects

As noted earlier, it stands to reason that children and young people will not respond uniformly to SEL interventions. However, we still know relatively little about exactly who benefits more or less from them (Durlak et al., 2011). An initial problem here is how to robustly investigate individual differences in responsiveness to intervention while avoiding ‘data dredging’ (that is, systematically searching through a dataset in the hope of finding a significant intervention effect; Keller, 2019). It is therefore recommended that subgroup analyses are specified in advance, informed by theory and/or research, and include clear specification of the expected direction of effects and population subgroup(s) of interest (using characteristics measured pre-randomisation in trials, e.g. demographic characteristics, individual differences at baseline and/or family factors) (Farrell et al., 2013).

I focus here on subgroup moderator effects among students deemed to be ‘at risk’ by virtue of their existing levels of need (e.g. elevated symptoms of distress at baseline in a given study) and/or socio-economic and other circumstances (e.g. those from more deprived backgrounds) because these are central to the issues noted earlier (see section *The Rationale for Universal, School-Based Interventions*). Furthermore, although common, subgroup analyses relating to demographic characteristics such as sex and age tend to be poorly theorised, if at all (in other words, while researchers frequently test to see if interventions affect boys and girls differently, they usually do not explain their justification for doing so).

The compensatory effects hypothesis predicts that at-risk children will benefit more from SEL interventions because they are at greater risk and have more room for improvement (McClelland et al., 2017). Thus, SEL can offset the significant disruption of developmental processes brought about by risk exposure. Several studies have provided support for the compensatory effects hypothesis. For example, the Conduct Problems Prevention Research Group (2010) reported greater benefits of the Fast Track intervention (which combines the PATHS curriculum with parent training and other supports) among children with higher baseline levels of aggression. Similarly, Low et al.’s (2015) trial of Second Step found that this SEL intervention primarily produced significant improvements in social skills and mental health among children who started the school year with skill deficits relative to their peers. We know that these results are not explained by regression to the mean because similar trends were not evident in the trial control group. The findings of such studies are therefore encouraging because they indicate that SEL interventions do indeed benefit those most in need of support.

In contrast, the accumulated advantages hypothesis (also known as the ‘rich get richer’ model) predicts that children from more advantaged, lower-risk backgrounds will benefit more from SEL interventions because they are better equipped to take advantage of learning opportunities and more capable of consolidating and building on their existing skills (McClelland et al., 2017). This prediction was borne out in a trial of the PATHS curriculum in Croatia, where the researchers reported significant improvements in SEL skills and reductions in mental health problems only among those students classed as ‘above average’(low risk) in pre-intervention assessments (Novak et al., 2016). Though fewer in number, studies like this set a challenging precedent because they indicate that the benefits of SEL go to those who are already in positions of relative advantage.

Are Universal SEL Interventions ‘Worth It’?

In the preceding sections, I hope to have convinced the reader that universal SEL interventions can produce meaningful improvements to students’ mental health outcomes. Despite this, it is important to note that just because SEL interventions are effective, this does not necessarily mean that they are *cost-effective*. It is here where economic analyses (e.g. basic cost, cost-effectiveness, cost-utility, cost-consequence and benefit-cost analyses) have great utility, as they provide critical information that can help inform decision-making about how best to deploy scarce resources by examining intervention effects in the context of the costs that were required to generate them. However, economic research on SEL interventions is in its infancy (McClelland et al., 2017).

Indeed, an early review of universal, school-based mental health interventions (including SEL) found *no* published studies (McCabe, 2008), and a recent systematic review only identified nine (Schmidt et al., 2020). Those studies that have been published yield tentative promise. Analyses reported by Turner et al. (2020) determined that the PATHS curriculum was likely to be cost-effective under most, but not all scenarios (e.g. different costing approaches and time horizons). Hunter et al.’s (2018) examination of the cost-effectiveness of the Social Skills Improvement System Classwide Intervention Programme drew similar conclusions.

In interpreting the results of such studies, several issues need to be borne in mind. First, the economic perspective adopted should be taken into account. For example, in the Turner et al. (2020) study, a *UK Health Service* perspective was adopted. In other words, the economic benefit was quantified based on improvements to health-related quality of life, for which the UK Health Service has a ‘willingness to pay’ threshold per quality adjusted life year. Second, cost-effectiveness estimates are sensitive to key

assumptions relating to the costing approach taken and time horizon adopted for a given analysis. Third, these analyses routinely use an intent-to-treat approach that does not account for variability in levels of implementation. As a result, cost-effectiveness estimates based on moderate or high levels of compliance (as in the aforementioned CACE models) are currently lacking.

Current and Future Directions

At the time of writing, there is an accumulated body of robust evidence to support the proposition that universal SEL interventions can improve students’ mental health. However, there is still much that we do not know. First, more economic analyses are required; indeed, a rigorous cost-effectiveness analysis (or equivalent) should become a fundamental component of future trials in this area (Schmidt et al., 2020). Second, given what we know about the inevitability of implementation variability, CACE or related instrumental variable approaches should also be undertaken as standard (Peugh & Toland, 2017). Third, an increased emphasis on the factors that facilitate or inhibit effective implementation is warranted, as this can inform future programme training and implementation support activities. Fourth, since a key purpose of universal SEL interventions is to alter developmental trajectories, it is important that this is reflected in the analytical techniques adopted by researchers; hence, the use of growth curve models is recommended (Greenberg & Abenavoli, 2017). The field is currently limited by a reliance on ‘point-in-time’ estimates that do not analyse the developmental process of growth (although there are a couple of notable exceptions, e.g. Nix et al., 2016). Finally, a shift away from programmatic approaches is underway, with a parallel increase in research on the constituent components that drive improvement in outcomes (Jones & Bouffard, 2012).

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School-Based Interventions for Students with Anxiety

3

Golda S. Ginsburg and Isaac C. Smith

Introduction

In a classroom of 30 students, approximately three will meet full criteria for an anxiety disorder and an additional three will experience excessive anxiety that causes impairment in daily functioning (Kessler et al., 2012; Polanczyk et al., 2015; Rapee et al., 2012). The high prevalence of excessive anxiety in youth makes it the most common psychiatric disorder and, according to the Centers for Disease Control, rates of pediatric anxiety disorders are on the rise (Bitsko et al., 2019). Decades of careful research demonstrate that excessive anxiety confers significant impairment across key domains of development such as academic, social, familial, and personal functioning (Swan & Kendall, 2016). Within the academic domain, excessive anxiety has been associated with school absenteeism and school refusal (Kearney & Albano, 2004); deficits in academic performance (Mazzone et al., 2007); grade retention (Stein & Kean, 2000); and early school dropout (Breslau et al., 2008). Importantly, the link between excessive anxiety and poor academic outcomes is both concurrent and prospective (Woodward & Fergusson, 2001).

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Fortunately, the negative effects of anxiety can be ameliorated with effective treatment. Evidence from meta-analyses and systematic reviews indicates that cognitive-behavioral therapy (CBT) and medication are two effective treatments for pediatric anxiety (Ipser et al., 2009; James et al., 2018). Importantly, these treatments have also been found to improve academic functioning including higher academic motivation and performance on standardized tests, increases in grade point average (GPA), and improved classroom behavior such as test taking, reading in class, and homework completion (Nail et al., 2015; Sanchez et al., 2019; Weems et al., 2009).

Rationale for School-Based Interventions for Anxiety

Despite the high prevalence, documented impairment, and effective treatment of pediatric anxiety disorders, most afflicted youth are unidentified and never receive needed interventions (Merikangas et al., 2011). Reasons for underidentification and low service utilization in outpatient settings are numerous and include pragmatic barriers (e.g., costs, transportation, limited time, lack of access to providers) as well as psychological barriers such as stigma and concerns about confidentiality (Gulliver et al., 2010).

To address these barriers, efforts at the national and state levels have advocated provid-

ing psychosocial interventions to youth in the school setting. The advantages of providing interventions in schools are numerous and include early and improved detection and better generalization of therapy skills. For instance, school-based clinicians can facilitate the application of coping skills in anxiety-provoking situations in real time and in ways that are not accessible to outpatient community therapists. Finally, school-based interventions improve access to care, do not require out-of-pocket payments, and reduce barriers associated with transportation. Elimination of these barriers is particularly relevant for historically underserved student groups, as a substantial body of evidence indicates that racial/ethnic minorities and lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) youth are significantly less likely to seek or receive mental health services than their non-minority peers (Cummings & Druss, 2011; Garland et al., 2005; Su et al., 2016). Accessing mental health services in school therefore presents a promising option for addressing these disparities.

Recognizing these advantages, a growing literature now documents the effectiveness of school-based interventions for students with anxiety. In the following sections, we summarize this literature by first presenting data from recent reviews and meta-analyses on school-based interventions. Subsequently, we review a selected set of randomized controlled trials (RCTs) of school-based interventions for anxiety organized by categories within a prevention science framework that also align with the multi-tiered system of supports (MTSS) and Response to Intervention (RtI) models (Gamm et al., 2012; Sugai & Horner, 2009). Specifically, primary prevention models (also referred to as universal or Tier 1 interventions) represent those interventions that are delivered to all students in a classroom or an entire school. Secondary prevention models (which include selective and indicated or Tier 2 interventions) are delivered to students who are at risk for disorder onset or show elevated anxiety symptoms. Finally, tertiary models (similar to Tier 3 interventions) are treatments

for students meeting criteria for an anxiety disorder.

Effectiveness of School-Based Interventions for Anxiety

Several meta-analyses and qualitative reviews have been published describing the effectiveness of school-based psychosocial interventions for internalizing problems including anxiety (Caldwell et al., 2019; Gee et al., 2020; Hugh-Jones et al., 2021; Sanchez et al., 2018; Werner-Seidler et al., 2017). Sanchez et al. (2018) reviewed school-based mental health interventions exclusively in elementary-aged children across symptom domains of internalizing, externalizing, and attention problems. With respect to interventions for internalizing problems (including anxiety), a small effect size was found (Hedge's $g = 0.30$; $SE = 0.07$; $95\% CI = 0.16-0.43$) across all interventions. Gee and colleagues reviewed 45 studies of school-based interventions for adolescents with elevated depression or anxiety symptoms across all intervention models (primary, secondary, and tertiary), and found the standardized mean difference of interventions versus control groups at post-intervention was modest (0.52 ; $95\% CI = -0.85$ to -0.18 ; $p = 0.003$; $k = 13$). Subgroup analyses generally did not yield significant differences in effect size based on study characteristics. In the most recent review, Hugh-Jones et al. (2021) conducted a meta-analysis of 18 studies focused exclusively on indicated interventions for youth with elevated anxiety. Small but significant positive intervention effects compared to control groups were found at post-test ($g = -0.28$; $95\% CI = -0.50$ to -0.05), with maintenance of benefit identified at 6- and 12-month follow-ups. Subgroup analyses based on theoretical orientation (i.e., CBT or other), child age, and delivery agent (e.g., teacher or research personnel) were not possible due to small sample sizes, but type of control group (i.e., waitlist vs. attention control vs. no intervention) was not found to significantly impact treatment effects (Hugh-Jones et al., 2021).

Across studies in these reviews, the magnitude of intervention effects varied widely—likely attributable to differences in the provider of the intervention (i.e., research staff vs. school personnel), extent of provider training and ongoing coaching, level of adherence/fidelity to intervention protocols, length and duration of intervention, inclusion of parental involvement, inclusion criteria (e.g., initial severity of anxiety symptoms, comorbid disorders), assessment strategies (assessor, specific measures, and timepoints), and other key study design characteristics (control group, primary outcome). One important conclusion was that the methodological quality of studies was uniformly low, suggesting a significant need for improvement with respect to trial design and intervention implementation.

Compared to studies conducted in outpatient research settings, school-based interventions show smaller effect sizes. For instance, a meta-analysis of outpatient treatment trials indicates effect sizes ranging from 0.65 to 0.94 (James et al., 2018). Reasons for these larger effects likely reflect differences in efficacy versus effectiveness RCTs (and similar to reasons for variations within school-based treatment trials), where efficacy studies use highly trained mental health specialists who receive ongoing supervision, deliver a higher dosage of treatment, have stricter inclusion/exclusion criteria (e.g., limited comorbidity), and incorporate greater parental involvement in treatment.

Below we highlight a representative sample of school-based interventions for anxiety¹ across each of the three levels of intervention models (primary, secondary, and tertiary); readers are referred to the meta-analyses referenced above for a more comprehensive analysis. Key features of selected studies focused on anxiety

are highlighted in Tables 3.1, 3.2, and 3.3. In light of the number of interventions based on CBT, Table 3.4 outlines the core therapeutic ingredients of this model used in school-based interventions.

Primary Prevention (Universal Interventions)

Several randomized controlled trials (RCTs) have evaluated the impact of universal interventions delivered to entire classrooms or schools. The 11 universal interventions in Table 3.1 span from preschool-aged children to adolescents in high school, with a majority (7 studies) focusing on middle childhood. Given that interventions were delivered universally, sample sizes were generally large, ranging from 100 to over 900 (Miller et al., 2010; Rooney et al., 2013). In terms of structure, most, but not all, universal interventions were provided in 1-h sessions administered on a weekly basis for a total number of sessions ranging from 3 to 30. Some universal interventions were quite brief, including one program administered in three 45-min classroom sessions (Aune & Stiles, 2009), whereas another intervention was delivered in a much smaller dosage (less than 15 min) daily for 6 weeks (Britton et al., 2014).

With regard to theoretical orientation, cognitive-behavioral approaches were the most common (core strategies described in Table 3.4); however, 3 of the 11 universal studies utilized mindfulness-based or positive psychology approaches (Britton et al., 2014; Burckhardt et al., 2015; van de Weijer-Bergsma et al., 2014) that were delivered with greater frequency for shorter duration, ranging from daily to biweekly.

Because universal interventions are delivered to all students in a school or classroom, many of these protocols were delivered at least in part by regular classroom teachers rather than research staff (e.g., licensed psychologists, graduate students). One computer-based study was evaluated that involved students logging time on a website delivering inter-

¹Disorders categorized as anxiety disorders in DSM-IV-TR (American Psychiatric Association, 2000), but not in DSM-5 (APA, 2013) were excluded. Disorders not considered in our selective review included school refusal, post-traumatic stress, and obsessive-compulsive symptoms.

Table 3.1 Universal interventions

Author	<i>N</i> ; age	No. of sessions	Treatment type	RCT groups	Provider	Findings
Anticich et al. (2013)	<i>N</i> = 488; ages 4–7	10	FRIENDS (CBT)	CBT; AC; WLC	Teacher	CBT > AC; CBT > WLC
Aune and Stiles (2009)	<i>N</i> = 1748; ages 11–14	3 (45 min)	NUPP-SA (CBT)	CBT; NTC	Psychologist	CBT > NTC
Barrett and Turner (2001)	<i>N</i> = 489; ages 10–12	10; 2 booster; 4 parent	FRIENDS (CBT)	CBT (psychologist); CBT (teacher); NTC	Psychologist; teacher	CBT (psych) > NTC; CBT (teacher) > NTC; CBT (psych) = CBT (teacher)
Britton et al. (2014)	<i>N</i> = 101; sixth grade	30 (daily for 6 weeks)	Integrative contemplative pedagogy (ICP)—Mindfulness	Mindfulness; AC	Teacher	Mindfulness = AC
Burckhardt et al. (2015)	<i>N</i> = 572; ages 12–18	Variable (6 h on site over 4–6 weeks)	Bite Back—Positive psychology	Positive psychology; ATN	N/A (computer administered)	Positive psychology = ATN
Essau et al. (2012)	<i>N</i> = 302; ages 9–12	10 2 booster; 4 parent	FRIENDS (CBT)	CBT; WLC	Psychologist	CBT > WLC
Johnstone et al. (2014)	<i>N</i> = 370; ages 9–10	10	AOP-PTS (CBT)	CBT; NTC	Teacher	CBT = NTC
Keogh et al. (2006)	<i>N</i> = 209; ages 15–16	10	SMI (CBT)	CBT; NTC	Psychologist	CBT > NTC
Miller et al. (2010)	<i>N</i> = 116; ages 7–12	8	TWD (CBT)	CBT; WLC	Teacher	CBT = WLC
Rooney et al. (2013)	<i>N</i> = 910; ages 9–10	10	AOP-PTS (CBT)	CBT; NTC	Teacher	CBT = NTC
van de Weijer-Bergsma et al. (2014)	<i>N</i> = 208; ages 8–12	12 (30 min twice weekly)	Mindful Kids (mindfulness)	Mindfulness; WLC	Researcher (teachers present)	Mindfulness = WLC

AC Active Control, AOP-PTS Aussie Optimism Program-Positive Thinking Skills, ATN Attention Control, CBT Cognitive–Behavioral Therapy, FRIENDS Feeling worried; Relax and feel good; Inner thoughts; Explore plans; Nice work so reward yourself; Don't forget to practice; Stay calm, N/A Not Applicable, NTC No-Treatment Control, NUPP-SA Norwegian Universal Preventive Program for Social Anxiety, RCT randomized controlled trial, SMI Stress Management Intervention, TWD Taming Worry Dragons, WLC Waitlist Control

vention content, with teachers observing and facilitating (Burckhardt et al., 2015). In cases where mainstream classroom teachers administered interventions, training most often took the form of one-day workshops led by research staff (Anticich et al., 2013; Barrett & Turner, 2001; Miller et al., 2010; Rooney et al., 2013).

Intervention effects reported in these universal interventions were variable. Five of the 11 studies reported statistically significant improvement in anxiety symptoms from baseline to post or follow-up evaluations for intervention groups as compared to waitlist, no treatment, or active control groups (Anticich et al., 2013; Aune & Stiles,

Table 3.2 Interventions for youth with elevated anxiety symptoms

Author	N; age	Inclusion criteria	No. of sessions	Treatment type	RCT groups	Provider	Findings
Balle and Tortella-Feliu (2010)	N = 613; ages 11–17	>80th percentile in anxiety sensitivity	6 (45 min)	FRIENDS (CBT)	CBT; WLC	Research staff	CBT = WLC
Berry and Hunt (2009)	N = 46; ages 12–15	SCARED > 1 SD above M; bullying history	8 child; parent program	Cool Kids (CBT)	CBT; WLC	Research staff	CBT > WLC
Cooley-Strickland et al. (2011)	N = 98; ages 8–12	RCMAS 7-score > 51; exposure to community violence	13 (biweekly); 3 parent	FRIENDS (CBT)	CBT; WLC	Research staff	CBT = WLC
Fitzgerald et al. (2016)	N = 127; ages 15–18	>75th percentile on self-reported anxiety	4	Attention bias modification (ABM)	ABM; AC	N/A (computer)	ABM = AC
Ginsburg et al. (2019)	N = 54; ages 5–12	Elevated anxiety symptoms as indicated by ADIS-C	6 (20–30 min)	CALM (CBT)	CBT; AC	School nurses	CBT = AC
Haugland et al. (2020)	N = 313; ages 12–16	Elevated anxiety and interference	Brief: 6 (45–90 min); 1 joint parent session Standard: 10 (90 min); 2 parent	Vaag (Brief CBT); Cool Kids (CBT)	CBT (Brief); CBT (Standard); WLC	School nurses and community clinicians	CBT (Brief) > WLC; CBT (Standard) > WLC; CBT (Brief) = CBT (Standard)
Hunt et al. (2009)	N = 260; ages 11–13	>1 SD above mean on RCMAS	10; 2 booster; 1–2 parent	FRIENDS (CBT)	CBT; NTC	School counselor and support teacher	CBT = NTC
McLoone and Rapee (2012)	N = 152; ages 7–12	>90th percentile on SCAS	10; 2 parent	Cool Kids (CBT)	CBT (school); CBT (home); WLC	School counselors; parents	CBT (school) > WLC; CBT (home) > WLC; CBT (school) = CBT (home)
Miller et al. (2011)	N = 191; grades 4–6	7-score > 56 on MASC	9	FRIENDS (CBT)	CBT; ATN	Teacher + school counselor or research staff	CBT = ATN
Mifsud and Rapee (2005)	N = 91; ages 8–11	>75th percentile on RCMAS	8; 2 parent	CBT (Cool Kids)	CBT; WLC	School counselors and community mental health workers	CBT > WLC

(continued)

Table 3.2 (continued)

Author	<i>N</i> ; age	Inclusion criteria	No. of sessions	Treatment type	RCT groups	Provider	Findings
Sportel et al. (2013)	<i>N</i> = 240; ages 13–15	>75th percentile on RCADS	CBM: 20 (40 min each, twice weekly); CBT: 10 (90 min)	Cognitive bias modification (CBM); CBT	CBM; CBT; NTC	Research staff	CBT > CBM; CBT > NTC; CBM = NTC

AC: Active Control, *ADIS-C* Anxiety Disorders Interview Schedule for Children, *ATN* Attention Control, *CALM* Child Anxiety Learning Modules, *CBT* Cognitive–Behavioral Therapy, *FRIENDS* Feeling worried; Relax and feel good; Inner thoughts; Explore plans; Nice work so reward yourself; Don't forget to practice; Stay calm, *MASC* Multidimensional Anxiety Scale for Children, *NTC* No-Treatment Control, *RCADS* Revised Children's Depression and Anxiety Scale, *RCMAS* Revised Children's Manifest Anxiety Scale, *RCT* randomized controlled trial, *SCARED* Screen for Child Anxiety Related Disorders, *SCAS* Spence Children's Anxiety Scale, *SD* Standard Deviation, *WLC* Waitlist Control

Table 3.3 Indicated school-based treatment studies for students with anxiety disorders

Author	<i>N</i> ; age	Inclusion criteria	RCT groups	No. of sessions and treatment format/type	Provider	Findings
Bernstein et al. (2005)	<i>N</i> = 61; ages 7–11	Primary anxiety dx (SOP, GAD, SAD)	Child group CBT; child group CBT plus parent group; no-treatment control	Child Group CBT: 9 weekly group sessions Child Group CBT plus parents: 9 child group sessions; 9 parent sessions (60 min); 2 booster sessions	Research staff	Child plus Parent Group CBT > Child group CBT > no-treatment control based on clinician (ES 0.58), child, and parent reports
Chiu et al. (2013)	<i>N</i> = 40; ages 5–12	Primary anxiety dx	CBT; WLC	Building Confidence (modular CBT): 1–16 weekly sessions (60 min); 1 (30 min) meeting with teacher; one 30-min meeting with school nurse; Optional parent meetings	Research staff	CBT > WLC
Chu et al. (2016)	<i>N</i> = 35; ages 12–14	Clinical or subclinical dx of unipolar depression disorder, or an anxiety disorder	GBAT; WLC	12–15 group (7 youth per group) sessions; 2 individual meetings (30–45 min)	Research staff; School counselors	GBAT > WLC
Dadds and Spence (1997)	<i>N</i> = 128; ages 7–14	Mild anxiety dx or features of anxiety disorder	Coping Koala (CBT) vs. monitoring-only control	10 sessions (weekly, 1–2 h each, parents attended 3 sessions); Group (5–12 children/group)	Research staff	CBT = Monitoring (at post-intervention among students with an AD); CBT > Monitoring at 6-month follow-up
Ginsburg et al. (2020)	<i>N</i> = 216; ages 7–18	Any primary AD	CBT; TAU	12 sessions; Individual; CBT	School-based clinicians	CBT > TAU (for youth with high BL anxiety only); CBT = TAU (for total sample)

(continued)

Table 3.3 (continued)

Author	<i>N</i> ; age	Inclusion criteria	RCT groups	No. of sessions and treatment format/type	Provider	Findings
Ginsburg et al. (2012)	<i>N</i> = 32; ages 7–17	Any primary AD	CBT; TAU	12 sessions; Individual; CBT	School-based clinicians	CBT = TAU
Ginsburg and Drake (2002)	<i>N</i> = 12; ages 14–17	Any primary anxiety dx	CBT; ASC	CBT and AS: 10 group sessions (45 min)	Research staff (graduate students)	CBT > AS
Masia-Warner et al. (2007)	<i>N</i> = 36; ages 14–16	Primary social anxiety dx	SASS (CBT); ASC	12 group sessions (40 min); 2 individual sessions; 4 weekend social events; 2 parent and teacher group sessions; and 2 booster sessions for adolescents	Research staff	SASS > AS
Masia-Warner et al. (2016)	<i>N</i> = 138; ages (9th–11th graders)	Primary social anxiety dx	C-SASS (CBT); P-SASS (CBT); SFL (control)	SASS: 12 group sessions; 2 individual sessions (15 min); 2 parent sessions (45 min); 4 out-of-school social events (90 min); 2 teacher meetings (30 min); 2 group booster sessions SFL: 12 group sessions; 1 parent session; 1 brief individual session; 1 group booster session	Research staff (P); school-based clinicians (C)	C-SASS = P-SASS > SFL

(continued)

Table 3.3 (continued)

Author	<i>N</i> ; age	Inclusion criteria	RCT groups	No. of sessions and treatment format/type	Provider	Findings
Masia-Warner et al. (2005)	<i>N</i> = 35; ages 13–17	Primary social anxiety dx	SASS (CBT); WLC	12 group sessions; 2 individual meetings (15 min); 4 weekend social events (90 min); 2 parent group meetings (45 min); 2 teacher meetings (30 min); 2 group booster sessions	Research staff	SASS > WLC

AD Anxiety Disorder, *AS* Attention Support, *ASC* Attention Support Control, *BL* Baseline, *CBT* Cognitive–Behavioral Therapy, *C-SASS* SASS delivered by school counselors, *dx* diagnosis, *ES* Effect Size, *GAD* Generalized Anxiety Disorder, *GBAT* Group Behavioral Activation Therapy, *P-SASS* SASS delivered by doctoral level psychologists, *RCT* randomized controlled trial, *SAD* Separation Anxiety Disorder, *SASS* Skills for Academic and Social Success, *SFL* Skills for Life, *SOP* Social Anxiety Disorder, *TAU* Treatment as Usual, *WLC* Waitlist Control

2009; Barrett & Turner, 2001; Essau et al., 2012; Keogh et al., 2006). Four of these five studies used manualized CBT-based protocols delivered by research staff (e.g., graduate students or licensed clinical psychologists) as opposed to classroom teachers. Despite the setting for these studies, few evaluated the impact of interventions on academic performance. In one notable exception, Keogh et al. (2006) evaluated a universal stress management intervention among adolescents in the United Kingdom preparing for a nationally administered standardized exam, finding that participants receiving the intervention performed, on average, one letter grade better than their peers in a no-intervention control group.

Six of the studies in Table 3.1 evaluating universal interventions failed to find evidence of efficacy of the intervention over comparison conditions. Two studies evaluating the effects of the Aussie Optimism Program-Positive Thinking Skills (AOP-PTS) as delivered by classroom teachers failed to outperform no-intervention control groups (Johnstone et al., 2014; Rooney et al.,

2013), and a third CBT-based, teacher-delivered intervention produced similar results when compared to a waitlist (Miller et al., 2010). Mindfulness and positive psychology-based interventions also demonstrated non-significant effects when compared to active controls (Britton et al., 2014), attention controls (Burckhardt et al., 2015), and waitlist controls (van de Weijer-Bergsma et al., 2014). Four of these six interventions were delivered by teachers, while one was a computer-based intervention. Notably, one study directly compared differences in intervention effects (using the FRIENDS intervention) when delivered by psychologists versus teachers (Barrett & Turner, 2001). Results indicated significant reductions in children’s self-reported anxiety scores from pre- to post-intervention relative to a monitoring-only control group for both teacher-delivered and psychologist-delivered CBT, which did not differ from each other. Notably, teachers delivering the intervention were supervised by postgraduate psychologists for 25% of their sessions, which may account in part for the positive findings.

Table 3.4 Core components of school-based interventions for student anxiety

Component	Description
Psychoeducation	Provide information about the prevalence (e.g., anxiety is common) and manifestations (e.g., physical, cognitive, behavioral) of anxiety. Describe techniques to identify emotions/anxiety and introduce the CBT model and how the CBT skills can reduce anxiety. These skills include exposure, relaxation, cognitive restructuring, problem-solving, social, and relapse prevention (described below).
Exposure	Provide rationale for importance of facing fears (i.e., exposure) in real life. Generate a personalized list of situation the student avoids at home and school in order of difficulty to facilitate gradual exposures (i.e., facing low-anxiety-provoking situations first, gradually increasing to face situations that provoke greater levels of anxiety). Emphasis is on daily exposure and continued practice. Rewards offered for engaging in exposures.
Relaxation	Introduce concept of physiological tension associated with anxiety and the benefits of using relaxation strategies. Teach relaxation strategies (e.g., progressive muscle relaxation, deep diaphragmatic breathing, guided imagery, and mindfulness exercises).
Cognitive	Introduce concept of negative “self-talk” and review common cognitive distortions. Teach steps for challenging and changing anxious thoughts and replacing them with “coping” thoughts in various anxiety-provoking situations.
Problem-solving skills	Introduce a problem-solving method. This method generally includes identifying a problem situation, brainstorming potential solutions without judging them, evaluating pros and cons of each option, selecting the best solution, and implementing the selected solution and evaluating its success.
Social skills	Teach social skills such as initiating/joining conversations with peers, dealing with bullying or teasing, and assertiveness.
Relapse prevention	Review strategies to prevent future exacerbations of anxiety and problematic avoidance. Develop a coping plan to help prepare for anticipated stressors.
Parent psychoeducation and contingency management	Provide psychoeducation about anxiety and CBT skills. Discuss how parents can help facilitate children’s acquisition of anxiety management skills with an emphasis on facilitating student’s exposure and use of positive reinforcement to reward “brave” (i.e., non-anxious or avoidant) behavior. Review parents’ behaviors that increase student anxiety and both plan to modify/decrease these behaviors (e.g., accommodation of fear/anxious avoidance, hostility, over-control) and increase behaviors that can reduce anxiety (e.g., warmth, autonomy promotion).

Taken together, evidence reviewed on primary prevention/universal interventions is mixed. Reporting of effect sizes was rare, but the magnitude of change on anxiety symptoms (based also on meta-analyses) suggests a small but significant positive effect size in at least half of the studies. Studies failing to find a significant impact on student anxiety were more likely to be delivered by teachers (rather than researchers or mental health specialists) and relied on mindfulness/positive psychology approaches (rather than CBT).

Secondary Prevention (Selective and Indicated) Interventions

Interventions reviewed in this section reflect those targeting youth who are at risk for developing a disorder and/or have elevated symptoms of

anxiety. Though some studies required that participants simply experience above-average levels of anxiety (e.g., Cooley-Strickland et al., 2011), other studies stipulated that participants demonstrate anxiety symptom scores at or above the 75th–90th percentiles as compared to their same-age peers (e.g., Balle & Tortella-Feliu, 2010; McLoone & Rapee, 2012; Mifsud & Rapee, 2005; Sportel et al., 2013). Anxiety symptoms were typically measured by widely used standardized questionnaires with well-established psychometrics, such as the Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1997), the Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1979), or the Multidimensional Anxiety Scale for Children (MASC; March et al., 1997).

Of the 11 studies highlighted in Table 3.2, 10 evaluated manualized CBT interventions.

Studies evaluating the FRIENDS program (total of four; delivered by research staff, school clinicians, and teachers) failed to find an intervention effect over waitlist or attention control conditions. In contrast, all four studies that evaluated the Cool Kids intervention demonstrated superior intervention effects compared to waitlist and/or active intervention controls. No clear trends were evident to separate the two interventions with regard to content, number of sessions, intervention training, or intervention fidelity/integrity. In fact, a recent study using data from a Cool Kids RCT found that intervention adherence and competence did *not* predict improvement in anxiety, although adherence and competence were greater for brief (as compared to full-length) intervention protocols (Husabo et al., 2022). One potential explanation for the superiority of Cool Kids over FRIENDS may be the variation in inclusion criteria. The majority of Cool Kids studies represented in Table 3.2 included youth with anxiety scores above the 75th–90th percentiles, or with “elevated anxiety and interference” (Haugland et al., 2020; McLoone & Rapee, 2012; Misfud & Rapee, 2005), whereas FRIENDS studies often included youth with milder elevations, such as *T*-scores that are simply above average (e.g., Cooley-Strickland et al., 2011; Miller et al., 2011). The inclusion of more severely affected youth in Cool Kids may increase the likelihood of improvement, either via treatment effects or spontaneous remission. As with universal interventions, collection of data on academic outcomes was rare, with no studies explicitly reporting on academic performance or other school outcomes.

In an attempt to broaden the network of school-based providers who can assist students with anxiety, Ginsburg and colleagues have developed brief teacher and school-nurse CBT-based interventions (Piselli et al., 2021; Ginsburg et al., 2019). The school nurse intervention called Child Anxiety Learning Modules (CALM; Drake et al., 2015) includes similar CBT principles to those used in FRIENDS and Cool Kids, but with the crucial distinction that

CALM is designed to be delivered by school nurses, who may be particularly well-suited to this task given that students with anxiety frequently visit the school nurse with somatic symptoms. A pilot RCT (summarized in Table 3.2) compared the CALM intervention to a relaxation skills-only curriculum (CALM-R). Results indicated that both CALM and CALM-R participants demonstrated significant clinical improvements as measured by interviews conducted by masked independent evaluators (IEs). Within-group effect sizes for key outcomes for CALM were moderate to large, ranging from Cohen’s $d = 0.55$ – 1.74 (Ginsburg et al., 2019).

Two non-CBT interventions explored the effects of cognitive bias modification training (CBM; Fitzgerald et al., 2016; Sportel et al., 2013). CBM aims to address anxiety symptoms by using computer-based tasks to modify negative or threatening attention biases that are often present in individuals with elevated anxiety (Notebaert et al., 2015). Both studies failed to demonstrate significant intervention effects for CBM compared to both a placebo computer task (Fitzgerald et al., 2016) and a traditional CBT protocol (Sportel et al., 2013). The latter of these studies indicated no significant difference between CBM and a no-intervention control condition. Thus, although CBM-based interventions are time-efficient and obviate challenges associated with training teachers, school nurses, or counselors, there is currently limited evidence to support their use in school settings. The use of technology as an intervention aid has shown more promising evidence when used to adapt or support implementation of CBT protocols (Storch et al., 2015).

In summary, the majority of secondary interventions are based on CBT, and of those that led to significant reductions in student anxiety (e.g., Cool Kids, CALM), effect sizes ranged from moderate to large (Cohen’s $d = 0.34$ – 2.7). Future research is needed to clarify why similar CBT protocols fail to have a similar impact on anxiety and the impact of these interventions on academic outcomes should be prioritized.

Tertiary Interventions

A summary of ten school-based RCTs of treatments for youth with anxiety disorders appears in Table 3.3. Interventions were delivered in elementary through high schools and targeted youth with social anxiety disorder exclusively (Masia-Warner et al., 2016) or with a broad range of primary anxiety disorders (e.g., Ginsburg et al., 2020). Study sample sizes ranged from small ($N < 50$) to moderate ($N = 216$; Ginsburg et al., 2020). Treatments evaluated in these studies were based on cognitive and/or behavioral interventions and were delivered using both group and individual formats. The length of treatments ranged from 10 to 12 student meetings (and some included parent and teacher meetings; see Table 3.3). In the majority of studies, research staff delivered the treatments, though there are three notable exceptions (Ginsburg et al., 2012, 2020; Masia-Warner et al., 2016) where treatments were delivered by school counselors. Only half of the studies used an active comparison condition (vs. a no-treatment control condition).

Among the smaller RCTs, CBT was generally compared to a waitlist control condition and results indicate that youth receiving CBT experienced a more positive response relative to those in the waitlist control condition (e.g., Bernstein et al., 2005; Chiu et al., 2013; Masia-Warner et al., 2005). Among studies that compared school-based CBT to an active control condition, and/or used non-CBT experts to administer the interventions (Ginsburg et al., 2020; Masia-Warner et al., 2016), findings were mixed. Masia-Warner et al. (2016) evaluated a 12-week group-based intervention (i.e., Skills for Academic and Social Success; SASS) for adolescents with social anxiety disorder (SOP). In this study, 138 adolescents were randomized to: (a) SASS delivered by school counselors (C-SASS), (b) SASS delivered by doctoral-level psychologists (P-SASS), or (c) a control condition, Skills for Life (SFL), a non-specific counseling program. School clinicians received didactic training, co-led their first therapy group with a study expert, and received 40 min of weekly supervi-

sion for all future groups. Independent evaluators (IEs) completed post-intervention assessments. At post-treatment and follow-up, respectively, between 21% and 39% of youth in C-/P-SASS no longer met diagnostic criteria for SOP compared to 7% and 11% in the control condition, a statistically significant difference. There were no significant differences between SASS delivered by school counselors and research staff psychologists. The authors concluded that with extensive training and ongoing supervision, school counselors can deliver evidence-based treatments with equal success as trained mental health specialists.

In contrast, two studies by Ginsburg and colleagues (2012, 2020) found similar outcomes for students receiving CBT and treatment as usual (TAU). For instance, in a large school-based study, a modular CBT was compared to treatment as usual (TAU) delivered by school-based clinicians in youth ($N = 216$) aged 6–18 years meeting *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* criteria for a broad range of primary anxiety disorders. Clinicians received one day of training in anxiety disorders, the CBT model and intervention modules, and study procedures, and were provided with treatment materials (e.g., treatment manual, handouts). Supervision was offered but not mandatory. Based on intent-to-treat analyses, youth in both treatment groups improved; however, no treatment group differences were found on most of the clinical outcomes measured at post-treatment or follow-up.

In summary, school-based treatments for students with anxiety disorders were based on cognitive-behavioral strategies. In most studies, the treatments were delivered by research staff and led to significant reductions in anxiety when compared to waitlist (i.e., no-treatment control conditions). However, in the three studies where treatment was delivered by school staff and compared to an active comparison condition (TAU, SFL), only one revealed that the experimental treatment was superior to the comparison condition, likely due to extensive training and continuous supervision provided by the research team,

which possibly enhanced adherence and quality of treatment delivery. The feasibility and costs associated with training and ongoing supervision pose important practical barriers to large-scale adoption of school-based treatments. Studies demonstrating cost-effectiveness and impact on academic outcomes are needed.

Future Directions

Providing school-based interventions for students with impairing anxiety holds the promise of broadening access to services for a population that is under-identified and under-treated. As reviewed in this chapter, growing numbers of anxiety reduction interventions have been evaluated in elementary, middle, and high school settings and several have been shown to be effective in lowering anxiety severity, though the magnitude of effects is modest and inconsistent.

Despite the rise in the number of school-based interventions for students with anxiety, numerous gaps in this literature remain. Most importantly, research is needed to identify ways of enhancing intervention effectiveness. Related, sustainable methods of intervention delivery (i.e., researchers vs. school staff) and the examination of treatment durability are needed. Research methods must increase in rigor as the majority of studies are described in extant meta-analyses as “low in quality,” failing to use gold standard designs and methods, which are barriers to drawing clear conclusions from published studies. Future work should also include analysis of academic outcomes. Finally, as schools operate within changing fiscal contexts, data are needed to evaluate the cost-effectiveness and cost benefits of school-based interventions.

Another gap in current knowledge regarding the effectiveness of school-based services for students with anxiety is identifying for whom these services work best—both within and across each model of intervention (primary, secondary, tertiary). Indeed, few published studies examined predictors, moderators, or mediators

of intervention response. These analyses are not only needed to enhance student outcomes but can also be used to refine intervention components and delivery methods. In one recent study, youth with the highest level of anxiety did better in CBT compared to TAU (Ginsburg et al., 2020). Additionally, Keogh et al. (2006) conducted a mediation analysis in an attempt to identify mechanisms of change in a cognitive-behavioral stress management program. Results indicated that changes in dysfunctional attitudes fully mediated the effects of the treatment program on academic performance and mental health (Keogh et al., 2006). The mixed outcomes noted in extant work on school-based interventions also speak to a need for future work to build on these initial attempts to identify mediators and moderators of effective treatment. Attention to the components of current interventions (e.g., number of sessions, session content) is also a fruitful area of future research. For instance, most current interventions range from 10 to 15 meetings. However, recent data on shorter (even single session) interventions (Schleider et al., 2020) deserve evaluation. The use of technology-delivered interventions, used as a stand-alone intervention or to augment in-person interventions, has shown promise in outpatient settings (Storch et al., 2015) and is also another productive area of research. Online interventions may also be cost-effective, require less training of school staff, and enhance student outcomes.

Across all areas of future study, improvements in methodological rigor are essential. Specifically, needed improvements include: (1) the use of appropriate control conditions (e.g., active control conditions rather than exclusively using waitlist controls), (2) the inclusion of assessments of adverse events, intervention adherence and acceptability, and school outcomes (e.g., classroom behavior, attendance, engagement), (3) the use of masked evaluators rather than child reports only, and (4) designs that assess the durability of intervention effects by including a long-term follow-up.

Conclusions

Anxiety is a highly prevalent and impairing condition that often goes under-identified and under-treated. Fortunately, a growing literature has emerged evaluating a broad range of school-based anxiety interventions. Findings from extant reviews, meta-analyses, and individual studies reveal mixed support for the effectiveness of school-based interventions for anxiety and highlight a need for enhanced methodological rigor for future studies. In addition to improving the effectiveness of school-based interventions, one important task is to ensure the adoption and sustained use of interventions by school staff. Several studies have begun to address this issue by training teachers, nurses, and counselors to deliver anxiety-reduction interventions. Masia-Warner et al. (2016) showed that with intensive training, school counselors delivered a targeted intervention to students with SOP with fidelity and outcomes of students receiving the intervention from school staff compared to research staff were similar. In another study comparing treatment effects by provider, Barrett and Turner (2001) identified no significant differences in anxiety reduction between psychologist-delivered and teacher-delivered FRIENDS. Finally, Ginsburg et al. (2019) trained school nurses to deliver a brief CBT intervention for students with anxiety with preliminary results showing significant reductions in anxiety. Each of these findings provides support for an ultimate shift toward intervention delivery by school-based providers rather than external research teams. Systematic research on the optimal training model for these school-based providers is viewed as a critical next step to ensuring all students with anxiety receive the interventions they need.

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Interventions for Students with Depression

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Nature and Impact of the Problem

The most common types of depressive disorders experienced by children and adolescents include Major Depressive Disorder (MDD) and Persistent Depressive Disorder (PDD) (American Psychiatric Association [APA], 2013). A diagnosis of MDD requires the presence of five or more of the following symptoms: depressed mood (i.e., persistent feelings of sadness or irritability), lack of interest or enjoyment in previously enjoyed activities (i.e., anhedonia), unintentional weight gain or loss (or, in youth, failure to gain weight based on developmental expectations), insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive guilt, decreased ability to think or concentrate, or recurrent thoughts of death or suicidal ideation (APA, 2013). Symptoms must include either depressed mood or anhedonia and have occurred for most of the day nearly every day for at least 2 weeks. PDD, previously termed Dysthymia, is characterized by depressed mood for most of the day on the majority of days for at least a 1-year period and requires at least two of the following symptoms: poor appetite or overeating, insomnia or hyper-

somnia, fatigue or low energy, low self-esteem, poor concentration, and feelings of hopelessness (APA, 2013).

Epidemiology

The lifetime prevalence of at least one major depressive episode occurring before the age of 18 years is approximately 13.3% (National Institute of Mental Health [NIMH], 2019). Prevalence rates differ among specific youth populations based on age, gender, sexual orientation, immigrant generation, and socioeconomic status. Specifically, research has consistently found that rates of depressive disorders are typically higher among adolescents compared to children (Avenevoli et al., 2015), females compared to males (Avenevoli et al., 2015), sexual minority youth compared to heterosexual youth (Marshal et al., 2013), and youth from low compared to high socioeconomic status (Adkins et al., 2009). Although findings regarding differences in rates of depression among White as compared to racially or ethnically minoritized youth are mixed, racial or ethnic minority youth are more likely to suffer from more chronic and severe depressive episodes than their White peers (Bailey et al., 2019).

The typical age of onset of depressive symptoms is between the ages of 13 and 15 years (Zisook et al., 2007), with an earlier age of

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onset being associated with increased recurrence of depression, greater severity of symptoms, and more lifetime suicide attempts (Zisook et al., 2007). Further, within any given year, 63.7% of adolescents with depression experience comorbid mental health disorders, the most common of which include anxiety disorders, post-traumatic stress disorder (PTSD), eating disorders, substance use disorders, and attention-deficit hyperactivity disorder (ADHD; Avenevoli et al., 2015). Moreover, one out of four adolescents with depression report suicidal thoughts, plans, or attempts (Avenevoli et al., 2015). Non-suicidal self-injury (NSSI) is also common, with approximately 38% of depressed adolescents engaging in NSSI (Asarnow et al., 2011).

Functional Impairment

Children and adolescents with depression experience higher functional impairment than non-depressed peers, with approximately 8.7% of adolescents with depression experiencing severe impairment (Merikangas et al., 2010). With regard to academic functioning, depressive disorders among youth have been associated with lower school grades (Riglin et al., 2014), poor school attendance (Finning et al., 2019), lower academic self-efficacy (Jaycox et al., 2009), and impaired academic skills (Lundy et al., 2010). These significant negative effects can ultimately influence depressed students' graduation rates and, by extension, post-secondary educational attainment (Clayborne et al., 2019). Depression is also often associated with impairments in social functioning (Allen et al., 2006). In particular, youth with depression are found to respond less appropriately in social situations than non-depressed peers, leading to challenges in developing and maintaining supportive interpersonal relationships (O'Shea et al., 2014). Within the home setting, depressive symptoms contribute to lower-quality parent-child relationships and higher parent-child conflict (Ogburn et al., 2010).

Targets of Intervention

Youth depression has individual (e.g., biological, cognitive), microsystem (e.g., interpersonal, school, family), and macrosystem (e.g., socio-ecologic) etiologies (Hankin, 2012) that inform the targets for intervention. In the section below, cognitive, behavioral, interpersonal, and socio-ecological theories of depression and their targets for intervention are reviewed. As the focus of this chapter is on school-based psychosocial interventions, this review of the malleable and causal characteristics that may be successfully targeted by youth depression interventions will exclude biological etiologies; the reader is referred to Berrettini and Lohoff (2017) for a thorough review of this topic.

Cognitive and Behavioral Targets for Intervention

Three main cognitive theories of depression underscore the role of several cognitive patterns that serve as vulnerabilities for depression among youth and adolescents (Abela & Hankin, 2008). Such perspectives assert that these cognitive vulnerabilities can lead to the onset of depression when activated under conditions of stress, otherwise known as the diathesis-stress model (Ingram et al., 1998). First, the hopelessness theory asserts that individuals with a more depressogenic inferential style (i.e., attributing negative events to global and stable causes, catastrophizing outcomes of negative events, viewing the self as flawed and deficient) are more likely to develop symptoms of depression when exposed to life stressors (Abramson et al., 1989). Next, Beck's (1967) cognitive theory contends that the development and persistence of depressive symptomatology is a result of an individual's bias toward negative interpretation of events. Finally, the response styles theory purports that the severity and duration of depressive symptoms are predicated on an individual's response to their symptoms, with symptoms being exacerbated by rumination (i.e., persistent focus on negative

thoughts and feelings) and alleviated by distraction (i.e., focus shifted away from negative thoughts and feelings; Nolen-Hoeksema, 1991). Thus, the goals of cognitive interventions are to increase youth awareness of negative thoughts and maladaptive causal attributions and subsequently teach cognitive restructuring techniques to replace these unhealthy, maladaptive thoughts with healthy, realistic cognitions (Beck, 2011).

Behavioral theories contend that depression is a learned experience stemming from an individual's negative interactions with their environment (Lewinsohn, 1975). Consequently, behavioral targets for youth depression interventions include behavioral activation, defined as increased engagement in adaptive activities, decreased involvement in activities that perpetuate or increase risk for depression, and increased ability to solve problems that pose barriers to eliciting environmental reward (Dimidjian et al., 2011).

Interpersonal Targets for Intervention

The developmentally based interpersonal model of youth depression contends that early family disruption (e.g., insecure child–parent attachment), social–behavioral deficits (e.g., excessive reassurance-seeking), and relationship disturbances (e.g., poor quality of family, peer, friend relationships) contribute to the onset and persistence of youth depression (Rudolph et al., 2008). Four interpersonal problem areas are thought to impact youth depression symptomatology, namely grief, role transition, interpersonal role dispute (e.g., level of independence), and interpersonal deficits (e.g., lack of social and communication skills; Jacobson et al., 2017). Youth depression interventions informed by interpersonal theories of depression include: (a) affect identification, or linking changes in mood to specific interpersonal experiences; (b) communication analysis, or gaining perspective on the impact of verbal and non-verbal communication

on interpersonal interactions and modifying communication style to elicit greater interpersonal connection; and (c) decision analysis, or engaging in effective compromise and negotiation in interpersonal relationships (Jacobson et al., 2017).

Family and Socioecologic Targets for Intervention

Although current research is more limited in its discussion of family and socioecologic theories of depression, these critical considerations in the onset and persistence of youth depression cannot be overlooked. The family stress model contends that economic hardship (e.g., poverty, economic loss) results in parental psychopathology and less-than-optimal parenting, which in turn increases the risk of child and adolescent psychopathology (Conger & Donnellan, 2007). Additional stressors associated with depression symptomatology at the family level include experiences of childhood maltreatment (Gibb, 2002), as well as acculturative stress among immigrant-origin youth (Sirin et al., 2012).

The socioecological model underscores the deleterious impact of racism, discrimination, economic oppression, and sense of powerlessness on psychological outcomes (Akbar, 1991). In the context of adolescent depression, the socioecologic model contends that when minoritized adolescents experience stress, multiple forms of oppression compound, leading to internalized feelings of powerlessness (Hammack, 2003). Targets for intervention within socioecologic stress models emphasize the importance of employing an integrated theoretical lens when conceptualizing and addressing targets for depression intervention across all intervention orientations. One such way this has been done is by culturally adapting evidence-based interventions (EBIs) to incorporate discussions of culturally relevant risk and protective factors throughout the course of treatment (Bernal et al., 1995), among other adaptations.

Approaches to Intervention

Psychosocial treatments, and, in particular, cognitive behavioral therapy (CBT) and interpersonal therapy (IPT), are among the most well-supported approaches to treatment of depression among children and adolescents (Eckshtain et al., 2020). In the following section, we review these treatment approaches, as well as family therapy approaches to the treatment of youth depression. While pharmacological approaches have demonstrated effectiveness in treating youth depression, particularly when utilized in combination with psychosocial interventions (TADS Team, 2004), we do not review them here; readers are referred to Carlson and Barterian (2019) for a detailed review of psychopharmacological interventions for youth depression.

Cognitive Behavioral Therapy

Cognitive behavioral therapy involves a variety of techniques with the primary goal of identifying and changing maladaptive thoughts and behaviors. Although CBT treatment manuals for depression incorporate a variety of treatment techniques (e.g., problem solving, coping skills training) delivered in varying formats (e.g., individual, group), cognitive restructuring and behavioral activation remain at the core of CBT for depression (Weersing et al., 2009).

Research to date supports the efficacy of CBT as a “well-established” EBI for depression in adolescents (Weersing et al., 2017). Meta-analyses examining the efficacy of CBT in reducing symptoms of depression among adolescents have demonstrated its superiority to non-active controls and active controls (Crowe & McKay, 2017). Further, when employed in combination with psychotropic medication, CBT with adolescents has been found to be more efficacious than medication or CBT alone (TADS Team, 2004). Among children, individual and group CBTs are considered to be “experimental” and “possibly efficacious,” respectively (Weersing et al., 2017). Although CBT has resulted in quicker rates of

improvement among depressed children as compared to usual care (Weisz et al., 2009), findings on the superiority of CBT with children have been mixed (Kahn et al., 1990; Vostanis et al., 1996; Weisz et al., 2009). The less robust support for CBT for child depression has placed into question current views of models of intervention for the treatment of depression in pre-pubertal youth. Indeed, considering research that has pointed to lower heritability for and increased environmental influence on childhood depression (Rutter et al., 2006), the value in examining parent-mediated interventions for this age group has been emphasized (Weersing et al., 2017).

Interpersonal Therapy

Interpersonal therapy (IPT) is a brief treatment that seeks to address symptoms of depression by resolving a problematic social event associated with depression and teaching effective skills to address interpersonal concerns stemming from the event (Weissman et al., 2000). Originally developed and evaluated for the treatment of depression in adults (Klerman et al., 1984), IPT has been modified for use with depressed adolescents (i.e., IPT-A) to target social events that are salient in adolescence, including parent–child and peer conflict (Moreau et al., 1991). The main components of IPT-A include psychoeducation, affect identification, interpersonal skills building, perspective taking, problem-solving, and affect expression. While IPT-A was originally developed as an individual treatment approach, it has been adapted for implementation with groups (i.e., IPT-AG; Mufson et al., 2004c) and as a school-based prevention program (i.e., Interpersonal Psychotherapy—Adolescent Skills Training [IPT-AST]; Young et al., 2006).

Individual IPT-A is considered a “well-established” treatment with studies demonstrating positive effects on depression outcomes relative to treatment controls (Weersing et al., 2017). In clinic-based trials with depressed adolescents aged 12–18 years, individual IPT-A has been shown to lead to significant reduction in depression symptoms as compared to usual care

(e.g., Mufson et al., 1999). It is worth noting that differences in efficacy by age and symptom severity have been found, with results pointing to increased reduction in depressive symptom among older and/or more severely depressed adolescents (Mufson et al., 2004b). In response to research regarding the critical role of environmental factors on preadolescent depression (Rutter et al., 2006), IPT-A has been modified to more actively involve parents in sessions and directly address interpersonal concerns most salient among preadolescent youth (e.g., parent-child conflict). This treatment, family-based IPT (FB-IPT), has resulted in significant reductions in depressive symptoms in preadolescents aged 7–12 years from pre- to post-treatment as compared to control (Dietz et al., 2015). Further, less empirical support for IPT-AG exists than for IPT-A, to date demonstrating positive effects compared to control in only two studies by the same research team. Accordingly, it has been termed a “probably efficacious” treatment for adolescent depression (Weersing et al., 2017).

Family Therapy

Unlike the above intervention approaches, in which youth are the primary target of skill acquisition and which involve parents to varying degrees, family therapy for depression among youth seeks to improve communication among, alter dysfunctional patterns of behavior between, and change maladaptive alliances between family members in conjoint family sessions (Kaslow & Rascusin, 1994). Although there exists less empirical support for family therapy in comparison to CBT and IPT-A, family-based therapy is still considered “possibly efficacious” treatment for youth depression (Weersing et al., 2017). For instance, Attachment-Based Family Therapy (ABFT) seeks to reduce depression symptoms by strengthening adolescent attachment to their caregivers, increasing mutual respect between adolescents and their caregivers, reducing harsh criticism from caregivers, and promoting adolescent autonomy and competence. Studies examining the effectiveness of ABFT have found greater

reductions in depressive symptoms among adolescents compared to controls (e.g., usual care; Diamond et al., 2010) that were sustained at follow-up periods. Even though findings on the efficacy of ABFT are promising, additional studies on ABFT comparing this treatment to other approaches and with larger and more diverse samples are needed in order to generalize the effectiveness of family-based therapy for youth depression (Weersing et al., 2017).

Feasibility Within Schools

Schools have been highlighted as the ideal setting to implement depression prevention (Werner-Seidler et al., 2017) and intervention initiatives (Stark et al., 2011). In particular, providing treatment in schools can minimize or eliminate barriers to accessing treatment, which are typically evident in outpatient settings, and allows clinicians to address problems within one of the primary settings in which impairment is displayed (Fazel et al., 2014). Indeed, schools are the most common setting for the receipt of mental health services among youth (Duong et al., 2020).

Most interventions for treating youth with depressive disorders, however, were originally developed and evaluated in clinical settings, with few studies having examined implementation of these approaches within schools (Eckshtain et al., 2020). Considering that successful implementation and sustainability of EBIs are highly dependent on the fit of program characteristics with the existing organizational structures, individuals involved, and target population, the generalizability of EBIs to the school setting has been questioned (Cook et al., 2019). Within schools, several logistical constraints such as limited time and limited availability of school staff may interfere with implementation of mental health programming (Lyon et al., 2014). Additionally, the motivation of school leaders and staff to support implementation of EBIs (Franklin et al., 2012), the cost of implementation (Owens et al., 2014), and the amount of training and coaching needed to implement a program with integrity (Schultz et al., 2015) are also critical aspects impacting

the feasibility of EBIs within schools. Moreover, the cultural fit of EBIs with the target population particularly in light of the increasing diversity of US school students remains a key factor in the implementation of school-based interventions (Arora et al., 2017). These considerations signal the importance of collaborative relationships between program developers and school stakeholders in developing and implementing school-based mental health programs to expand upon research examining real-life applications of EBIs in school settings.

School Mental Health Programs

Multi-tiered Systems in Schools

A multi-tiered system of support (MTSS), a population-based prevention approach, involves the delivery of a continuum of evidence-based services in schools (Jimerson et al., 2015). Universal, or Tier 1, services are offered to all students with the goal of preventing depressive disorders. Selective, or Tier 2, services are offered to students at risk for depressive disorders. Intensive, or Tier 3, services are implemented with the goal of treating youth with depressive disorders (Arora et al., 2019). In the following sections, both prevention (Tiers 1 and 2) and intervention (Tier 3) programming for addressing youth depression in schools will be presented.

Prevention or Tier 1 and 2 Programming

Implementation of prevention, or Tier 1 and Tier 2, programs for youth depression is important not only in delaying the onset of clinically significant symptoms (Merry et al., 2011), but also in reducing the need for more intense mental health services (Kern et al., 2017). Though studies on prevention programs for depression in schools generally demonstrate small effect sizes, small improvements in depression symptoms for sub-threshold or at-risk youth can be beneficial (Werner-Seidler et al., 2017). In this section, two

prevention programs that have been developed or adapted for schools will be reviewed. Prevention programs selected for inclusion in this review are those with at least two randomized control trials (RCTs) conducted in US schools.

Penn Resiliency Program

The Penn Resiliency Program (PRP) is a Tier 1 or 2, 12-session, school-based, CBT-based group depression prevention program for youth aged 10–14 years (Gillham et al., 2008). In the first five sessions of PRP, students learn to (a) recognize the connections between beliefs, emotions, and behaviors, (b) identify maladaptive thoughts, and (c) engage in cognitive restructuring to challenge their negative beliefs. In the latter seven sessions, students learn a variety of interpersonal, problem-solving, and coping skills (Gillham et al., 2007). Training to administer this program is provided by the program developers at varied intensity and cost depending on the needs of the organization (Positive Psychology Center, n.d.).

RCTs of PRP within school settings have demonstrated its effectiveness in reducing depressive symptoms at post-intervention and at 6- and 12-month follow-ups as compared to assessment-only control groups (Chaplin et al., 2006; Gillham et al., 2012). PRP has also resulted in significant improvements in depressive symptoms among both boys and girls (Chaplin et al., 2006) and students with higher baseline depressive symptoms (Gillham et al., 2012). Further, findings show that community providers, such as teachers and school-based counselors, can effectively deliver PRP within the school setting (Gillham et al., 2007, 2012). However, noted inconsistencies in PRP's effectiveness in schools exist, with results differing by intervention site (Gillham et al., 2007) and participant race and ethnicity (Cardemil et al., 2002). Research attempting to identify participant characteristics and contextual factors that may contribute to mixed results has suggested potential variables moderating or mediating the effects of PRP (e.g., cognitive style; Brunwasser et al., 2018). However, further research is needed to better understand the sources of these inconsistencies and to determine which intervention components

and contextual factors bolster PRP's effectiveness (Brunwasser et al., 2018). Nonetheless, PRP remains among the most well-established and frequently examined prevention programs for youth depression in school settings (Arora et al., 2019).

Blues Program

Blues Program (BP) is a Tier 2, brief, school-based, CBT-oriented group prevention program targeting adolescents aged 13–19 years with elevated depressive symptoms (Rohde et al., 2019). The program consists of 6 h-long sessions over 6 weeks. Core components of the program include cognitive restructuring and behavioral activation. Group members are also given homework assignments to complete after each session to track progress and practice skills outside sessions. One or two group facilitators are needed to conduct the program with groups of four to seven adolescents. Supporting materials include a leader manual, student workgroup, fidelity measures, and screening measures, which are available at no cost (The Blues Program, n.d.).

Based on results from various RCTs in schools, BP has demonstrated greater effects in reducing depression than waitlist controls (Stice et al., 2007), assessment-only controls (Rohde et al., 2014; Stice et al., 2008, 2010), and alternative treatments, including supportive–expressive group therapy (Stice et al., 2008) and bibliotherapy (e.g., Stice et al., 2011). BP has also demonstrated its effectiveness in lowering the risk of onset of depression as compared to alternative treatments and controls (e.g., bibliotherapy, Rohde et al., 2014; assessment-only controls, Rohde et al., 2014; Stice et al., 2008, 2010). School-based mental health providers have also been found to be able to deliver the treatment with acceptable fidelity (Stice et al., 2008; Rohde et al., 2014). Nevertheless, several critiques of this program should be noted. While some studies sought to examine BP's effectiveness in improving social functioning, these gains as a result of attending BP were not sustained over time (Rohde et al., 2014) or relied on subjective perceptions of social support (Stice et al., 2011). Improvements have also been moderated by key

factors such as degree of participant motivation and comorbid substance use (e.g., Müller et al., 2015). Further, small sample sizes (Stice et al., 2007; Rohde et al., 2012) and a lack ethnic and racial representative samples (e.g., Rohde et al., 2014) have also been cited as limitations in existing literature.

Intervention Programs

Meta-analyses of intervention, or Tier 3, programming for depressed youth conducted within the school setting indicate small to large effect sizes (Gee et al., 2020; Arora et al., 2019). Two intervention programs primarily targeting depressive symptoms that have been developed or adapted for schools with at least two RCTs conducted in the United States will be reviewed in this section.

Primary and Secondary Control Enhancement Training (PASCET)

PASCET is a Tier 3, CBT-based intervention for children and adolescents aged 8–15 years with depressive disorders lasting up to 15 sessions (Weisz et al., 1997). The core elements of PASCET include teaching youth primary control (i.e., ACT skills), secondary control (i.e., THINK skills), and general problem-solving skills. Parents participate in an individual parent session prior to the first session with the child and join the last 10–15 minutes of each individual child session. A detailed program manual, an accompanying practice book, and optional manipulatives (e.g., stickers, markers, and cards) are needed to deliver the intervention (Weisz et al., 1997).

PASCET has been adapted as a school-based, video-guided intervention called Act & Adapt, in which 2 group leaders facilitate 13 sessions focused on strengthening primary and secondary control coping skills among vulnerable middle schoolers (Bearman & Weisz, 2009). The number of sessions implemented and parental involvement have varied in practical applications and adaptations of PASCET and Act & Adapt. In adapting the Act & Adapt, researchers informed

providers of the core elements essential to maintaining the integrity of the intervention while school personnel suggested ideas for procedures and content that would be feasible within the school environment (e.g., shortened meeting durations and added flexibility; Bearman et al., 2020).

Results of a school-based RCT of PASCET have demonstrated significantly greater reductions in depression symptomatology and higher likelihood of exhibiting average scores on both post-intervention depression measures when compared to a no-treatment control condition, at post-intervention and 9-month follow-up (Weisz et al., 1997). Eiraldi et al. (2016) further demonstrated the effectiveness of PASCET in reducing diagnostic severity for internalizing disorders among youth in an exploratory study within a school setting. When used within the context of school-wide school mental health delivery at Tier 2, several identified implementation barriers were noted. These included high staff turnover rates, low parent participation, and the low reliability of teacher referrals for internalizing behaviors (Eiraldi et al., 2019). In order to address these issues, the authors recommended that schools consider maintaining partnerships with university-affiliated programs in order to obtain ongoing support and technical assistance to facilitate continued implementation (Eiraldi et al., 2019).

In an RCT conducted across ten middle schools, Act & Adapt was compared to group treatment as usual (TAU); initial results underscored the acceptability and feasibility of Act & Adapt (Bearman & Weisz, 2009). Bearman et al. (2020) further modified Act & Adapt for a school-based pilot trial; preliminary results demonstrated reductions in emotional difficulties and improvements in coping strategies at post-intervention and at one-year follow-up. To date, evidence of reductions in depression symptomatology has not yet been demonstrated.

Interpersonal Psychotherapy for Adolescents

Interpersonal Psychotherapy for Adolescents (IPT-A) is a Tier 3, weekly 12-session treatment

for adolescents aged 12–18 years with mild to moderate depression symptoms (Mufson et al., 2004a). IPT-A has three phases: (1) initial phase, which includes psychoeducation and identification of problem areas; (2) middle phase, which involves learning and practicing communication and problem-solving skills; and (3) termination phase, which includes generalization of skills and future plans. IPT-A has also been adapted to a group therapy format (IPT-AG; Mufson et al., 2004c), which includes 2 pre-group individual sessions with the parent and adolescent, followed by 12 subsequent group therapy sessions. Further, IPT-AG includes two additional adolescent–parent dyad sessions throughout treatment.

Evaluations of the effectiveness of IPT-A in schools have revealed that, compared to TAU, youth receiving IPT-A experienced greater reductions in depression symptoms, as well as improved social functioning, problem-solving skills, and overall functioning (Gunlicks-Stoessel et al., 2010; Mufson et al., 2004b). While there is clear evidence for the effectiveness of IPT-A, the generalizability of the data may be questioned given lack of diversity and geographic distribution among participants. Further, data regarding the long-term effectiveness of IPT-A in schools are lacking as follow-up data have only been collected at 1-month post-treatment.

Developed based on IPT-A and IPT-AG, IPT-AST is a school-based group prevention program for adolescents aged 12–18 years with elevated depression symptoms (Young et al., 2016a). The program consists of two initial individual sessions, followed by eight weekly group sessions with a recommended group size of four to seven adolescents. Sessions include a focus on psychoeducation, as well as communication and interpersonal skills building aimed at improving three interpersonal problem areas (i.e., interpersonal role disputes, role transitions, and interpersonal deficits). A detailed manual and two-day training, as well as ongoing consultation as needed, are available at cost (Young et al., 2016b). Resources needed to implement the program include a large room, one to two group leaders, and binders for group members. Program developers recom-

mended IPT-ASP be delivered by masters- or doctoral-level mental health professionals.

Results from RCTs evaluating the effectiveness of IPT-AST indicate that it produces significantly greater reductions in depression symptoms and overall functioning in comparison to controls with effect sizes ranging from small-medium (Horowitz et al., 2007; Young et al., 2016a) to large (Young et al., 2006, 2010). However, differences were not maintained at 12-month or more follow-up assessments (e.g., Young et al., 2010). Community clinicians have been shown to effectively deliver IPT-A to depressed adolescents (Mufson et al., 2004b); however, a cost-benefit analysis of school personnel to be trained to effectively deliver IPT-AST is yet to be examined (Young et al., 2016a).

Promising Intervention Programs

Additional programs present promising options for use in schools. First, though having garnered less supporting evidence to date, the first program was designed specifically for use in schools for preadolescent youth, a less frequently addressed and unique developmental group within depression treatment literature. Further, though not tailored for or systematically evaluated in school settings, the second intervention program has garnered strong supporting evidence in clinical settings. It nonetheless has significant history of use in schools, perhaps due to its readily accessible content available at no cost.

Action

ACTION is a Tier 3, CBT-oriented intervention for depressed children aged 9–14 years developed for delivery in schools (Stark et al., 2007). ACTION includes 20 group sessions, 2 individual sessions, and 8 parent training sessions. The key components of the ACTION intervention include: (a) psychoeducation; (b) goal setting; (c) behavioral activation; (d) coping skills, emotion regulation, and problem-solving skills training; (e) cognitive restructuring; and (f) self-schema. A detailed manual and student workgroup exist at cost (Stark et al., 2011).

Narrative results of RCTs indicate that ACTION is effective in reducing youth depression symptomatology (Stark et al., 1987, 2011). Although ACTION is recognized as a highly effective intervention for depressed youth (Stark et al., 2011), only one published trial has been conducted within the school setting (Stark et al., 1987). Moreover, the program has not been systematically examined within the context of an implementation trial under real-world conditions in a school setting. As such, further research on the effectiveness of ACTION is needed.

Adolescent Coping with Depression Course (CWD-A)

The Adolescent Coping with Depression Course (CWD-A) is a Tier 3, group intervention targeting adolescents aged 13–19 years with depression consisting of 16, 2-h sessions over 8 weeks with up to 10 adolescents per group (Clarke et al., 1990). The core skills taught in the program include mood monitoring, social skills training, relaxation, behavioral activation, cognitive restructuring, communication, problem-solving, and relapse prevention. A detailed manual provides guidance to interventionists on the delivery of content, methods of assessment and recruitment, and training requirements. The accompanying student workbook includes structured activities, quizzes, and homework assignments. Both the manual and workbook are available online at no cost (Clarke et al., 1990).

CWD-A has been shown to be effective in reducing symptoms of depression among adolescents in clinical settings above and beyond waitlist controls (e.g., Lewinsohn et al., 1990) and active controls (Rohde et al., 2004). Further, CWD-A has also demonstrated significant reductions in parent-child conflict, frequency of outpatient visits, and use of medication (Clarke et al., 2005; Lewinsohn et al., 1990). CWD-A has been adapted and implemented in one pilot study within a school setting; results revealed that the shortened version of CWD-A (i.e., nine, 45-minute sessions) demonstrated significant reductions in depression symptoms at post-intervention and 6-week follow-up (Ruffolo et al., 2009). Thus, while CWD-A offers a par-

ticularly well-known and no-cost option, limited research exists supporting its use in school settings.

A modified version of CWD-A called the Coping with Stress Course (CWS; Clarke et al., 1995) has been developed as a group prevention program in schools. CWS is a CBT-oriented, school-based prevention program for adolescents who are at risk for depression and includes 15 group sessions of 45 min each. The manual and student workbook for CWS are also available online at no cost (Saavvus, n.d.). CWS was found to reduce the risk for future onset of clinical depression and depressive symptoms among at-risk adolescents over a 12-month follow-up period (Clarke et al., 1995). Conversely, Horowitz et al. (2007) later found that CWS significantly reduced depressive symptoms at post-intervention in comparison to no-intervention controls, but these gains were not maintained at 6-month follow-up. Thus, despite immediate positive effects, these results make it difficult to determine an overall appraisal of the program's effectiveness in preventing depression among youth in school settings.

Modular Therapy

Modular therapies have been put forth as an approach to providing feasible and individualized EBIs for depression in schools (Kinninger et al., 2018). Modular therapies are flexible approaches to the delivery of common evidence-based techniques found in treatment of depression in children and adolescents that are individually packaged as stand-alone, single-session "modules" (Weisz et al., 2012). Modules to incorporate in treatment are then selected and flexibly sequenced for use based on the needs of the child or adolescent (Weisz et al., 2012). Though modular therapies for depression have not yet been extensively evaluated in schools (Kinninger et al., 2018), they have been shown to be effective in treating depression among children in RCTs in clinical settings (e.g., Weisz et al., 2012). Indeed, the recent emergence of transdiagnostic treatments (i.e., approaches that

target two or more psychiatric disorders) designed to address depression and other co-occurring disorders reflects efforts to expand the benefits of treatment beyond single-disorder approaches and programs to be more likely to be feasibly implemented in school- and community-based settings (Hersh et al., 2016). One such program that has been examined in at least two RCTs in the United States targeting depression as well as other comorbid disorders is presented here.

The Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems (MATCH-ADTC)

MATCH-ADTC is a collection of 33 modules targeting youth aged 8–13 years with diagnoses or clinically elevated symptoms of anxiety, depression, trauma, and/or conduct disorders (Chorpita & Weisz, 2009). Each of these four treatment targets has its own decision flowchart guiding therapists' selection and sequencing of modules based on client responses to each session. Depending on the client's needs, the flowchart allows for integration of modules from all four treatments. Clear step-by-step instructions, activities, scripts, tips, and monitoring forms are included in each module in the detailed manual available for purchase online. Easy-to-read handouts and worksheets for children and their caregivers are also available in English and Spanish (Chorpita & Weisz, n.d.).

Two large-scale RCTs have evaluated MATCH-ADTC in community mental health settings as compared to TAU, as well as EBIs targeting anxiety, traumatic stress, disruptive behaviors, or depression (Weisz et al., 2012; Chorpita et al., 2017). Researchers found significant improvements in internalizing and externalizing symptoms as compared to TAU (Weisz et al., 2012), which were sustained at 3-, 6-, and 12-month follow-ups (Chorpita et al., 2013). Results also revealed faster rates of improvement in internalizing and externalizing symptoms (Chorpita et al., 2017; Weisz et al., 2012). Further, findings on the feasibility and acceptability of MATCH-ADTC revealed that mental health professionals perceived MATCH-ADTC more favorably as

compared to traditional, manualized treatments and TAU (Chorpita et al., 2015).

Given its flexible and user-friendly approach to treatment for a variety of mental health problems among youth, modular therapy approaches, such as MATCH-ADTC, may be particularly appealing for use in schools to allow for real-time adaptation of treatment (Lyon et al., 2014). Indeed, initial evidence of MATCH-ADTC in school settings has revealed generally positive views of program, with school counselors underscoring the flexible nature of the protocol as appropriate for the school setting and providing positive feedback on the benefits of the training and ongoing consultation (Corteselli et al., 2020). An RCT of MATCH-ADTC in schools is currently underway (Harmon et al., 2021).

Implementation Considerations

A number of implementation concerns must be considered in order to support the increased application of the above-noted interventions in schools. Given that many school-based programs have been transported from other service settings (Eckshtain et al., 2020), the fit of the program itself within the setting is crucial to successful implementation. Substantial adaptations and continuous evaluations of these incremental improvements may be needed to increase feasibility and utility within the school context (Lyon & Bruns, 2019). Fortunately, tools to assess the intervention-setting fit (e.g., the Hexagon Tool; see Metz & Louison, 2018) provide guidance for stakeholders when considering whether and how a program may fit with their school context and culture. Relatedly, the cultural fit of the program remains a key implementation consideration (Arora et al., 2017). As such, school-based mental health providers should assess the cultural fit of the program with the prospective school population. Although some programs described above have included more heterogeneous samples with regard to race and ethnicity (e.g., Young et al., 2016a), others have demonstrated an overrepresentation of non-Hispanic White youth in effectiveness trials (e.g., Rohde et al., 2014). Even

though there is a dearth of literature on the systematic evaluation of adaptations of the specific programs reviewed above for diverse populations, efforts to document and evaluate practitioner-led local adaptations of such interventions have been called for (e.g., Alvidrez et al., 2019).

The critical role of leadership and administrative support in the successful implementation of school mental health programs has been underscored (Lyon & Bruns, 2019). As most school mental health programs utilized within a multi-tiered framework involve multidisciplinary teams rather than individual providers (Franklin et al., 2012), the active involvement of school leaders to facilitate implementation practices that ultimately drive allocation of funding has been called for (Lyon & Bruns, 2019).

Moreover, provider training and consultation remain key implementation considerations in the success of these programs (Lyon & Bruns, 2019). In order to streamline training requirements, schools may consider modifications to support treatment adherence such as abbreviated therapist training, supervision of treatment adherence without audio- or videotapes, shorter session durations, flexibly scheduling sessions to align with school calendars, inclusion of heterogeneous samples, and consistent communication with parents (Mufson et al., 2004b). In considering the time commitment for training requirements, the option for online formats and resources (e.g., self-paced courses, asynchronous learning) may help to expand the reach and delivery of professional development of school staff (Becker et al., 2014).

Finally, given funding constraints, the costs to implement the programs above need to be considered (Owens et al., 2014). In addition to manuals and materials, costs may accrue with related training and consultation. Given the financial constraints of school systems and the requirements for paid training programs and ongoing coaching for several programs mentioned above, the benefits of the program to youth, families, and the school community must be made clear (Kern et al., 2017). Schools may find it beneficial to invest in preventive interventions to avoid

worsening of mental health challenges and reduce the need for more costly and intensive individualized interventions (Kern et al., 2017).

Conclusion

Childhood depression is a fairly widespread, stable, and recurring disorder leading to serious, negative consequences when left untreated. Schools serve as a critical location for the prevention and treatment of youth depression, wherein numerous CBT- and interpersonally based interventions for youth depression have been examined. This chapter seeks to summarize available research on the presentation and treatment of youth depression in order to meet the mental health needs of students with depressive disorders in schools. Furthering our field's knowledge in the area of school-based intervention for youth depression is critical if students are to receive adequate mental health services in schools.

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Interventions for Students with Social Impairment

5

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Introduction

A concerning problem for educators is social impairment in students. This chapter describes social impairment and the various ways that it can manifest. We summarize research findings that social impairment affects students' academic, emotional, and behavioral functioning at school, which underscores the importance of assessment and intervention for this problem. We next present some potential targets for intervention and intervention approaches and offer illustrative examples of school-based interventions to address social impairment in students. We conclude with directions for future research and practice in this area.

Nature and Impact of the Problem

Especially in the elementary grades, students' primary context for peer relationships is the classroom; however, the school continues to be an important locale for peer relationships in secondary school (Wentzel, 2017). Given the prominence of the school context for peer socialization, it is often evident when students have social

impairment. Such social impairment can be multifaceted, and manifests in different ways (e.g., see Dirks et al., 2007). First, such a student may show poor social behaviors and skills; this reflects social deficits in that student. Second, a student may have poor-quality peer relationships; this reflects problems in a process or dynamic between that student and peers. As discussed in this chapter, the distinction between deficient behaviors/skills and poor relationships is important because each may require different methods of assessment and intervention. Notably, these two categories of social impairment are relevant across developmental stages, such that they appear both in elementary school and secondary school students.

Regarding the first category (social behaviors/skills), some students display unskilled social behaviors at school, such as aggression, social withdrawal, or emotional outbursts (e.g., frustration, crying). They may also have few positive social behaviors; for example, they may fail to compromise, collaborate, or problem-solve with peers, or to make prosocial overtures. These problematic social behaviors are often disruptive in the classroom and they catch teachers' attention. Another type of difficulty can occur in students' social-cognitive or social-emotional skills. This might be shown by students being unable to identify emotions in oneself or in peers, to read peers' social cues, to understand peers who have different perspectives from them, or to accurately

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perceive their own competencies. It is thought that, at least for some students, the difficulties in social cognition may underlie the problematic social behaviors (see Tuerk et al., 2020). For instance, if a student cannot identify their own emotions, it may be harder to regulate them, leading to emotional outbursts. Or, if a student cannot perceive peers' social cues, this could lead to difficulties in recognizing when they are being offensive or insensitive to those peers.

Regarding the second category (peer relationships), another important way that social impairment manifests is in poor peer regard, which reflects the affective judgments that peers make about a student (Parker et al., 2006). For instance, students with social impairment may be rejected (i.e., disliked by most of the class, and liked by few) or neglected (i.e., ignored) by peers. They may also have few reciprocated friendships in the classroom (i.e., dyadic, close relationships between two students, reflecting an affective bond). Finally, social impairment could manifest in students having poor-quality peer interactions. For example, a student could experience a lack of support, or a lack of respectful treatment, from peers at school. At extreme levels, problematic peer interactions could appear in the form of perpetration of bullying, or in being the recipient of peer victimization (Hong & Espelage, 2012).

Social impairment in students is concerning for educators for several important reasons. First, there are strong links between social impairment and academic problems that are likely bidirectional (Juvonen et al., 2012; Wentzel, 2017); nonetheless there is evidence that social impairment can exacerbate academic problems over time, after accounting for initial levels of academic problems. Research finds that elementary school students who are peer rejected or victimized at the start of the school year are likely to have poorer academic achievement by the end of the year, owing to these students withdrawing from class participation and avoiding school (Buhs et al., 2006). Student perceptions of support and respectful treatment by peers also predict greater academic engagement, resulting in eventual achievement, among secondary school students (Mikami et al., 2017a). In addition to the

academic problems that may result from social impairment, a substantial literature also finds that friendship and peer acceptance help students feel a sense of belonging and connectedness to school (Wentzel & Caldwell, 1997). On the other side, victimization can leave students feeling excluded, lonely, and emotionally vulnerable (Reijntjes et al., 2010).

Finally, social impairment in students can disrupt the classroom learning environment for everyone. Students with social impairment create dilemmas for teachers when assigning teams for academic groupwork, as many peers do not want to work with these students. This can lead to squabbles between team members during groupwork that interfere with the team's academic productivity, contribute to teacher stress, or detract from the teacher focusing on academic content. Supporting these ideas, one study found that classroom victimization experiences were associated with reduced academic learning classroom-wide, and was not just limited to the students involved in the victimization (Reuland & Mikami, 2014).

Social impairment is a common feature across many mental health conditions in students, including those with depression or anxiety, conduct disorders, or autism spectrum disorders, but one prominent example is in students with symptoms or diagnoses of attention-deficit/hyperactivity disorder (ADHD; Mikami et al., 2019). Because ADHD is a prevalent disorder affecting 5.9–7.1% of students, and most students with this condition are in general education classrooms (Willcutt, 2012), we use it as an example throughout this chapter to illustrate how social impairment can manifest.

The social behaviors of students with symptoms or diagnoses of ADHD often involve aggression, emotion dysregulation, and poor ability to compromise and problem-solve; this may also be related to difficulties in social-cognitive skills, especially in real-world peer situations in the heat of the moment (Bora & Pantelis, 2016). It is estimated that 52% of elementary school-age children with ADHD are peer-rejected, and 56% do not have a mutual friend in their classroom; the comparison figures

in classmates for peer-rejected status and lack of friendship are 14% and 32%, respectively (Hoza et al., 2005b). In a study of young adolescents with ADHD, 57% reported having at least one victimization experience every week, including relational (51%), reputational (17%), and physical victimization (14%; Becker et al., 2017). The negative ramifications of social impairment also apply to students with ADHD, where social impairment has been found to incrementally predict lower grades in a longitudinal design (Dvorsky et al., 2018). Experiencing peer rejection may also predict greater anxiety symptoms and substance use in children and adolescents with ADHD (Mrug et al., 2012), and there is even some evidence that it may exacerbate the symptoms of ADHD themselves (Tseng et al., 2014).

In summary, social impairment in students is prevalent, and relevant across developmental stages. Social impairment can exacerbate students' subsequent maladjustment in other academic, emotional, and behavioral areas; as well, it can disrupt the broader classroom learning environment and create problems for teachers. Taken together, this underscores the need for intervention to address social impairment in students.

Malleable Factors That Are Potential Targets for Intervention

As social impairment is a multifaceted construct, it follows that interventions for this impairment can aim to improve problematic student behaviors/skills, or aim to improve the poor relationships those students have with peers. For many students, the ideal may be improvements in both categories, at least eventually. This distinction between behaviors/skills and relationships is again important because they may necessitate different intervention approaches. However, herein we argue that there are some common assumptions in our field about the links between behaviors/skills and relationships, which have informed models of intervention.

We propose that the majority of interventions to address social impairment in students have tar-

geted student behaviors/skills, under the assumption that doing so will have the downstream result of these students having better peer relationships (Mikami et al., 2017b). In other words, the source of the problems in peer relationships has been assumed to be students' deficient behaviors/skills. Based on this model, changing the malleable factor of student behaviors/skills should take priority, because it should lead to broader improvements in other aspects of social impairment (such as relationships).

An alternative, however, is to target factors in the peer group that may facilitate or maintain poor peer relationships in a student. In other work, we have argued that addressing student problematic behaviors/skills may be a necessary but insufficient condition for changing peer relationships (Mikami & Normand, 2015). Rather, it may be required to also address key peer group factors, some of which are elaborated upon below. Importantly, helping students to develop better peer relationships (potentially through targeting the peer group factors affecting this outcome) could then provide a motivating context for students to learn and practice better behaviors/skills (Murray-Close et al., 2010). However, the theoretical model of changing malleable peer group processes to result in better peer relationships, which eventually leads to broader improvement in behaviors/skills, has been given limited attention in the literature.

Malleable Factor 1: Problematic Student Behaviors and Skills

Student characteristics that are often targeted by interventions are their deficient social behaviors/skills. For example, interventions often seek to reduce negative student behaviors such as aggression or fighting with peers, interrupting or intruding, or poor sportsmanship (Mize & Ladd, 1990). In recognition of the idea that the absence of negative behavior does not equate to the presence of positive behavior, interventions may also seek to build positive behaviors such as conflict resolution, compromise, and problem-solving. For students who demonstrate social withdrawal,

interventions can aim to bolster prosocial engagement with peers. Because it is thought that deficits in social-cognitive or social-emotional skills can underlie, or at least influence, some of the problematic social behaviors (Tuerk et al., 2020), interventions can also target building students' skills in emotion recognition and regulation, reading social cues, or understanding peers' mental states (Durlak et al., 2011).

Malleable Factor 2: Peer Group Processes

Peer relationships are inherently interpersonal and dynamic processes that depend not only on the behaviors/skills of one student, but also on how peers elicit, interpret, and respond to those student behaviors (Rubin et al., 2007). Therefore, peer group processes may also contribute to problems in peer relationships that are experienced by students with social impairment. One relevant peer process may be the cliquish nature of the peer group. Some peer groups are more hierarchical, whereas in others, social ties tend to be more equitably distributed across all students (Cappella et al., 2013). Peer groups also have norms for exclusionary behavior and whether they tolerate bullying of others in the outgroup. One implication is that the same student with the same social behaviors and skills might be more socially accepted by peers in one group versus another, simply because of the nature or norms in the peer group. Relevant to ADHD or other disorders, some peers have more stigma about symptoms of ADHD than do other peers, which may relate to their sociometric evaluations of classmates with ADHD (Na & Mikami, 2018). There is some research suggesting that stigma may depend on how common these behaviors are in the classroom already, or the way that the teacher reacts to students with ADHD (Chang, 2004; Gasser et al., 2018).

Another important peer process concerns the reputation that a student has in their classroom. Once a student develops a negative reputation, research suggests that peers have cognitive biases that prevent them from ever altering that impres-

sion (Rubin et al., 2015). For instance, when viewing an ambiguous behavior performed by a classmate who they dislike, peers may make hostile attributions for that behavior, while making benign attributions when the same behavior is performed by a liked classmate (Peets et al., 2007). However, research and interventions have overall neglected to attend to peer group factors that pertain to problematic peer relationships, while instead placing more emphasis on the behaviors/skills of the student with social impairment that turn off peers.

Implications for Assessment and Progress Monitoring

Implications for progress monitoring follow from the chosen targets of intervention. Notably, there are many measures, instruments, and validated questionnaires for assessing problematic student behaviors/skills (see review in Whitcomb & Merrell, 2013). It is common for clinicians working in schools to give the teacher a questionnaire to complete about student behaviors, and this is usually a feasible approach (Gresham, 2016). Clinicians can also interview students to assess social-cognitive or social-emotional skills, such as by giving them a test of emotional knowledge (Izard et al., 2001). Another method is to observe students to monitor their social behaviors in various school settings, such as in the classroom and at recess, which can be done using formalized observation systems or informal observation (Merrell, 2001). Each of these measurement approaches could be used to monitor student progress. For instance, data could be collected to establish a baseline before intervention begins, and then be repeated over time to assess the potential effect of an intervention.

Compared to measures of student behaviors/skills, there are fewer feasible ways for clinicians to measure student difficulties with peer relationships. The gold standard for assessing peer regard from a research perspective is usually considered to be the sociometric method (Bukowski et al., 1994), in which peers nominate the classmates whom they like and those whom they dislike

(Coie et al., 1982). For each student, scores can be calculated reflecting the proportion of peers who nominated them in each category. Yet, it is often impractical to administer sociometrics outside of a research context, because it requires interviewing the whole class (often individually, if students are young), and the process of converting students' answers to the sociometric scores is time-consuming. Thus, a more feasible method of assessing peer regard is to ask the teacher to estimate the proportion of peers who accept versus reject or ignore a student (Dishion & Kavanagh, 2003). Finally, bullying and victimization are most typically assessed through student self-report, which has the benefit of identifying incidents about which teachers may not be aware or observers may not see (Jia & Mikami, 2018). However, the reliance on student self-report also raises questions about whether cognitive biases in students may affect their interpretation of events. The same event could potentially be interpreted as benign by one student, but as bullying by a student with depression, and there has been controversy about whether student perspectives should be prioritized or whether it is important to seek an "objective" standard (Jia & Mikami, 2018).

Our ability to measure peer group processes that may contribute to social impairment in a student is extremely limited, which possibly reflects the historical lack of attention to this perspective. To our knowledge, there are no normed questionnaires to assess social dynamics in the peer group, in contrast to the vast number of existing questionnaires to assess student problematic behaviors. However, we recommend that clinicians might simply ask teachers to what extent they think a negative reputation and/or a cliquish peer group are contributing to the student's social impairment. Despite this being an unstandardized assessment, this might generate ideas for how the teacher could monitor these factors. In a research context, it might be possible to administer questionnaires to the peer group to assess their stigma of ADHD (Kellison et al., 2010; O'Driscoll et al., 2012), where the data generated could suggest the peer group's reported likelihood of socially devaluing a classmate with ADHD.

However, often it is impractical for a clinician to administer measures to the whole class. Similarly, researchers can use sociometric interview data to calculate the hierarchical versus equitable nature of a social network in a classroom (e.g., Cappella et al., 2013), but, as mentioned above, sociometrics are unlikely to be feasible to administer outside of a research context.

However, without good measurement, progress monitoring is challenging. For instance, if a teacher wishes to implement an intervention to address peer group factors that contribute to problems in peer relationships, but has no assessment tools to measure such factors, it will be difficult to create such an intervention. Further, it will be hard to monitor intervention-related change in the peer group factors targeted.

Approaches for Interventions

In this section, we discuss broad intervention approaches to address social impairment in students. These approaches can be considered to map onto the two categories of malleable intervention targets identified in the section above. We note that the majority of these existing intervention approaches target the problematic behaviors/skills in students with social impairment, with perhaps some assumption that improvements in these areas will generalize to peer relationship outcomes. Intervention approaches to target the peer group factors that may also contribute to peer relationship outcomes have garnered less attention in the literature.

Intervention Target: Problematic Student Behaviors and Skills

One common intervention approach in this category is classroom behavior management. Broadly, this involves the teacher setting up clear behavior expectations, communicating these to students, giving feedback to students about their performance, and implementing consistent reinforcements for students meeting expectations (or consequences for not meeting expectations).

Classroom behavior management is an empirically supported technique to reduce negative and increase positive student behaviors as a universal approach, in addition to being useful for the clinical population of students with ADHD (Epstein et al., 2008). Relevant to social impairment, behavior management can be used to shape behaviors that are socially unskilled and off-putting to peers. Teachers can select desired target behaviors accordingly, such as cooperation with peers, sharing materials in group projects, or letting peers take turns. Even though teachers will adjust their wording for students at different developmental levels, the same behavioral principles remain relevant. For instance, setting behavior expectations before a task is needed for students of any age, as is performance feedback. Older students can be expected to have more autonomy and to be able to carry out more complex tasks; however, good classroom behavior management has been demonstrated to be useful across age groups (Flannery et al., 2014).

Another intervention approach involves skills training to improve students' social-emotional or social-cognitive competencies (Durlak et al., 2011). One way this can be done is through a universal curriculum, where the teacher provides lessons to the whole class on competencies such as emotional awareness, conflict resolution, empathy, and perspective taking (Weissberg et al., 2015). Another option is to provide skills training through targeted, pull-out services to students selected for social impairment, where such students might receive a social skills training group led by a school psychologist or resource teacher (Weissberg et al., 2015). Such a group could cover similar types of social-emotional skills as taught in a universal curriculum, but allow for a more intensive focus and more individualized attention to students. Pull-out services could also involve peer pairing, where often children with social impairment are strategically paired with a peer (sometimes with a typically developing student), and activities are arranged for the dyad to learn and practice good social skills. Peer pairing interventions have some empirical support in the literature for children with conduct problems (Conduct Problems

Prevention Research Group, 1999a) or for those with autism spectrum disorders (Kasari et al., 2012).

Notably, these skills training approaches are suggested to be more useful for students without ADHD relative to those with ADHD (Evans et al., 2018), which is in part due to theory about the nature of social impairment in this disorder. Students with ADHD are often thought to know the correct skills to do; rather, their difficulty is in enacting those skills in real-life peer situations in the heat of the moment (Aduen et al., 2018). Most skills training approaches emphasize a model where knowledge about the correct skills is taught in the lesson, but without strong emphasis on how to help students translate those skills to real-life situations (Mikami et al., 2014). In contrast, interventions to improve knowledge may be more useful for other clinical populations of students with social impairment such as those with autism spectrum disorders (Gates et al., 2017), or as a universal classroom approach (Durlak et al., 2011).

Interventions to build social-emotional or social-cognitive skills are useful across developmental periods (Weissberg et al., 2015; Yeager, 2017), although they may be less commonly undertaken with older students. Because students in secondary school switch classes and spend a limited time with each teacher around a specific subject matter, teachers may focus on imparting subject matter content in the time they have with a class. Indeed, there are fewer universal social-emotional learning curricula for secondary school (Durlak et al., 2011), perhaps for this reason. Adolescents may also have reluctance about social skills training or peer pairing due to feeling stigmatized, as well as wanting to choose their own friends and activities.

Intervention Target: Peer Group Processes

In contrast to targeting deficient behaviors or skills in students with social impairment, targeting the peer group factors is a more understudied intervention approach. However, we offer

some ways that teachers might do so. One possibility is that teachers might institute cooperative learning instructional activities, where students must work together in order to achieve a superordinate goal, and positive interactions are encouraged by the teacher. There is some evidence that such cooperative learning practices might lead to students treating one another in a more supportive or respectful manner, and this has been demonstrated in elementary as well as secondary school classrooms (Johnson et al., 1993; Van Ryzin & Roseth, 2018). A teacher who treats students with respect and emotional support may also set a model for students to follow in terms of how they treat their peers (Mikami et al., 2011; Ruzek et al., 2016). Similarly, anti-bullying interventions often emphasize school-wide policies to create a social norm against bullying (Hong & Espelage, 2012). Some anti-bullying interventions specifically target recruiting bystanders (other observing students) to speak out against bullying when they see it occur (Salmivalli, 2014). Anti-bullying interventions are commonly implemented across all grade levels, which is important given that bullying tends to peak in middle school and continue to be present, albeit to a lesser degree, throughout adolescence (Cook et al., 2010).

Interestingly, more attention has been paid to teacher or school practices that target students' respectful interactions, as opposed to their peer regard toward one another. However, teachers' strategic seating arrangements of students may yield sociometric benefits for some students (van den Berg & Stoltz, 2018). Teachers who have learner-centered practices may also send a message that diverse students are deserving of liking (Mikami et al., 2012). There is also evidence that when teachers genuinely like certain students, that may predict those students becoming better liked by peers over time; notably, this has been found among both elementary and secondary school students (Chang et al., 2004; Hughes & Chen, 2011).

Intervention Feasibility

General education teachers commonly implement behavior management and/or universal social-emotional learning curricula, often at the whole-class level, suggesting the feasibility of these approaches (Durlak et al., 2011; Epstein et al., 2008). Also, receiving support from a school psychologist can be helpful for teachers during intervention delivery, especially to assist the students with the greatest social impairment and/or students with ADHD (DuPaul et al., 2011). These students may need higher doses of intervention, or extra attention. Usually, social skills training in a small group or with pairs involves pull-out services, so this requires the right supports in a school (Fox et al., 2020).

The interventions to target peer processes could also be feasible for a general education teacher to do, because many are universal (Mikami & Normand, 2015). Again, support from a school psychologist for strategies to target peer processes may be useful, since general education teachers may be less familiar with these approaches. Some interventions, especially those to prevent bullying, are done at the school level, and require administrator support (Hong & Espelage, 2012).

Examples of School Mental Health Interventions

We provide selected examples of school-based interventions for social impairment that illustrate the approaches listed in the previous section. This is not meant to be an exhaustive list of all available interventions; rather, our intention is to provide a few examples to give readers a flavor of each approach. With the exception of the Olweus Bullying Prevention Program (OBPP; Olweus & Limber, 2010), which spans elementary and secondary school, the programs focus on elementary school-age students, which reflects the overall greater focus in the field on younger students.

The Good Behavior Game

An example of a classroom behavior management program is the Good Behavior Game (GBG). This program, first introduced in 1969 with fourth-grade students, has amassed a wealth of research that continues to the present day (Flower et al., 2014; Tingstrom et al., 2006). The GBG is a universal intervention where teachers implement group, interdependent contingencies to encourage positive and discourage negative behaviors across the whole class. Students might be divided into teams and the team that best achieves the target behavior, as well as any team that achieves a certain level of the target behavior, receives teacher positive attention and privileges. As reviewed in Tingstrom et al. (2006), the majority of the implementations of the GBG have targeted reducing negative student behaviors such as verbal and physical aggression, disruptive behaviors, and breaking classroom rules. These are salient unskilled social behaviors that are off-putting to peers, and constitute social impairment. However, in some implementations, teachers have also targeted increasing positive student behaviors, such as good manners or helping peers. As in all behavior management programs, teachers implementing the GBG can select the particular social behaviors to target that they think are most relevant for their students, or are most in need of intervention in their classroom.

The majority of research evaluating the GBG has involved students in general education elementary school classrooms, but there are suggestions that the efficacy of the GBG may extend to older students (Ford et al., 2020), or to those in special education (Rubow et al., 2018). Most studies documenting the efficacy of the GBG have relied upon teacher ratings of student behaviors as the outcome measure, but, in an exception to this, one study found that the GBG resulted in lower peer-rated aggression (Dolan et al., 1993). Overall, the GBG has strong empirical support for reducing negative and unskilled student behaviors, with some demonstrations of increasing positive behaviors. The effects of the GBG may even extend to preventing students' sub-

stance abuse years later (Embry, 2002). Therefore, the GBG is a good example of an intervention to address problematic student behaviors.

However, there have been extremely few evaluations of the GBG on peer regard, which is another important aspect of social impairment. This might be due to an assumption that if students change their problematic behavior, then this will make them more likeable by peers. Nonetheless, this premise has rarely been tested with the GBG, despite the vast amount of research on this program. In fact, Tingstrom et al. (2006) even raised the idea that a negative effect of the GBG could potentially be that peers will notice, and resent, students who do not meet the behavior expectations because these students are preventing the class from achieving the group contingencies. Interestingly, Breeman et al. (2016), in a study of 389 children and their 58 teachers in elementary school special education classrooms, found that whereas the GBG was associated with lower teacher-rated behavior problems in students, there was no effect on peer sociometrics. This is consistent with other research involving children with ADHD and finding that although the combination of behavior management and medication resulted in better parent- and teacher-rated social behaviors, peer rejection (as measured by sociometrics) was unchanged (Hoza et al., 2005a). On the other hand, two investigations among elementary school students suggest that the effects of the GBG on lower aggression (Leflot et al., 2013) and suicide attempts (Newcomer et al., 2016) may potentially be mediated by lower peer rejection.

Promoting Alternative Thinking Strategies

The Promoting Alternative Thinking Strategies (PATHS) curriculum is an example of skills training to build social-emotional and social-cognitive competencies (Greenberg et al., 1995). This intervention consists of approximately 60 lessons delivered by the teacher (who could be supported by a school psychologist or a research team),

typically as a universal curriculum, with units on self-control, emotions, and problem-solving. Each lesson might include didactic instruction, role-playing, class discussion, modeling of skills by the teacher and peers, reinforcement for displaying skills, and worksheets. Lessons are often taught three times per week, with each lesson lasting 20–30 min. Teachers are encouraged to generalize students' demonstration of skills to other parts of the school day. Thus, the PATHS curriculum aims to target the types of social-emotional and social-cognitive skills that are thought to be needed by students, and that are often lacking in students with social impairment. Compared to the GBG, PATHS contains a more explicit focus on building positive and socially competent skills and behaviors, as opposed to reducing negative behaviors.

PATHS has undergone extensive empirical testing. It has been found to result in students' better emotional skills (e.g., feelings vocabulary, emotional understanding) as demonstrated in child interviews (Greenberg et al., 1995). A trial in Headstart (preschool) general education classrooms with 246 children found that PATHS resulted in better emotional knowledge and reduced anger attribution bias (measured from a child interview), as well as teacher and parent reports of better social competence (Domitrovich et al., 2007). Another study found PATHS yielded lower teacher ratings of problematic social behavior (externalizing and internalizing problems), as mediated through improvements in neurocognitive functioning (Riggs et al., 2006). Although PATHS is often implemented in general education classrooms as a universal curriculum, there is evidence for its efficacy in special education classrooms as well (Kam et al., 2004). In summary, literature supports the conclusion that PATHS can improve children's social behaviors and skills, as indicated using multiple measures and informants. Nonetheless, as is the case for most interventions, a high quality of the implementation (and not simply the quantity) is key for obtaining student benefits (Humphrey et al., 2018).

Because the target of PATHS is children's behaviors/skills, it also has rarely been evaluated

on peer relationship outcomes. Although PATHS was found to improve teacher ratings of peer problems (e.g., being picked on or bullied) in one study (Humphrey et al., 2016), another study using sociometric measures found no effect of PATHS on this outcome, despite finding an effect on interviewers' global judgments of the child's social competence (Seifer et al., 2004). PATHS was also included as part of Fast Track, which was a multicomponent program for first-grade students consisting of a universal, whole-class component, and a targeted component given to a high-risk sample of students with elevated conduct problems (Conduct Problems Prevention Research Group, 1999a). At the end of the first year of intervention, an evaluation of the universal component (which consisted of PATHS plus teacher consultation) in the classroom peers of the high-risk sample suggested that it was associated with lower problem behaviors and better ratings of classroom climate, but no effects on sociometrics (Conduct Problems Prevention Research Group, 1999b). The high-risk sample received PATHS and teacher consultation in addition to parent training, friendship groups, and home visits. At the end of the first year of intervention, high-risk students in the multicomponent intervention were observed to show more positive peer interactions at school, and they received more favorable sociometrics from classmates. However, these results on sociometrics did not maintain in subsequent years of evaluation (Conduct Problems Prevention Research Group, 2002), nor is it possible to disentangle the effects of PATHS from the other Fast Track components.

Making Socially Accepting Inclusive Classrooms

There are no interventions with strong empirical support that target peer group factors thought to contribute to peer regard. Our lab has aimed to address this gap through the Making Socially Accepting Inclusive Classrooms (MOSAIC) program (Mikami et al., 2013a, b). MOSAIC uses a model where consultants work with teachers to

institute behavior management to address student problematic behaviors, while also targeting peer group factors thought to contribute to peer regard. For instance, MOSAIC teachers are asked to perform relationship-building activities with students, and to call positive attention to their strengths in front of peers, with the idea that this may set a model for peers to follow in their own sociometric judgments of these children. Rather than being a curriculum, MOSAIC attempts to change teachers' day-to-day practices in terms of the way they interact with students.

MOSAIC is a universal intervention that teachers implement with the whole class, but they are also asked to deliver higher doses (e.g., more frequent and intense use of strategies) to target students selected for being at risk for ADHD. After an initial pilot done in a two-week summer program (Mikami et al., 2013a, b), MOSAIC has recently been tested as a school-based version in general education elementary school classrooms (Mikami et al., 2020, 2022). Over the course of a school year, teachers received consultation from a study staff member approximately once to twice per month and were observed by their consultant an additional one to two times per month (after which the consultant emailed the teacher performance feedback).

The initial results of MOSAIC in the summer program were promising for the outcome of peer regard, showing that the students received better peer sociometrics when in classrooms randomly assigned to MOSAIC, relative to a comparison condition of classroom behavior management alone; this was found for both the peers of the children with ADHD (Mikami et al., 2013b), and for the children with ADHD (Mikami et al., 2013a). However, children were previously unacquainted in the summer program and therefore had not already formed reputational biases, the program was only 2 weeks, the teachers were in their preservice training, and there was no academic content in the program that may have made it easier for teachers to implement the MOSAIC strategies. In the trial of the school-based version of MOSAIC, however, the results were mixed. Although some pilot work showed that teachers who implemented higher doses of

the MOSAIC strategies had students with better sociometric ratings at the whole-class level (Mikami et al., 2020), this was not found in a larger randomized trial of MOSAIC relative to typical practice. Rather, MOSAIC was associated with better teacher-rated social and academic competence for all students, but no difference in sociometric measures; however, for students at risk for ADHD, MOSAIC was associated with poorer sociometrics (although with these students also perceiving more positive relationships with their teachers; Mikami et al., 2022). These results underscore the difficulty of counteracting peer rejection, even in the presence of improvements in students' social behaviors and skills or in their teacher–student relationships. Thus, the ways to improve peer regard, especially among students with or at risk for ADHD, are still unclear (Evans et al., 2018).

Olweus Bullying Prevention Program

One of the best-known school-based interventions to address bullying and victimization is the Olweus Bullying Prevention Program (OBPP; Olweus & Limber, 2010). In 1983, after three adolescents in Norway died by suicide related to experiencing severe bullying by peers, the resulting nationwide campaign to prevent bullying in schools led to the development of the OBPP (Olweus & Limber, 2010). Initially created for students in middle school, this program has now been implemented and tested across all grades.

The OBPP is a multicomponent intervention consisting of features at multiple levels (Limber, 2011). At the school level, a bullying prevention committee may be established, with the goal of raising awareness of bullying and instituting anti-bullying norms among students, staff, and parents. School-wide procedures may also be implemented for better monitoring of areas where bullying occurs (e.g., bathrooms, lunchrooms). At the classroom level, teachers watch for bullying and enforce school rules related to anti-bullying. Teachers may also hold class meetings to discuss bullying and the school policies. At the individual level, students who are involved in

bullying are held accountable by teachers and administration; sometimes parent involvement is solicited. Finally, at the community level, partnerships with community agencies are encouraged to support the school anti-bullying efforts.

The OBPP has shown quite positive effects in Norway, as predominantly measured by student self-reports of bullying and victimization (Olweus & Limber, 2010). Interestingly, the results in the United States have been more mixed, which could reflect cultural variability (Limber, 2011). For instance, one study found no overall main effects of the OBPP, even on self-reports of bullying and victimization, but did find effects on some self-report outcomes for some subgroups (e.g., White students, sixth graders; Bauer et al., 2007). However, another study in US schools (grades 3–11) did find effects on student self-reports of bullying and victimization; effects were also stronger the longer the program had been in place (Limber et al., 2018). Notably, evaluations of the OBPP on measures outside of student self-report, and on other aspects of social impairment besides bullying and victimization, are quite limited. Some studies have found positive effects for the OBPP on teacher reports of perceived capacity to identify and intervene in bullying (Bollan, 2011), or on students' perceptions that others will intervene when they see bullying (Bauer et al., 2007). To our knowledge, the effects of the OBPP have never been tested on sociometric measures of peer regard. As discussed by Jia and Mikami (2018), the field has been unclear regarding whether it is important to expand beyond student self-reports in evaluations of anti-bullying interventions in general.

Implications for Future Research

These examples of interventions and their results carry implications for future research in this field. The main implication to us is that a distinction needs to be made in terms of students demonstrating socially competent behaviors/skills, relative to good peer relationships. Although both can characterize social impairment in students, they may be distinct processes that also require unique interventions. It has historically often

been assumed that changing problematic behaviors and skills will result in better peer regard. However, these results highlight that this is likely not the case, especially for students with or at risk for ADHD. An important future direction is identifying which approaches lead to positive student outcomes on behaviors/skills, relative to on peer relationships. Attention also needs to be paid to the distinction between teacher report, student self-report, observations, and peer sociometrics, to measure outcomes of intervention, as not all types of measures are equally likely to suggest intervention efficacy.

Conclusion

This chapter summarized information about how social impairment manifests in students and why it is of concern to educators. Behavior management, skills training, and addressing peer group factors were discussed as approaches to intervene in social impairment. Selected school-based programs were presented to illustrate each approach. A take-home message is that social impairment has diverse manifestations, and depending on the type of social impairment, it may require a distinct intervention approach. Crucially, interventions to target problematic behaviors and skills in students with social impairment, which has been the dominant tactic, may not necessarily result in peers changing their personal feelings about, or treatment of, these students. There continues to be a need for further development and study of interventions that address peer group factors contributing to social impairment.

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Interventions for Students Exposed to Trauma

6

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In this chapter, we offer a wide focus lens to interventions for students exposed to trauma through a definition of trauma as within and across individual, collective, and systemic levels. We describe how much of the extant literature on school-based trauma intervention has targeted the individual student level, with increased expansion that integrates an ecological perspective to trauma intervention.

Nature and Impact of the Problem

Childhood trauma has been described as a public health crisis (e.g., Blaustein, 2013; Magruder et al., 2017), necessitating attention to addressing trauma at the individual level as well as the contributing systems. Campaigns to raise awareness that adverse childhood experiences (ACEs) can lead to serious negative consequences for children have propelled terms such as toxic stress to everyday language in child-serving settings such

as schools. Important distinctions, however, should be noted in that ACEs are inclusive of childhood adversities but do not represent all possible adversities that might be experienced, particularly exposures that occur at collective or systemic levels. For example, the original ACEs study (Felitti et al., 1998) contained items focused on individual exposure in areas such as physical, sexual, or emotional abuse. Expansion to community-level adversities did not appear in the literature until over a decade later, in work such as the Philadelphia ACEs (e.g., Chronholm et al., 2015).

Related, exposure to adversities in childhood does not mean trauma will be experienced. Rather, childhood trauma can be an outcome of exposure to different forms of adversities. In 2014, the Substance Abuse and Mental Health Services Administration provided the seminal definition of trauma, as follows:

Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being. (p. 7)

To highlight the defining features of trauma, McGlynn-Wright and Briner (2021) expand on the three critical elements of this definition: the event, the experience, and the effects (SAMHSA, 2014). First, the event can vary a great deal to

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include an acute, singular event (e.g., severe car accident), a series of exposures to the same type of event (e.g., chronic child abuse) or to different events over time (e.g., cumulative exposure), and/or complex exposure to multiple and severe adverse events (Overstreet & Mathews, 2011). Second, the experience of the event involves the harmful interruption of safety (i.e., sense of physical, psychological, emotional security), agency (i.e., sense of independence and control over actions and consequences), dignity (i.e., sense of one's place and power), and belonging (i.e., sense of connection and group membership). Third, the long-lasting effects of the event occur when coping is overwhelmed and/or the experience of the event cannot be integrated with one's sense of self or beliefs about the world. Additional factors determine whether exposure to adversities will result in trauma, including individual interpretations of and reactions to the event. As described by Chafouleas et al. (2019), individual interpretations and reactions are influenced by conditions including the history of trauma exposure, personal factors (e.g., coping style, maturity, psychological history), and environmental factors (e.g., support resources, social connections). The individual interpretations and reactions intersect with features of the adverse exposure such as predictability, duration, intensity, and consequences, which together both influence and inform directions for intervention. Taken together, the complexities of the definition of trauma make clear the importance of understanding that trauma intervention is not one size fits all.

Related, it is important to understand why exposure to ACEs as potentially traumatic events is problematic. Two central reasons include the magnitude of exposure and resulting consequences from adverse childhood experiences. Exposure to trauma is common for children around the globe, with a substantial proportion experiencing adversities such as natural disaster, armed conflict, and other humanitarian emergencies (Magruder et al., 2017). In a recently released report, the Centers for Disease Control and Prevention (2019) noted that at least one in six adults in the United States experienced four or more adverse childhood experiences, with esti-

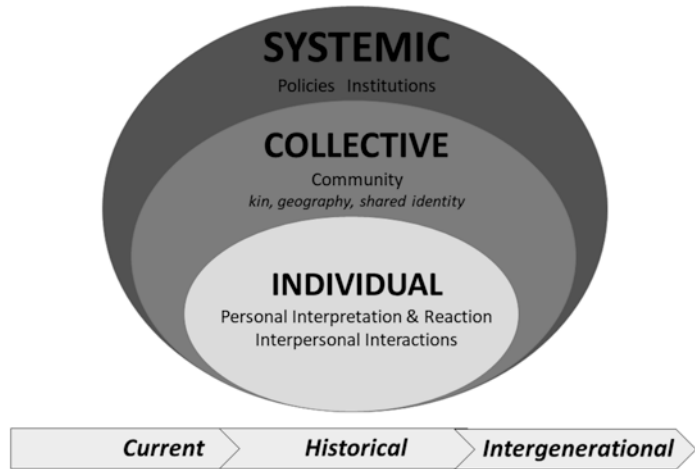
mates that five of the top ten causes of death can be linked to adverse childhood experiences. The report goes further to note that preventing adverse child experiences could have an impact on population health, such as large reductions in the number of health conditions as well as reductions in health risk behaviors (e.g., smoking, drinking) and socioeconomic challenges (e.g., school dropout, unemployment).

The ever-mounting evidence regarding substantial and life course outcomes associated with exposure to childhood adversities points to the need for proactive and prevention-focused efforts that begin in childhood. And in fact, exponential growth in policy, practice, and research agendas has been witnessed over the past decade (Chafouleas et al., 2021). As we elaborate in the next section, however, the overall body of work as applied within education settings may best be described as emerging and heavily focused on trauma-specific intervention, meaning supports delivered at the individual level to remediate maladaptive symptoms. Although individual approaches can lead to improved outcomes, the positive impacts of trauma-based approaches are expanded when the intended beneficiary extends beyond the individual student to include the systems in which adversities are experienced. In this way, the problem-solving lens becomes ecologically focused, with intervention decisions informed by understanding which components of an intervention may be most relevant and effective in producing durable outcomes. Some situations may call for trauma-specific intervention delivered to individuals with a focus on teaching strategies that promote adaptive interpretation and reaction. Other situations may require system-level efforts to remove, minimize, or neutralize trauma exposure, and another approach might focus on skill-building of others (e.g., adults) in the environment to reduce actions that could re-traumatize individuals (Chafouleas et al., 2019).

McGlynn-Wright and Briner (2021) referenced these levels, or targets for trauma intervention as individual, collective, and systemic (see Fig. 6.1). Consistent with ecological systems theory, individual experiences of trauma are

Fig. 6.1 An ecological lens to trauma: different levels and across time. (Note: Adapted from McGlynn-Wright & Briner, 2021)

An Ecological Lens to Trauma: Different Levels and Across Time



Note. Adapted from McGlynn-Wright & Briner (2021)

nested within wider contexts of influence that can result in collective and systemic experiences of trauma. Collective trauma, also referred to as communal trauma, refers to a traumatic experience that is shared with a community or group of people, which can range from a family or whole society (Weems & Overstreet, 2008). The community microsystem may be defined by features such as geography, kinship, and/or shared identity. Collective trauma within one microsystem can disrupt connections with others, and thus also have an impact on mesosystems (Weems & Overstreet, 2008). Collective trauma can include current or past situations and experiences such as natural disasters and the genocide of specific groups of people based on racial or ethnic characteristics (e.g., slavery, genocide of Native Americans, September 11 terrorist attacks, COVID-19). When collective trauma occurs based on one's social identity, community members may experience compounding effects of discrimination, racism, and oppression (Brave Heart et al., 2011). Communities impacted by collective trauma are often overwhelmed by their inability to address their own needs, which creates uncertainty and distress (Hobfoll et al., 2007).

Individual and collective trauma can be fueled by systemic trauma, which occurs through formal

and informal social structures and policies (exosystem) and cultural ideologies (macrosystem). The nature of systemic trauma can change over time (chronosystem). An example of current systemic trauma is the disproportionate COVID-19 mortality rates for Black and Latinx populations due to societal inequities in health care and socioeconomic resources, which are linked to systemic racism; examples of historical systemic trauma include slavery and the holocaust.

In summary, the application of an ecological lens to view trauma offers directions for broader impact of trauma interventions. Re-framing trauma as something that occurs not only at the individual child level but also with attention to communal experiences of trauma and to the societal structures that perpetuate trauma extends the focus of intervention. With regard to school settings, interventions for students exposed to trauma mean a focus on not only the student but also student populations, educators, and school policies. This wide focus lens affords dual benefit as it not only can strengthen intervention match (i.e., components of intervention strategy are selected and targeted based on need), but also can result in synergistic effects that reduce risk across individual, collective, and systemic levels. Next, we offer expanded discussion on this multi-level focus for trauma intervention.

Focus of Trauma Intervention

In the previous section, we presented that trauma occurs, has impact on, and should be addressed at multiple levels. Thus, it is important to align possible foci for intervention across each of these levels. In this section, we provide background on and propose targets for treatment at three levels as applied to education settings: (a) individual trauma, (b) collective trauma, and (c) systemic trauma focused on school personnel and the larger school microsystem.

Before diving into application of multi-level targets of trauma intervention within schools, however, two points are foundational. First, the tenets of trauma-informed schools are necessary for school personnel to begin to identify and respond to students' trauma experiences and symptoms (Chafouleas et al., 2016). Professional learning is needed to facilitate trauma-informed knowledge and attitudes as well as the opportunity to build skills through positive practice and feedback in applying trauma-informed practices. Second, as school professionals move to address the needs of students exposed to trauma, they must understand that individual trauma experiences are not randomly distributed or acontextual—they are nested within collective and systemic trauma experiences driven by structural inequities and systemic racism within society and within our schools (Saleem et al., *in press*). In fact, Goldsmith et al. (2014) propose that a “systemic [trauma] paradigm is necessary to accurately reflect the complex cultural, cognitive, behavioral, and institutional systems in which trauma occurs (p. 125).” In other words, it is important to consider conditions that contribute to or impede incidence of adverse childhood experiences and trauma. There is a need, for example, to intentionally acknowledge and address how racism and other forms of social oppression are systemically ingrained within institutions such as schools, which can influence youth's experiences with and healing from trauma. This acknowledgment includes recognition that youth from historically marginalized backgrounds can experience trauma based on aspects of their identity (e.g., race, sex, class, gen-

der) at individual, collective, and systemic levels (e.g., Alessi & Martin, 2017), with race being particularly salient in schools (e.g., Jernigan & Daniel, 2011; Saleem et al., 2019). With these two points in mind, we review the foci for trauma intervention broadly and at individual, collective, and systemic levels. See Table 6.1 for a summary. Note that our review is not meant to provide an exhaustive list, but instead offers primary targets based on evidence-based trauma practices and supporting literatures on forms of social oppression in the experience of trauma.

As has been reviewed, many trauma treatments take an *individual* approach with a focus on symptom reduction. These interventions provide individuals with skills to regulate emotions as well as evaluate and increase helpful thoughts, helpful behaviors, and adaptive coping skills (e.g., Cohen et al., 2009; Kar, 2011). These skills allow for increased control and autonomy in managing consequences of trauma, which are important given that traumatic experiences are often outside of one's control and can lead to debilitating consequences (e.g., feeling helpless, hopeless, anxious). A core principle of treating trauma through an individualized lens is that those who have experienced trauma can learn better ways of coping, which can both relieve their symptoms and improve day-to-day functioning in their lives (SAHMSA, 2014). Thus, major components for addressing trauma at the individual level generally include reducing individual psychological symptoms, regulating emotions, and altering negative cognitions. Other essential components include promoting safety, healthy relationships, and building trust (e.g., Cohen et al., 2009; Kar, 2011).

As previously noted, *collective trauma* is often the result of cumulative and devastating losses and is linked with negative psychological consequences (Luszczynska et al., 2009; Somasundaram, 2014). Targets to address collective trauma can vary based on the scale (e.g., society, community, family; Ainslie, 2013; Somasundaram, 2014). For example, a large-scale collective trauma intervention may be focused on re-constructing communities, re-establishing social norms, and/or providing economic support.

Table 6.1 A summary of forms of trauma by potential impact, primary target, and foci for intervention

	Impact of trauma	Primary target	Foci for intervention
Individual	Academic, social, behavioral, emotional, physical	Individual students	Promoting safety, agency, dignity, belongingness Building emotion regulation, coping skills, cognitions Fostering safety, relationships, trust, decreasing psychological symptoms
Collective	Invalidation of identities; communal morale; human capacity (e.g., future leaders); immediate and prolonged psychological, social, and economic consequences	School populations (student, educators)	Validating of and acknowledging identity Embracing/embedding historical and cultural trauma Restoring connectedness, social support, efficacy Building resources, capacity, empowerment Addressing unresolved psychological consequences
Systemic	Bias and punitive or exclusionary policies and practices; criminalization or stigmatization response to trauma; mislabeling or misunderstanding trauma reactions; staff burnout and turnover	Educators (teachers, administrators, staff); system and policies	Examining and altering bias systems, policies, practices Providing staff and school-wide trauma awareness, tools, and strategies Trainings that focus on self-reflection and increasing staffs' ability to analyze and change systems of inequality Addressing staff secondary traumatic stress

These strategies are often implemented from entities such as government departments or international nongovernmental organizations (Somasundaram, 2014). Collective trauma can also be addressed at a community level, with primary components that include restoring connectedness, social support, and sense of collective efficacy (Hobfoll et al., 2007). Points of intervention also might include empowerment, reducing stigma and isolation, addressing historical and unresolved grief, building local resources and capacities, and increasing support systems (Brave Heart et al., 2011; Somasundaram, 2014). Collective trauma examples that can impact students could include school shootings (e.g., Stoneman Douglas High School in Parkland, Florida), natural disasters (e.g., Hurricane Katrina), or race-based killings that lead to communal mourning or loss of morale (e.g., 2020 heightened racial unrest after the Killing of George Floyd).

Addressing trauma at the *systemic level* requires attention to institutions, practices, policies, and contextual factors that perpetuate, maintain, invalidate, or produce trauma (Goldsmith et al., 2014). For example, in some settings youth's trauma triggers or traumatic stress reactions may be mislabeled and misunderstood leading to penalization or stigmatization (Saleem et al., 2019). Although less frequently studied, there are several targets for systemic intervention. First, it is essential to identify, acknowledge, and alter bias policies and practices that are insensitive to youth's mental health needs and are discriminatory or convey devaluation based on aspects of one's identity (e.g., race, sex, class, gender). Next, providing comprehensive training to individuals in power within systems to improve knowledge and change bias attitudes, beliefs, and behaviors is important—in particular, trainings that focus on self-reflection, increasing staffs' awareness and skills to analyze systems of inequality, and making space to discuss how to create change within these systems (Almeida et al., 2007). Additionally, adults who work with youth would benefit by learning about the multiple ways that trauma can impact students and themselves (Borntrager et al., 2012). Next, we explore possible approaches to trauma interven-

tion at different levels as applied in education settings.

Approaches to Trauma Intervention in Schools

Trauma intervention must include focus not only on remediation of trauma symptoms but also on strengths-based approaches that bolster resilience. Just like exposure to trauma, the resilience of individuals is nested within collective and systemic resilience. Intervention approaches must therefore attend to the individual and the collective of the school population, as well as the school personnel, policies, and practices that are part of the systems that define the school. As previously described, however, approaches used by schools to date have been focused on individual students exposed to trauma, with a systematic review reporting that only 7% of the literature on trauma-informed care in schools provided evidence of a multi-tiered approach (Berger, 2019). Others have noted a lack of attention to the school's role in perpetuating systems of oppression and exposure to trauma as well as a lack of attention to student and community strengths to collectively heal the effects of trauma and challenge the systemic inequities that perpetuate trauma (Avery et al., 2020; Gherardi et al., 2020; Saleem et al., *in press*). Thus, our goal in this section is to offer suggestions for the integration of trauma-informed approaches with other established or emerging strengths-based approaches that promote healing and foster well-being across individual, collective, and systemic levels. A summary is provided in Table 6.2, which includes broad approaches by level (individual, collective, systemic) along with specific examples of potential developing and adapting school mental health interventions. In addition, example measures are included in Table 6.2 that could be used to assess outcomes, which are roughly organized into proximal and medial/distal indicators. We purposefully draw attention to outcome measures given that establishing desired outcomes should be the first step in the intervention selection process.

Table 6.2 Current directions in trauma intervention across levels

Level	Approaches to intervention		Example interventions		Potential indicators for assessing effects	
	Cognitive-behavioral interventions	Contemplative practices	Cognitive-behavioral interventions	Example interventions	Proximal indicators	Medial/distal indicators
INDIVIDUAL			Bounce Back (Langley et al., 2015) Cognitive Behavioral Intervention for Trauma in Schools (Jaycox et al., 2012) Support for Students Experiencing Trauma (Jaycox et al., 2009) Trauma-Focused Cognitive-Behavioral Therapy (Cohen et al., 2006)		Direct behavior ratings (e.g., Chafouleas et al., 2009; von der Embse et al., 2019) Observations of student behavior	Caregiver, teacher, and/or student self-report of symptomatology and impairment Subjective well-being measures Student attendance Academic performance
			Mindfulness-based stress reduction (Ortiz & Sibinga, 2017) Meditative practices (addressing negative thoughts, breath work, transcendental meditation; Waters et al., 2015) Movement-based approaches (yoga, progressive muscle relaxation, Tai Chi; Waters et al., 2015)			
			Anchoring core social and emotional learning (SEL) competencies within justice-oriented citizenship (culture, identity, agency, belonging, engagement), through integration of intentional components such as: (a) culturally infused SEL skill development, (b) project-based learning, and (c) youth participatory action research (Jagers et al., 2019) Participatory engagement to co-determine surface (e.g., modify delivery mode or materials) and/or deep structure (e.g., incorporating cultural beliefs about how trauma affects health) adaptations of existing intervention (Goodkind et al., 2010)		Ratings of self-efficacy Quantity and quality of civic engagement Social validity measures Intervention participation	School climate measures School-wide academic and behavioral indicators Intervention completion
COLLECTIVE	Transformational social emotional learning					
	Cultural adaptations of evidence-based intervention					

(continued)

Table 6.2 (continued)

Level	Approaches to intervention		Potential indicators for assessing effects	
	Example interventions	Medial/distal indicators	Proximal indicators	Medial/distal indicators
SYSTEMIC	Promising alternatives to exclusionary discipline	<p>Four broad categories as reviewed by Chafouleas et al. (2020):</p> <ul style="list-style-type: none"> Data-based inquiry for equity Inclusive approaches for problem-solving behavior concerns, such as restorative practices Positive behavior interventions and supports Supportive and culturally relevant teaching practices, for example, addressing unconscious bias (Okonofua et al., 2016; Whitford & Emerson, 2019) and Culturally Responsive Classroom Management (CRCM; Weinstein et al., 2003) 	<p>Attitudes related to trauma-informed care (Baker et al., 2016)</p> <p>Direct observations of staff use of trauma-informed strategies</p>	<p>Rates of office discipline referrals and exclusionary discipline</p> <p>PBIS tiered intervention Fidelity (https://www.pbis.org/resource/tfi)</p> <p>School policy evaluation of alignment with trauma-informed principles</p>
	Interventions to prevent and respond to secondary traumatic stress	<p>Secondary Traumatic Stress Informed Organizational Assessment (Sprang et al., 2014) and Toolkit (Sprang et al., 2018)</p> <p>Mindfulness-based approaches (Klingbeil & Renshaw, 2018)</p>	<p>Professional Quality of Life Scale (Stamm, 2010)</p> <p>Secondary Traumatic Stress Informed Organizational Assessment (Sprang et al., 2017)</p>	<p>Staff attendance and turnover</p> <p>Staff climate surveys</p> <p>Trauma-Informed Climate Scale (Hales et al., 2019)</p>

Approaches to Individual Trauma

As discussed throughout, the earliest and primary efforts to address the needs of students exposed to trauma focused on the development of school-based trauma-focused treatments. These treatments target students whose trauma reactions align with specific mental health disorders, such as posttraumatic stress disorder (PTSD), anxiety, and depression. When delivered in schools, these treatments have demonstrated medium to large effects in the reduction of traumatic stress reactions (Chafouleas et al., 2016). Although individualized and group-based targeted interventions can be effective for reducing student distress, an exclusive focus on treating symptoms can perpetuate a deficit-focused approach. Treating clinical symptoms is important; however, there is also a need for approaches designed to focus more broadly on overall health and well-being within a whole child lens (Chafouleas & Iovino, 2021).

Contemplative practice is an example of a strength-based approach to working with students exposed to trauma that focuses on asset-building rather than deficit reduction. Contemplative practices, including meditation and mindfulness, move beyond traditional interventions to equip students with the skills to increase awareness, insight, and emotional regulation (Waters et al., 2015) to bring forth "...their own genuine way of connecting their heart and mind" (Grossenbacher & Parkin, 2006, p. 1). Empowering students with the autonomy to make meaning of their experiences and set their own goals for healing and growth can contribute to overall well-being and a sense of purpose in life (Ginswright, 2018). In their systematic review, Waters et al. (2015) found that contemplative practices demonstrated positive effects on self-awareness, self-regulation, and social competence, the building blocks for a healthy sense of self and success in school and in life (Jones & Kahn, 2017).

School Mental Interventions to Address Individual Trauma

As noted in Table 6.2, we include two primary categories of interventions to address the indi-

vidual trauma level: cognitive-behavioral therapy (CBT) strategies and contemplative practices.

Cognitive-Behavioral Therapy (CBT) Strategies

Cognitive-behavioral treatment (CBT) strategies are among the most robust evidence base for intervening in individual and small groups of students experiencing a maladaptive response to trauma exposure (Dorsey et al., 2017). CBT-based approaches for trauma with substantial evidence supporting their effectiveness include Trauma-Focused CBT (TF-CBT; Cohen et al., 2006) and Cognitive Behavioral Interventions for Trauma in Schools (CBITS; Jaycox et al., 2012). These core CBT intervention packages have also been extended to expand both the student populations receiving intervention and providers able to deliver the interventions. One example is Bounce Back (Langley et al., 2015), which incorporates elements of TF-CBT and CBITS and is designed for young students aged 5–11 years. In addition, Jaycox et al. (2009) adapted CBITS into Supports for Students Experiencing Trauma (SSET), which can be delivered by school staff without clinical training. For a more detailed description of these cognitive-behavioral intervention approaches and relationships to student outcomes, see the 2019 review provided by Chafouleas and colleagues.

Contemplative Practices Contemplative practices, which may include mindfulness approaches and meditation practices, can both decrease trauma symptomatology and improve emotional regulation (Waters et al., 2015). Although used interchangeably, contemplative practice often focuses on meditation and associated techniques such as visualization and transcendental approaches whereas mindfulness may combine meditation with other strategies such as breathing exercises, body scans, and yoga (Waters et al., 2015). The review by Waters and colleagues (2015) includes a summary of contemplative practices including loving kindness meditation, mindfulness, transcendental meditation, breathing instruction, and mindfulness-based stress reduction (MBSR). In addition, some contempla-

tive and mindfulness practices may be movement-based such as progressive muscle relaxation, yoga, and Tai Chi (Ortiz & Sibinga, 2017; Sibinga et al., 2015; Waters et al., 2015).

Several systematic reviews and meta-analyses have reviewed the effects of mindfulness and contemplative approaches (Klingbeil et al., 2017; Ortiz & Sibinga, 2017; Zenner et al., 2014; Zoogman et al., 2015). Although results are promising, some limitations are noted in informing working with students with trauma exposure. First, the reviews differed in how they defined contemplative and mindfulness approaches. For example, Zenner et al. (2014) excluded mindfulness approaches that included relaxation techniques (such as progressive muscle relaxation and visualization) whereas these approaches were included in other reviews (Waters et al., 2015). In addition, only one study included evaluation of methodological rigor or used it as inclusion criteria (Klingbeil et al., 2017). Perhaps most relevant, it is important to note that only one of these reviews focused on studies that delivered intervention to students with trauma exposure. Ortiz and Sibinga (2017) focused specifically on MBSR as an intervention to reduce adverse impacts of trauma, finding that these strategies were associated with decreased impairment and improved resilience and positive outcomes across several studies.

Approaches to Collective Trauma

Collective trauma is likely to be experienced in geographic or kinship communities oppressed by structural inequality and discrimination based on characteristics such as race, sex, gender identity, or religion. The shared impact of these experiences on the community, even when not directly experienced by each individual who identifies with that community, represents collective trauma. Experiences of collective trauma, such as COVID-19 (especially in communities of color), police killings of unarmed people of color, or violence against members of the LGBTQ community, can result in a collective sense of endangerment, community disorder, and profound

fracture in the trust of societal institutions for members of the affected communities (Keynan, 2018). When communities are deprived of opportunities for healing from a collective trauma, the impacts of that trauma can be long-lasting (historical) and transmitted across generations (inter-generational) (Brave Heart et al., 2011; NCTSN, 2017).

Collective trauma calls for collective healing, which can occur when individuals with a shared identity have opportunities to support one another and draw on their solidarity to promote healing and growth (Drury et al., 2019). Social and emotional learning (SEL) curricula can provide those opportunities in schools. Effective use of social and emotional learning curricula can create safe, supportive school environments that are conducive to learning and to the development of positive relationships with peers and adults (Jones & Kahn, 2017). Healing-centered approaches take those opportunities to the next level by centering culture within social and emotional learning and empowering students to be agents in fostering well-being (Ginwright, 2018). Healing-centered approaches to SEL integrate culturally responsive practices to help students build an awareness of justice and inequality and generate strategies to resist social oppression (Jagers et al., 2019), which can contribute to overall well-being, hopefulness, and optimism (Blitz et al., 2016; Potts, 2003; Prilleltensky, 2003).

School Mental Health Interventions to Address Collective Trauma

As presented in Table 6.2, we include two primary categories of interventions to address collective trauma: transformative social-emotional learning and cultural adaptations to evidence-based intervention.

Transformative Social Emotional Learning

Emerging as an opportunity to integrate trauma-informed approaches and social-emotional learning, transformative social-emotional learning offers potential to promote equity and collective growth. Developed by Jagers et al. (2019), transformative social-emotional learning positions student social-emotional development as occur-

ring through expansion of typical programming to account for life experiences and emerging identities that shape self-understanding and connections with others (Chafouleas et al., 2021). Jagers et al. (2019) focused on issues of race and ethnicity in development, yet it has potential to address a range of inequities through anchoring in justice-oriented citizenship.

Using the Collaborative for Academic, Social, and Emotional Learning's (CASEL's) framework of core social and emotional competencies (i.e., self-awareness, self-management, social awareness, relationship skills, responsible decision-making), Jagers et al. (2019) extend learning each competency from typical focus on personal responsibility to participatory and transformative concepts. For example, personal self-management may include components such as emotion-focused coping and agency (resilience, social efficacy) whereas transformative self-management may include problem-focused coping and cultural humility (agency, resistance, moral, civic efficacy, collective efficacy). The approach taken to each concept varies. For example, personal responsibility focuses on individual development and participatory may include class community-building, multicultural education, and/or service learning. In contrast, a transformative approach may include culturally relevant education, project-based learning, and/or youth participatory action research. As noted, the transformative pieces have alignment with trauma-informed principles, and have potential to extend to addressing collective trauma.

Faculty at CASEL (n.d.) are working to refine social and emotional learning into transformative social and emotional learning as a lever for equity and social justice, defining it as:

a process whereby young people and adults build strong, respectful, and lasting, relationships that facilitate co-learning to critically examine root causes of inequity, and to develop collaborative solutions that lead to personal, community, and societal well-being. This form of SEL is aimed at redistributing power to promote social justice through increased engagement in school and civic life. It emphasizes the development of identity, agency, belonging, curiosity, and collaborative problem solving within the CASEL framework.

Cultural Development and Adaptations to Evidence-Based Intervention In acknowledgment that the vast majority of evidence-based interventions have been developed and evaluated without attention to application across different contexts, some researchers have advocated for and found evidence to support racial-ethnic and cultural development and adaptations (Marsiglia & Booth, 2015; Nierkens et al., 2013). Goodkind et al. (2010), for example, adapted CBITS for use with adolescents identifying as American Indian, with focus on feasibility and appropriateness in addition to typical indicators of symptomology. The authors share their process for participatory engagement in co-determining adaptations to materials, presenting a summary table of modifications to each session. Participatory engagement involved co-determining changes as well as numerous community-based presentations with many different stakeholders. As one example, the authors noted making a range of modifications "... such as removing inadvertently offensive, Eurocentric examples of cognitive restructuring, as well as deep structure changes such as utilizing stories and examples based upon participants' cultural teachings, collective experiences, and addressing differing cultural beliefs about how long it is acceptable to talk about someone after they have died" (Goodkind et al., 2010, p. 5).

Although burgeoning, there are some promising approaches that can be utilized and extended to address collective trauma. Key to cultural development and adaptation success is engaging participatory methods that facilitate co-determination of choices. Participatory methods include engaging communities in acknowledging, addressing, and healing from factors contributing to the collective trauma(s). With regard to adaptations, modifications can be surface (e.g., modify delivery mode or materials) and/or deep structure (e.g., incorporating cultural beliefs about how trauma affects health). It is important to evaluate whether the collective trauma (i.e., the event, experience, effects) warrants an adapted approach compared to a newly developed and tailored treatment.

Approaches to Systemic Trauma

Systemic trauma is perpetuated by policies and practices implemented by institutions that result in trauma (Goldsmith et al., 2014). Schools must acknowledge their responsibility as a source of trauma for some students and families—ranging from Native American boarding schools to school segregation to contemporary discipline policies characterized by zero-tolerance, exclusionary, and shaming discipline practices (NCTSN, 2017). Schools have the potential to transform themselves from a source of systemic trauma to a source of systemic resilience by adopting practices and policies that promote healing and dismantle systems of privilege, discrimination, and oppression that result in inequities for students of color and other marginalized groups (Saleem et al., *in press*).

A first step in shifting policies and practices to promote systemic resilience is increasing staff awareness of the structural inequities and systemic racism within society and within our schools that contribute to experiences of trauma for students of color (Temkin et al., 2020). Although most approaches for trauma-informed schools focus on increasing staff knowledge about trauma and trauma-informed approaches (Avery et al., 2020; Temkin et al., 2020), few contextualize that knowledge within the legacy of historical and intergenerational trauma or ongoing race and class bias (Blitz et al., 2016). As Gherardi et al. (2020, p. 492) noted, trauma-informed schools “...need to reattribute responsibility for the outcomes associated with social marginalization from the victims to the systems” to become a source of systemic resilience for students. Conceptualizing trauma from a socio-ecological perspective lays the groundwork for changes in school practices that support healing and promote equity. Change in classroom practices is unlikely to be a successful change agent in the absence of an infrastructure to reinforce and encourage new practices (Temkin et al., 2020).

School policies must support educational equity that promotes healing and avoids the re-traumatization of students. As noted by Avery

et al. (2020), policy changes related to discipline are often seen as a key feature of systemic approaches to addressing trauma. In their review, discipline changes focused on moving away from punitive, reactive discipline and moving toward strength-based and skill-building discipline strategies that focus on maintaining relational connection, developing self-regulation skills, and supporting time in class. When schools enact these types of discipline changes to address the disproportionate impact of harsh and exclusionary discipline on students of color, success in achieving that goal must be documented by disaggregating disciplinary data to ensure the intended effect (Gherardi et al., 2020).

Systemic resilience also requires adoption of practices and policies that support the well-being of school personnel given their central role as agents of change across various models of trauma-informed schools. For example, when a teacher’s well-being is threatened due to work-related stressors, they may lack sensitivity to student needs, be more likely to disengage and withdraw from their students, have difficulty making effective changes to classroom management practices to address emerging student needs, and be more likely to employ exclusionary discipline practices (Jennings & Greenberg, 2009). Specific consideration of secondary traumatic stress (STS) is important because the highly interpersonal nature of the work of school personnel paired with their efforts to form meaningful relationships with individual students and families mean there are ample opportunities to learn about student traumatic experiences through their daily interactions. Learning about the traumatic experiences of the students they work closely with can lead school personnel to experience secondary traumatic stress symptoms—thus serving to contribute to collective trauma in the whole school population. These mirror the classic symptoms of posttraumatic stress disorder that can develop when trauma is directly experienced, such as intrusive thoughts, avoidance, negative cognitions and mood, and hyperarousal (Hydon et al., 2015). Thus, there is a need to attend to the psychological needs of school personnel who have frequent interactions with stu-

dents and are impacted by students' trauma. Given the documented psychological consequences of secondary traumatic stress for school personnel, it is essential for staff to learn about the multiple ways that trauma can impact both students and themselves (Borntrager et al., 2012). Further, staff need support for managing secondary traumatic stress that is embedded within the school context to promote resilience and coping (Caringi et al., 2015). Primary tools for reducing secondary traumatic stress include providing open and supportive opportunities to discuss secondary traumatic stress, integrating stress-reduction activities throughout the school day (e.g., access to mindfulness tools), and increasing resources to help staff manage secondary traumatic stress (e.g., peer groups, connect with community-based support) (Hydon et al., 2015).

School-Based Interventions to Address Systemic Trauma

We include two primary categories of interventions to address systemic trauma: examining policies and promising alternatives to exclusionary discipline, and interventions to prevent and respond to secondary traumatic stress. See Table 6.2. We acknowledge that the categories are not mutually exclusive and likely result in greatest impact through co-occurrence. For example, altering exclusionary policies that contribute to racial disparities and utilizing school-wide restorative justice practices (Teasley, 2014) can be combined with workforce development strategies that allocate funding to training aimed to address trauma and foster equitable and justice-centered schools (Blitz et al., 2016; Dutil, 2020).

Promising Alternatives to Exclusionary Discipline Given the serious negative outcomes that result from exclusionary discipline, recent reviews have sought to identify promising alternatives to current school discipline practices (see Chafouleas et al., 2020). Many individual alternatives have been identified across reviews, which can be grouped into four broad categories: (1) data-based inquiry for equity and to inform policy change, (2) positive behavior interventions

and supports, (3) inclusive approaches for problem-solving behavior concerns, and (4) supportive and culturally relevant practices. Using school discipline data to inform school improvement and positive behavior interventions and supports is consistent with the application of prevention science in schools, commonly referred to as multi-tiered systems of support. Embedding inclusive approaches for problem-solving behavior such as restorative practices, reintegration of students after conflict or absence, and conflict resolution within these alternatives has shown increased use in schools. Given generally higher familiarity with the first three alternatives and how they might be used in combination, we focus here on additional description of supportive and culturally relevant practices.

Effectively addressing trauma and the systems level involves becoming aware of not only "trauma" specifically but also how systemic inequality in our society and schools perpetuates and exacerbates trauma exposure (Saleem et al., [in press](#)). For example, this may involve providing explicit instruction to staff on implicit/unconscious bias. Although there is a wealth of research related to unconscious bias, there is little research on applying unconscious bias training to schools (Dee & Gershenson, 2017). Preliminary evidence, however, suggests that training related to empathetic discipline and unconscious bias is associated with decreases in measures of implicit bias (Whitford & Emerson, 2019) and decreases in exclusionary discipline (Okonfua et al., 2016). Another promising approach, which requires training for school staff on classroom practices that seek to minimize discriminatory discipline in schools, is Culturally Responsive Classroom Management (CRCM; Weinstein et al., 2003). This approach, which is aligned with culturally responsive pedagogy, provides school staff with tangible and concrete practices to improve their classroom environment, including activities that help them recognize their own cultural biases, techniques to develop awareness of broader social, economic, and political contexts impacting students, and ideas for building relationships with students based in trust.

In addition to training on addressing systemic inequities in our schools and addressing unconscious bias, school leaders can also provide explicit training to promote trauma awareness and the use of trauma-informed practices. As noted in a recent review, this work typically focuses on improving staff trauma knowledge, attitude, behavior, and practice (KAPB: Lowenthal, 2020). This review also noted that these initiatives to improve “Trauma-Informed Care” fall on a continuum of their scope and intensity—from “limited change” initiatives (typically involving a one-time training for staff) to “comprehensive” change initiatives involving staff training with ongoing support and coaching and long-term plans for systems-level changes to practices, policy, and climate. Results of this review indicated that training initiatives involving a “one off” training session for staff were unlikely to lead to sustained changes over time or actual changes in practice (Lowenthal, 2020). Although there is some preliminary evidence connecting one-time trauma-informed training with changes in attitude to trauma-informed care that are sustained over time (Parker et al., 2020), there is limited evidence that these changes in attitudes are associated with changes in practice (and thus changes in student outcomes) without additional support and coaching.

These findings indicate school leaders seeking to develop trauma-informed systems likely need comprehensive approaches to improve staff KAPB related to trauma-informed care (Dorado et al., 2016). For example, in their evaluation of implementation of multi-tiered trauma-informed systems, von der Embse et al. (2019) conducted an initial whole staff professional development training on trauma-informed practices, and then followed this training with intensive coaching for a small set of teachers to support implementation of target strategies. In addition, this initial training was associated with changes in trauma-based assessment and intervention delivery across the district, reinforcing the practices and concepts introduced during the training.

Interventions to Prevent and Respond to Secondary Traumatic Stress Another important component of trauma intervention targeting the systems level is preventing and responding to secondary traumatic stress (STS). Much like trauma-informed work, STS has received increased attention. A recent review (Sprang et al., 2019) found that the STS literature is stymied by differing definitions and conceptualizations. Although additional empirical study is needed, these authors identified promising strategies as including psychoeducation, mindfulness, emotional regulation strategies, and cognitive-behavioral strategies (e.g., redirecting automatic thoughts, cognitive restructuring). One strategy with specific evidence relevant to schools is mindfulness, with a recent meta-analysis (Klingbeil & Renshaw, 2018) indicating medium effect for outcomes related to psychological well-being, psychological distress, and physiological indicators, as well as small effects on classroom climate and instructional practices. It is important to note, however, that their review focused on general mindfulness intervention and was not specifically directed to examining impact of mindfulness on STS.

In addition, it should be noted that much of the STS work has focused on improving staff individual well-being and self-care practices (Sprang et al., 2019). Although this is important, this focus tends to minimize organizational factors contributing to STS (Sprang et al., 2019). Therefore, a systems-level conceptualization of responding to STS is essential; one such approach with initial promising evidence is the Secondary Traumatic Stress Informed Organizational Assessment (STSI-OA; Sprang et al., 2014) and Toolkit (Sprang et al., 2018). This intervention is based on best practices related to STS and implementation science to identify organizational supports that will create and sustain system-wide change. This approach involves initially completing the STSI-OA based on the organization’s current approach to prevention and intervention of STS to identify priority domains

of intervention (resilience, safety, policies, leader practices, organizational practices). Based on the results of the STSI-OA, the accompanying toolkit can be used to identify activities and procedures that correspond with the targeted domains for intervention. Aligned with best practices in implementation science, this intervention also identifies “implementation drivers” for competency, organizational factors, and leadership within each domain to support sustained change over time.

Summary and Future Directions in Trauma Intervention

As emphasized throughout this chapter, the past decade has brought tremendous steps forward in acknowledging and recognizing impacts of adverse childhood experiences. Substantial efforts have been undertaken to build an evidence base for trauma-informed intervention that targets trauma at the individual level. Directions forward must connect related literatures and expand focus to be inclusive of collective and systemic levels of intervention. As related to school mental health research and practice, a key emphasis must be on fostering education settings that engage a trauma-informed lens that is culturally responsive and healing-centered for the whole child, school, and community (Chafouleas et al., 2021). By definition, trauma-informed schools are a mechanism to promote systemic resilience and to disrupt the systemic trauma that is often perpetuated by schools. Yet gaps in how to fully engage this mechanism are evident, such as defining and measuring expected impacts with clear ties to educational outcomes, establishing capable school personnel who are supported in doing the work, and integrating knowledge on racial and cultural stress into frameworks. Agendas forward must move to define, enable, and sustain the “whole package” of a trauma-informed approach in schools.

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Interventions for Students Who Exhibit Bullying or Aggressive Behavior

7

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Nature and Impact of the Problem

Bullying and aggressive behavior remain persistent problems in schools. Although definitions of bullying and aggressive behaviors differ in the literature and are often contentious, bullying is generally defined with three main features or core elements: intent to harm, repetition, and power imbalance (Olweus, 1992). Aggressive behavior, in turn, is a more encompassing construct involving various behaviors with the general goal of harming or injuring another individual (Baron & Richardson, 2004). However, definitions of bullying and aggression present theoretical inconsistencies and limitations in measurement such as how to measure the perpetrator's intent (i.e., accidental harm vs. intentional harm), how to determine whether the behavior is repeated over time, or how to define a power imbalance between the perpetrator and victim (Slattery et al., 2019). Definitions of aggression have also been criticized as being broad and lacking specificity, often confounding aggression with related but distinct constructs such as hostility and anger (Parrot & Giancola, 2007). According to participant roles, bullying has also been defined as a complex social phenomenon along a continuum of categories includ-

ing bullies, bully-victims, and victims, as well as categories for other individuals not directly involved such as bystanders, defenders, and uninvolved students (Espelage et al., 2013; Salmivalli, 2010). Furthermore, these definitions may not capture how youth understand and define these terms in real-life settings with research showing that youth often confuse bullying with general aggression and may focus on other aspects not included in the theoretical definitions of these constructs (Jeffrey & Stuart, 2019; Monks & Smith, 2006).

Despite the theoretical limitations in the definitions of bullying and aggression, researchers agree that both bullying and aggression are prime targets for preventive interventions and selective programming hoping to decrease these behaviors among children and adolescents (Gaffney et al., 2019). Gaffney et al. (2019) report that about one-third of children and adolescents experience bullying victimization globally with rates as high as 48% in sub-Saharan Africa, and the lowest ranging from 22% in Central America to 31.7% in North America. Similar findings were reported by Modecki and colleagues (2014), who found an average prevalence of school bullying of 35% among 80 different countries.

Children and adolescents experiencing bullying victimization and aggression, or who perpetrate these behaviors, are more likely to experience adverse developmental outcomes such as higher rates of depression and suicidal

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ideation (Hinduja & Patchin, 2010; Holt et al., 2015; Ttofi et al., 2011a), and increased rates of offending and violence as adults (Ttofi et al., 2011b, 2012). Bullying perpetration has also been linked to other forms of violence and disruptive behaviors such as sexual harassment, sexual violence perpetration, and homophobic name-calling (Espelage et al., 2015, 2018). Similarly, bullying and aggression have been linked to detrimental educational outcomes, such as higher levels of absenteeism and school dropout, decreased school graduation, and low academic achievement (Fry et al., 2018; Gaffney et al., 2019). School mental health professionals, teachers, and other school staff are well-positioned to deliver interventions targeting children and adolescents who exhibit bullying or aggressive behaviors at school. In addition, interventions have sought to address the prevalence of bullying and aggression by involving family, parents, and the broader community as allies in preventive efforts. Given the elevated prevalence and negative associations between bullying and adverse socio-developmental outcomes, bullying and aggression remain serious public health concerns.

Targets for Intervention

Ecological Systems Theory (Bronfenbrenner, 1992) is a useful framework for prevention and intervention programs addressing bullying and aggression at school. Various malleable factors at multiple levels of youths' social ecologies (individual, family, peers, schools, communities, and society) interact and reciprocally influence bullying and aggression at school (Espelage & Swearer, 2009; Espelage et al., 2013; Hong et al., 2014; Merrin et al., 2018).

At the individual level, factors such as age, gender, race/ethnicity, socio-economic status, special education status, disabilities, sexual orientation, gender expression, and homelessness can be associated with increased risks of bullying victimization and aggression (Espelage et al., 2013; Kurki-Kangas et al., 2019; Rose et al., 2011; Underwood & Rosen, 2010). Societal

stigma, stereotypes, and discrimination on the basis of perceived individual characteristics fuel bullying and aggression against youth who do not conform to more privileged identities. At this level, malleable factors include creating affirming curriculum content and interventions that directly address bias-based discrimination on the basis of gender, race/ethnicity, special needs, disability status, sexual orientation, and other socio-demographic characteristics (Espelage et al., 2013).

At the microsystem level, family and parenting practices, peer influence, friendship networks, school norms and climate, and teacher's attitudes are hypothesized to influence the prevalence of bullying and aggression (Espelage et al., 2013). For example, according to Social Learning Theory (Bandura, 1986) researchers have shown that violence experienced at home and maladaptive family dynamics can also impact bullying and peer aggression at school (Snyder et al., 2003; Valido et al., 2021). At the peer level, bullying has been hypothesized to serve as a means to establish and maintain social dominance, or a central and powerful position, in the peer network (Reijntjes et al., 2013; Vaillancourt et al., 2003). Bullying has been linked to strategic manipulation with the aims of attaining popularity, prestige, and social status within school norms that equate aggression with being "tough" or "cool" (Juvonen et al., 2003; Reijntjes et al., 2013). In addition, teachers and school staff who view bullying as harmless or normative can negatively influence bullying and aggression, helping to establish school norms and climates that perpetuate these behaviors (Holt et al., 2010). At this level, effective intervention strategies include transforming peer norms that promote bullying into norms that support bystander intervention, providing professional development to teachers and staff, and building school-wide behavior supports and social-emotional learning (SEL) skills (Espelage et al., 2013).

Relationships between the microsystems are also reflected in the mesosystem and exosystem, where interactions between different settings can contribute to the establishment of bullying and aggression. For example, family, community, and

school settings interact where family/community relationships may influence school friendship networks and in turn friendship networks may have an impact on family systems and community settings. At this level, coordinated intervention efforts that involve multiple levels, such as the family, the school, and the community, can address the complex interactions across multiple environments (Espelage et al., 2013). Similarly, interventions that capitalize on community resources such as recreational facilities, volunteer experiences, youth leadership, and coaching can have a positive impact on bullying and aggression, helping to offset the risks associated with these settings (Espelage et al., 2013).

Lastly, at the macrosystem, structural and societal-level factors such as cultural and societal expectations and structural inequality can be targets of culturally sensitive bullying prevention. For example, structural and economic inequalities affecting youth from low-income families who receive government welfare have been associated with higher incidence of bullying perpetration and victimization (D'Urso et al., 2021; Hong et al., 2020). Similarly, socio-cultural and community-level risk factors experienced by ethnic/racial minority youth from disadvantaged backgrounds are associated with higher incidence of bullying (D'Urso et al., 2021; Jansen et al., 2012). Interventions that take a social justice/restorative perspective can explicitly target malleable risk factors at the macrosystem, acknowledging the impact culture and structural inequality have on the outcomes of bullying and aggression. Additionally, existing programs can be reviewed and updated with adaptations to better fit the cultural needs of diverse populations to improve prevention outcomes (Bernal & Adames, 2017).

From a broader perspective, the complex and multifaceted nature of bullying and aggression within the social-ecological model has important implications for program evaluation and progress monitoring. First, evaluation of bullying prevention programs must consider multiple settings and include diverse informants and stakeholders in the monitoring of prevention efforts. Research designs that incorporate the views and perceptions of students, teachers,

families, and community members can strengthen the validity of program evaluations. Given that these environments reciprocally interact with each other and influence bullying and aggression both in and out of school, examining only one context in isolation can limit the generalizability and applicability of research findings. Further, program evaluation and progress monitoring should include measurement of hypothesized causal mechanisms besides the main outcomes of bullying and aggression. In addition to evaluating moderators and mediators of program effectiveness across multiple levels, it is also important to determine under what conditions and for whom bullying interventions are effective. This includes monitoring program effectiveness among disadvantaged racial/ethnic, sexual, or gender minority youth and among youth with special needs or disabilities. Lastly, program evaluation should assess the broader school climate, cultural attitudes, and social norms of the spaces where bullying is reinforced and maintained.

Approaches for Interventions

Interventions for students who exhibit bullying or aggressive behaviors should be comprehensive and tailored to the individual student, group of students, and/or school climate to be most effective. It is important to remember that students who perpetrate bullying or aggressive behaviors belong to a heterogeneous group and that bullying, specifically, is a social phenomenon including several key players (i.e., perpetrators, victims, and bystanders). Therefore, approaches to intervention for these behaviors warrant a social-ecological lens rather than a one-size-fits-all approach. A comprehensive approach for intervention includes training for all school staff, psychoeducation for students at risk for these behaviors and their families, cognitive-behavioral strategies, and classroom management. To successfully implement these approaches for intervention and even prevention, research suggests a multi-tiered system of support (MTSS) framework.

Training

All adults who work with children and adolescents need to receive ongoing professional development on topics related to child development. As generations of children evolve and adapt to new risk and protective factors, adults need to have the latest knowledge on evidence-based practices to best support their diverse needs. Currently, not all school staff have access to the same level of training. Certified school staff (e.g., teachers, counselors, school social workers) receive far more professional days than non-certified school staff (e.g., paraprofessionals, teacher aides, lunchroom and custodial staff) even though we know bullying and other dangerous behaviors are not limited to the classroom. A quantitative study with 165 certified and 87 non-certified elementary school staff found that school staff had significant differences in measures on self-efficacy beliefs to intervene, attitudes toward victims and bullies, and likelihood of intervention with cyberbullying, favoring certified staff members (Williford, 2015). Findings suggest that additional training is necessary to support non-certified staff members to successfully identify and intervene in bullying and other aggressive behaviors.

School Resource Officers (SROs) and School Security Professionals (SSPs) often interact with students who exhibit bullying or aggressive behaviors. Despite their frequent interactions, SROs and SSPs are not mandated to complete, nor do they receive, youth or school-related professional development (Espelage et al., 2020; Forber-Pratt et al., 2020; Mallett, 2016). From 2014 to 2017, the National Institute of Justice (NIJ) awarded a total of \$246 million to one hundred different Comprehensive School Safety Initiative (CSSI) projects including research on mental health and trauma-informed responses, restorative justice, and training for school resource officers. Espelage et al. (2020) received funding through this initiative to develop and disseminate a series of four professional development modules to School Resource Officers (SROs) and other School Security Professionals (SSPs), focused on trauma-informed care, social-

emotional learning, cultural competence, and restorative problem solving. Quantitative and qualitative data from this initiative demonstrate the challenges to training this population but the critical need and desire expressed by SSPs for additional training (Espelage et al., 2021; Forber-Pratt et al., 2020).

Since the last NIJ CSSI-funded initiative in 2017, a lot has changed. The coronavirus disease-2019 (COVID-19) pandemic and the national outcry around police brutality and accountability have direct implications for schools and their approach to interventions, especially among students who exhibit aggressive behaviors. Moving forward, if SROs and SSPs are to remain working in public schools then they must receive ongoing professional development on a variety of youth development topics and undergo progress monitoring to ensure they are applying the content to serve all students. Additional funding for research and training on anti-racist practices is also critical for adults working with students who engage in bullying and other aggressive behavior (Zimmerman & Astor, 2021).

Psychoeducational Interventions

Another strategy for preventing bullying and aggression at school involves psychoeducational programs. The term psychoeducation is based on the idea that better condition-related outcomes will result from increased knowledge of a condition (Lukens & McFarlane, 2006). Psychoeducational programs integrate psychological and educational aspects to provide students (and teachers or other school staff) with specific strategies to overcome bullying and aggression at school. The intervention might include strategies to increase awareness of bullying, identify the bully and victim, and create changes in school cultures and norms (Newman-Carlson & Horne, 2004).

Psychoeducational interventions may involve interactive activities or peer learning in small-group settings in order to enhance students' acquisition of knowledge and social-emotional skills (Evans et al., 2014). For example, Şahin

(2012) evaluated the efficacy of a psychoeducational intervention aimed at increasing empathy and preventing bullying in primary schools. The study used a small-group didactic approach with demonstrations and interactive activities to increase students' abilities to empathize and establish healthy relationships with their peers (Şahin, 2012). The study found significant decreases in bullying behavior among students in the intervention condition.

Psychoeducational programs can also combine various modalities such as discussions, role-playing, films, and video games designed to both educate students about bullying and aggression and increase student's self-efficacy and anti-bullying attitudes (Evans et al., 2014). As an example, the "*FearNot!*" bullying prevention program presented students with hypothetical bullying scenarios in which they were taught how to respond and formulate advice for the game characters (Sapouna et al., 2010). According to Sapouna and colleagues (2010), the brief three-week program saw significant decreases in bullying victimization among intervention students versus control students at the first follow-up. Similarly, well-known and successful bullying prevention programs such as the KiVa program in Finland have used a combination of strategies including curriculum lessons, group work, films, and video games, which fall under the broad category of psychoeducational interventions (Salmivalli et al., 2011).

Other psychoeducational programs have focused on increasing students' social-emotional learning (SEL) competencies, in conjunction with lessons on bullying prevention. For example, the Second Step middle school program included 15 interactive lessons aimed at increasing social-emotional learning skills, problem-solving, emotion management, and empathy (Espelage et al., 2013). Students actively participated in class discussions, dyad exercises, and individual work supplemented with media-rich content and video demonstrations of skills (Espelage et al., 2013). Within a 3-year period, the program found significant reductions in verbal/relational bullying perpetration, homophobic name-calling, physical aggression, and sexual violence (Espelage et al., 2013).

In summary, psychoeducational programs can contribute significantly to the reduction in aggression and bullying at schools by empowering students with the skills needed to recognize and confront bullying, while also developing their self-efficacy and interpersonal skills to do so. This type of intervention is adaptable and can involve several intervention strategies, delivery settings, and technologies. Psychoeducational interventions, which have been shown to be effective, remain one of the most effective methods for bullying prevention.

Cognitive-Behavioral Interventions

Cognitive behavioral therapy (CBT) is the current gold standard of psychotherapy for treating many mental health and behavioral concerns (David et al., 2018). Formal CBT interventions are performed by licensed psychologists, counselors, and therapists, but most occur outside of the school system and are accessible to those who can afford mental health care. However, cognitive behavioral techniques are key components of nearly all effective school interventions for bullying involvement and other internalizing and externalizing behaviors (Merkin, 2019; Waschbusch et al., 2019). These strategies are designed to improve emotional regulation and coping strategies by challenging and changing distorted cognitions (e.g., thoughts and beliefs) that arise from feelings and result in maladaptive behaviors. Social-emotional learning (SEL) and mindfulness-based curricula and programs are some of the existing cognitive behavioral approaches to intervention.

Waschbusch and colleagues (2019) examined research from meta-analyses, systematic reviews, and meta-reviews that tested school-based interventions for aggressive and defiant behaviors in students. Results indicated that school-based interventions produced significant but small positive effects on aggression and defiance, with larger effects for interventions that were implemented school-wide and with higher fidelity. Whether interventions were student-directed or teacher-/environment-directed,

researchers found a common thread of cognitive-behavioral approaches that included praise and incentives, clearly communicated rules and expectations, and reasonable consequences for misbehavior. Specific interventions with empirical support were identified from the Blueprints for Healthy Youth Development and “What Works Clearinghouse” databases. All interventions listed were focused either on SEL or Behavioral SEL. Evidence supported the following interventions for students exhibiting aggression or defiance according to grade levels: Positive Behavior Interventions and Supports (PBIS) during 1st–12th grade, the Good Behavior Game (GBG) in elementary school, and Second Step in elementary and middle school.

Other cognitive-behavioral approaches to students exhibiting bullying and other aggressive behaviors are mindfulness-based interventions. Mindfulness is described as awareness that is present-focused and non-judgmental (Kabat-Zinn, 2003; Tang et al., 2015; Wheeler et al., 2017). Meditation is one of the most popular mindfulness practices, which involves being in tune with the present moment while bringing awareness to and regulating attention and emotional responses (Wheeler et al., 2017). Mindfulness interventions provide students with the practice necessary to view anger-producing thoughts and situations as temporary events within the broader context of life events (Feldman et al., 2010; Singh et al., 2017). Mindfulness also helps diffuse situational sensitivity and provide cognitive flexibility to enable non-aggressive responses (Masuda et al., 2003; Roemer & Orsillo, 2003). Thus, instead of reacting with anger and aggression to emotionally arousing thoughts and situations, students are enabled by mindfulness training to consciously respond. A recent meta-analysis explained the effects and moderators associated with school-based mindfulness interventions for mental health in students (Carsley et al., 2018). A total of 24 studies with 3977 total participants were included in the meta-analysis and results indicated that mindfulness-based interventions had small to moderate effects on mental health from pre–post intervention compared to control groups.

However, interventions delivered during late adolescence that included a variety of mindfulness activities had the largest effects on mental health and well-being. Given that bullying behaviors are most prevalent during middle and high school, mindfulness-based interventions may be effective for adolescents exhibiting these behaviors.

Family–School Interventions

Including family members in school-based prevention efforts is another strategy that may be effective to prevent bullying and aggressive behaviors at school. Due to the documented associations between aggression experienced at home and aggression and bullying at school, investigators have designed interventions to increase family awareness and involvement in school as modifiable factors of bullying prevention (Cross & Barnes, 2014; Duncan, 2004). Using Family Systems Theory (Hammer, 1998), researchers assert that the interconnectedness of family members affects the behavior patterns of individuals within the family and the wider social environment they inhabit (e.g., peer interactions; Cross & Barnes, 2014). As such, several interventions include the family system in bullying prevention.

For instance, the “*Friendly Schools Friendly Families*” program (Cross et al., 2012) raises bullying awareness and parental involvement as a strategy for bullying prevention. The intervention was designed to target malleable factors (e.g., parent–child communication, parenting style, parent bullying attitudes and beliefs) that contribute to bullying involvement in schools using family education materials and active parental involvement (Cross & Barnes, 2014). Part of a school-wide bullying prevention initiative, parents were recruited to participate in family-level activities in order to increase their competence in preventing and responding to bullying (Cross et al., 2012). In comparison with the program without parental participation, the authors found that the comprehensive approach including parental components was more effective at reducing bullying behaviors (Cross et al., 2012).

Similarly, a recent meta-analytic review examined 22 studies of school-based anti-bullying programs and found that the 13 programs including a parental component were associated with a small but significant effect in reducing bullying perpetration and victimization (Huang et al., 2019). Parental components included providing parents with informational materials about bullying and prevention strategies, organizing meetings with parents, and assigning home activities involving parent–child interactions (Huang et al., 2019). These findings suggest that an integrated whole systems approach utilizing multiple levels of the social–ecological model can be effective in preventing bullying and aggressive behavior.

Classroom Management

Interventions designed to manage classroom behavior can also be effective in preventing bullying and aggression (Veenman et al., 2018). In classroom management interventions, techniques are employed to detect and deal with bullying and aggression with an emphasis on classroom rules and monitoring of disruptive behavior (Ttofi & Farrington, 2009). In addition to managing classroom activities, classroom management also involves creating a stimulating environment that encourages prosocial behavior, relationship building, and effective teaching strategies (Levin & Nolan, 2014). Classroom management interventions are rooted in the recognition that teachers are crucial in establishing the social climate of their classrooms and that their attitudes toward students can influence classroom behavior (Agee, 2020).

The Good Behavior Game (GBG; Barris et al., 1969) is a classroom management intervention that has been shown to be effective in decreasing bullying and aggressive behavior (Tingstrom et al., 2006). The intervention is designed to create group contingencies within the classroom where two or more teams earn marks when displaying disruptive classroom behaviors such as bullying or aggression (Tingstrom et al., 2006). The team showing the lowest number of marks is given special privileges such as free time at the

end of the day, skipping the line at lunch, or receiving stars on a winner board (Tingstrom et al., 2006). The game creates a common group goal in which the actions of individuals impact the performance of their team as a whole. The GBG intervention has been widely adopted and evaluated showing effectiveness in reducing both proximal and long-term outcomes of aggression, conduct problems, substance use, criminality, and other detrimental developmental outcomes (Smith et al., 2019).

Another promising classroom management strategy to reduce bullying and aggression is the instructional approach of cooperative peer learning (Johnson et al., 2013; Van Ryzin & Roseth, 2019). The purpose of cooperative learning is to create a group-based learning environment that encourages interpersonal relationships among students (Van Ryzin & Roseth, 2019). During cooperative learning, interactions between students are shaped around common goals, and peers are encouraged to collaborate toward these goals. The positive environment created through cooperative learning and supportive interactions is associated with enhanced peer relations, development of social skills, improved empathy, and reductions in bullying and prejudice (Van Ryzin & Roseth, 2019). A study by Van Ryzin and Roseth (2019) showed that a cooperative learning intervention among middle school students resulted in an indirect reduction in bullying behaviors via enhancement of affective empathy (Van Ryzin & Roseth, 2019). These findings suggest that effective classroom management that promotes student cohesion and a positive learning environment can have positive impacts on bullying and aggressive behaviors at school.

School Mental Health Interventions

Within the social ecology of children and adolescents, schools are critical spaces for prevention and intervention. The development of effective school mental health interventions must be rooted in social justice and equity to be culturally responsive and inclusive of the diverse student identities across US schools. The successful

implementation of interventions depends largely on funding and collective buy-in from key stakeholders. Given the variability in schools, it is best practice for each school to collect their own data from a variety of sources for data-driven decision-making when identifying points for intervention (Mandinach & Jackson, 2012). Schools are well positioned to collect ongoing data and monitor the progress of interventions. Many educators already collect data for progress monitoring in Response to Intervention (RTI) and Positive Behavior Interventions and Supports (PBIS). However, a student's academic, social, and emotional skills are interrelated, such that when a student struggles in one area we must consider how it interferes with the other. The multi-tiered system of support (MTSS) framework combines the progress monitoring goals from RTI and PBIS.

An MTSS framework is currently considered best practice for developing and implementing interventions (Eagle et al., 2015). MTSS facilitates data-driven decision-making in schools to implement research-based interventions that align with the needs of a student, group of students, and school climate. An MTSS framework includes a multidisciplinary team of stakeholders (e.g., teachers, administrators, school security, families) who collaborate to collect and analyze data. Results inform the evidence-based interventions that are systematically implemented in Tiers 1–3 that differ in intensity and/or frequency (i.e., Tier 1, universal; Tier 2, targeted; and Tier 3, intensive). Additionally, the multidisciplinary team is responsible for monitoring progress on intended outcomes and tracking the “fidelity” of the implementation.

A recent randomized controlled trial (RCT) tested the effectiveness of multi-tiered system of support for behavior (MTSS-B) training and coaching in 58 Maryland high schools to improve the implementation of evidence-based social and behavioral programs and practices (EBPs) across all tiers and to determine the impact on school and classroom practices to reduce the prevalence of emotional and behavioral disorders (EBDs) (Bradshaw et al., 2020). Results indicated that intervention schools receiving additional training and coaching in MTSS-B demonstrated improved

implementation fidelity and significant reductions in teachers' use of reactive behavior management over the course of the three-year study, and school-wide fidelity was predictive of improved teacher practice. Additional support in implementation is key to the successful adoption of an MTSS framework but so is time. Extant research suggests it can take 3–7 years for systemic change to occur (Fixsen et al., 2009) and it is possible that the three-year RCT did not have sufficient time to improve implementation evenly across all tiers. Given that aggression and bullying depend on the socio-cultural school context, a school-wide MTSS framework that enables data-driven decision-making for school mental health interventions can be used to implement a comprehensive bullying prevention plan that is iteratively developed for every school.

Conclusions and Future Directions

Youth bullying and other associated forms of aggression remain quite prevalent across the globe. Victims, perpetrators, and bystanders continue to experience concerning and adverse mental health and educational outcomes. In this chapter, we briefly provided a discussion of definitions of bullying, prevalence of bullying internationally, and comment on how bullying is a precursor to other forms of aggression, including bias-based aggression (e.g., sexual harassment, racism). The utility of framing these behaviors as stemming from the larger social ecology of a child continues to shape the development and evaluation of prevention programs. Interventions tend to target risk factors at the individual, family, and school levels, but rarely do so in an integrated, systematic manner, which may contribute to the modest effects found in many meta-analyses. Despite the research documenting how family can encourage bullying and also mitigate the impacts of bullying involvement, few studies have targeted parent education when compared to school-based interventions. Much work still needs to be done to develop, refine, and evaluate these programs with an eye on developing prevention programs that address bias and inequities

that are often undergirding bullying and other forms of aggression among youth.

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School Mental Health Interventions and Assessment for Students with Attention-Deficit Hyperactivity Disorder

8

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Description of Students with ADHD

Attention-deficit hyperactivity disorder (ADHD) is characterized by difficulties sustaining attention, impulse control, and hyperactivity. The disorder is thought to be present at birth and chronic with fluctuations in degrees of impairment across the lifespan. In the 1990s, the diagnosis was changed to ADHD, which replaced previous labels including ADD and ADD with or without hyperactivity. Children and adolescents with ADHD experience impairment across multiple domains of functioning with impairment at school being very common. Stimulants are the most common treatment for youth with ADHD and can address some of the impairment at school (Evans et al., 2001); however, there are limitations to its benefits (e.g., Froehlich et al., 2018). School-based interventions for students with ADHD have been widely studied with behavioral interventions being most common for elementary-aged students and training interventions are supported for secondary students (Evans et al., 2018). The disorganized thinking and difficulty sustaining attention that are common for youth with ADHD are sometimes referred to as problems with executive functioning and these problems conflict with school demands related to

productivity, comprehension and attention to written and spoken material, and following the formal rules for behavior established by the school. They are likely to receive poor grades, experience disciplinary actions, fall behind academically, and be rejected by their peers. Some of their behavior can be very stressful to teachers and annoy other students. The school-related impairment often increases as students' age and adults' expectations for independently managing their own behavior and work completion increase.

Children in primary grades are most likely to be diagnosed with ADHD predominantly combined presentation. As expectations for young children to sustain effort and attention to tasks are low, their primary problems are frequently related to disruptive behavior and overactivity. Combined presentation remains common in the intermediate grades, but expectations for completing seatwork, sustaining attention, and productivity increase presenting challenges for these youth resulting in poor grades and compromised learning of the academic material. During adolescence the predominantly inattentive presentation becomes most common and the expectations for students to be able to independently organize their time and materials as well as learn the academic content become substantial. As a result, academic failure and school disengagement are common outcomes. Frequent co-occurring problems such as emotion dysregulation (Bunford et al., 2015) and learning disabilities (Larson

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et al., 2011) along with comorbid disorders such as depression and conduct disorder further compromise these students' trajectories (Beauchaine et al., 2013). Overall, these problems can place students at high risk for problematic long-term outcomes such as school dropout, delinquency, substance use, and social and economic hardship (Hechtman, 2017).

There are numerous advantages to both assessment and treatment afforded in school settings compared to clinics. When conducting an evaluation, a clinician can directly observe the student in a variety of situations including structured and unstructured settings, in demanding situations, in social settings, and in a variety of other situations that typically occur during a school day. This allows clinicians to see the context of problematic behaviors and identify antecedents and consequences. In addition, clinicians can see changes in behavior over both short periods of time (e.g., days and weeks) as well as over years. Finally, in addition to the child, there are usually multiple other adults who know the child and can provide their perspective on the student's strengths and weaknesses.

Many of these advantages for assessment are also likely to improve the potential benefits of interventions. Children can be seen multiple times per week for varying lengths of time. Problematic settings can be observed and can include live coaching from the clinician so clinicians can learn why an intervention may or may not be effective. There are other adults who can help by implementing aspects of an intervention to expand the scope of the impact. The potential value of these enhanced tools can greatly increase the likelihood that treatments will be effective for youth with ADHD.

The benefits of the school setting are only realized if teachers and clinicians use practices that are likely to be effective. In the education and school mental health field there are multiple definitions of the term "effective." For some, effectiveness is determined by access to the curriculum in a manner that facilitates passing courses. For example, adolescents with ADHD frequently have difficulty completing homework due to disorganization of time, materials, and

tasks. This can lead to failing grades. In some schools, when this occurs the student is no longer assigned homework and the course grade is determined solely by performance in the classroom (i.e., completing classwork, tests, quizzes, in-class projects). Once implemented a child's grade can change from failing to a C or a B overnight. As a result, some would describe eliminating the need to do homework as an effective intervention. In addition, this change in expectations is easy to implement and can fix the problem immediately.

Others argue that this approach is actually harmful to the student. If the goal of the education system is to help children become educated, competent, and independent adults; then removing an expectation to complete homework makes this goal difficult to achieve. It is critical in many aspects of adulthood to be able to organize one's tasks and complete them on time (e.g., pay bills, meet expectations at job, follow-through on commitments to friends and partners). Learning to independently complete homework helps a student achieve this long-term goal. In addition, there are interventions to help adolescents consistently complete homework and evidence supporting their effectiveness (described later in the chapter; Evans et al., 2016; Langberg et al., 2012). This approach to intervening with students is consistent with the Life Course Model (LCM; Evans et al., 2014a). The LCM defines effective interventions as those that increase the likelihood that the student will be able to independently meet age-appropriate expectations. Based on this definition, removing the expectation to complete homework is completely ineffective but training the student to independently regularly complete homework constitutes an effective intervention for this problem.

Ineffective interventions only don't help the student, they also can do harm. First, many students and their families experience relief when expectations are reduced and problems are eliminated. For example, in the situation described above regarding homework completion, many parents struggle to get their students to complete their schoolwork and this elevates the stress in the family and the conflict between parents and

their child. As a result, eliminating these struggles can be very welcome and relieving. The short-term goal of relief can be far more salient than the long-term goal of functioning independently. Second, some students and parents come to believe that the world needs to reduce expectations for the student. As a result, some reject attempts to intervene to improve independence. For example, in some of our work in secondary schools, some of the students with ADHD are not required to take notes in class even when their peers are expected to do this. The student with ADHD may be given a copy of the teacher's notes or the notes of a high-achieving peer. There is research documenting that notetaking can be learned by adolescents with ADHD (Evans et al., 1995). On some occasions when we offered to work with students to help them learn to independently take notes, they refused to participate because their teachers and parents do not require them to take notes (Harrison et al., 2022). This perspective that students with ADHD should not be expected to meet age-appropriate expectations can limit their potential and shift resources away from interventions that could actually help them achieve.

Unfortunately, this approach to services of reducing expectations for students with ADHD is very common in today's schools. In reviews of individualized education plans (IEPs) of students with ADHD (Hustus et al., 2020; Schnoes et al., 2006; Spiel et al., 2014) investigators identified

that many of the most common services provided to students involve reducing expectations instead of intervening to improve skills (see Table 8.1). As can be seen in Table 8.1 none of the most common services on the IEPs of students with ADHD include an intervention that is intended to improve the student's academic functioning. If this approach were taken with students with reading problems, then services would completely rely on offering audio recordings of books and having others read to the student instead of providing remedial reading instruction. Although this approach for students with reading problems or with ADHD can improve grades and access to the curriculum, it keeps the student dependent on these reduced expectations instead of focusing on getting the student to the point of not needing them.

In the years since these studies were published, the use of fidget devices and modified seats in classrooms has become increasingly popular for children with ADHD. The idea is that by giving students a target for their overactivity (e.g., clicker, toys, and chairs with bands) the student will be better able to be productive. There is very little evidence to support this approach and there is research suggesting that this approach can actually make the behavior of the student and peers worse (Graziano et al., 2020). Unfortunately, approaches for helping students with ADHD without meaningful evidence supporting their benefits frequently become popular. Some other

Table 8.1 Most common school-based services provided to students with ADHD

Grade levels/reference	Services	Percentage of IEPs	Percentage of 504 plans
Grades 1–7 Schnoes et al. (2006)	Extended time on tests	80.9	NA
	Extended time for assignments	71.1	
	Shorter/different assignments	57.5	
	Read tests to students	53.3	
	Modified tests	51.7	
Grades 6–8 Spiel et al. (2014)	Extended time on tests	88.3	78.4
	Small group instruction	85.0	56.8
	Prompting	76.7	64.9
	Test aids	73.3	29.7
	Read tests to students	70.0	32.4
Grades 9–12 Hustus et al. (2020)	Small group instruction	85.7	25.0
	Extended time on tests	77.8	62.5
	Prompting	74.6	73.2
	Read tests to students	60.3	17.9
	Preferential seating	55.6	34.0

examples include nutritional aids, computer-based cognitive training tasks, and specially designed video games (Chacko et al., 2013; Evans et al., 2021).

In the remaining pages of this chapter, we review the evidence-based assessment and intervention practices for students with ADHD. In contrast to the services that are often provided, the following services have varying degrees of evidence suggesting that they improve functioning and may reduce the likelihood that the student will need services in the future. More importantly, many are evaluated to determine the extent with which they help students independently meet age-appropriate expectations.

Evidence-Based SMH Assessment and Intervention

SMH Assessment

In the age of accountability and data-driven decision-making, there has been a push for behavioral interventions to operate within a multi-tiered system of support (MTSS) (Benner et al., 2013). Within this framework, educators are tasked with identifying students who need support, providing empirically supported interventions to meet student needs, monitoring student progress using empirically supported measures and processes, and making data-driven decisions to maximize positive student outcomes. As a part of a MTSS, high quality instruction is provided to all students (Tier 1) and screening is conducted to identify children who are not meeting expected benchmarks. Students who are struggling are provided additional support (Tier 2) to improve their access to educational materials and meet their needs. Students' progress is monitored and those who do not demonstrate adequate response to these targeted interventions may receive additional individualized interventions (Tier 3) to support their needs.

Assessment plays a key role in MTSS frameworks. Educators must regularly collect data on students' skills and functioning to determine

when increasingly targeted and intensive interventions are needed to supplement core instruction. In the section below, we provide an overview of evidence-based methods for conducting screening, comprehensive evaluation, and progress monitoring of students with ADHD in the school setting within an MTSS framework. Throughout the dynamic process of assessment, school psychologists, and evaluation teams should consider factors that may account for a student's inattentive, hyperactive, and/or impulsive behaviors. Comprehensive evaluation should also include educational and cognitive testing. Difficulty understanding content due to learning or intellectual disability may lead students to be inattentive during lessons or exhibit challenges completing work that may mimic ADHD. Similarly, school personnel should consider contextual factors related to the child's history (e.g., poverty, abuse) that may contribute to difficulties paying attention in school. In sum, the use of dynamic and holistic assessment methods can help facilitate the development of an intervention plan designed to meet the student's unique needs across their schooling.

Screening

The goal of screening procedures is to minimize false negatives and ensure that all at-risk students are identified. Within an MTSS framework, screening allows students at risk for ADHD to be provided with Tier 2 supports to supplement universal classroom management strategies and ensure the student's success in the classroom. When resources are limited, screening may be conducted on an as-needed basis, driven by teacher referrals. However, given differences in teachers' perceptions of student behavior and approaches to referrals, a substantial number of students with emotional and behavioral problems may be missed using this method (Eklund et al., 2009). This is particularly true for students who present with non-disruptive inattentive behaviors. Teachers are ideal candidates to complete universal screening measures because of their unique

backgrounds and interactions with students (see below). However, screening measures can also be completed by caregivers/parents and relying on multiple informants can help ensure all students who may benefit from services are identified.

Given the broad goal of universal screening, many available screening measures assess for a variety of cognitive, emotional, and behavioral disorders. However, most include a subscale designed to assess for the presence of symptoms associated with ADHD. Examples of available screening measures include the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), Direct Behavior Rating Scale (DBR; Chafouleas et al., 2013), Social, Academic, and Emotional Behavior Risk Screener (SAEBRS, Kilgus & von der Embse, 2014), and the Behavioral Emotional Screening System (BESS; Kamphaus & Reynolds, 2015). The use of a broad screening measure has the advantage of providing information about other concerns and can help rule out other disorders that may mimic attention and impulse control difficulties in the classroom. A comprehensive screening process should also incorporate information from health screenings often conducted at school (e.g., hearing, vision) that can cause or exacerbate inattentive and impulsive behaviors that mimic ADHD.

Progress Monitoring

In the context of MTSS, children who are identified as at risk for ADHD may be provided with targeted interventions to support positive classroom behavior. When services are implemented to support behavior change, progress monitoring assessments play a critical role in guiding intervention related decisions. Progress monitoring involves the regular collection of data throughout the course of intervening to determine whether the intervention is effectively improving behavior and decreasing impairment. Behavioral progress monitoring measures should (a) have strong psychometric properties and be sensitive to small changes in behavior, (b) be efficient with respect

to financial costs, time, and effort, and (c) be repeatable to allow for regular data collection throughout intervention (Chafouleas et al., 2009).

Given the need to obtain progress monitoring data in the child's natural environment (Classen & Cheatham, 2015), teachers are ideal candidates to acquire progress-monitoring data and to interpret the data for the purpose of making decisions about potential changes to intervention plans. Depending on the extent to which parents are involved with treatment, parents may provide information that is useful for progress monitoring. Progress monitoring can be conducted using existing measures that are designed for this purpose such as the School Functioning Scale (SFS; DuPaul et al., 2019) or Daily Behavior Ratings (DBRs; Chafouleas, 2011). Alternatively, school mental health professionals may select an intervention that involves frequent tracking of carefully defined target behaviors (e.g., Daily Report Cards) and, therefore, allows SMHPs to observe changes in behavior (or lack thereof) that indicate whether the implemented services are producing the desired behavior change.

Evaluation and Eligibility

When students who are at risk for ADHD present with severe behavioral concerns or do not respond to initial supports, they may be recommended for a comprehensive evaluation to determine whether an ADHD diagnosis is warranted and an IEP or 504 plan needed. Children with ADHD may qualify for additional services and supports under the Individuals with Disabilities Act of 2004 (IDEA 2004) or Section 504 of the Rehabilitation Act of 1972. It is critical that school mental health professionals be familiar with IDEA 2004 requirements for special education procedures. Federal, state, district, and school-level regulations and policies may influence the method used to evaluate a given student. The following section provides an overview of the most common and critical components of a comprehensive diagnostic evaluation.

Informant Rating Scales

Rating scales completed by individuals who interact regularly with the student are the most commonly used means to assess ADHD (Barkley, 2015). Given that ADHD symptoms must be present across at least two settings to warrant diagnosis, obtaining rating scales from multiple informants is critical. Parents and teachers are the most common informants. Parents are important informants because they observe the child over time across multiple environments and have a comprehensive knowledge of their history. However, teachers are also ideal informants. Their educational training in child development and extensive experiences with children of similar ages give them a unique perspective from which to differentiate typical and atypical behavior. Self-report measures of ADHD are also available; however, research suggests that many children and adolescents with ADHD may not accurately report their ADHD symptoms and the associated impairment (e.g., Smith et al., 2000). Thus, parent and teacher ratings are highly recommended, but self-ratings should be used with caution.

Interviews

Although not always feasible, interviews with informants who complete the rating scales can also be a valuable addition to the assessment process, particularly when discrepancies arise between informants who interact with the child in various settings. Interviews can help the school psychologist understand informants' interpretation of the ratings scale items and identify potential biases that may have impacted their responses on the rating scales. Interviews with parents can be critical for determining age of onset and learning more about the student's developmental and medical history. Interviews are also an opportunity to gather important information about other disorders or contextual factors that may contribute to a student's inattentive, hyperactive, or impulsive behaviors.

Classroom Observation

Direct observations can complement the other components of a comprehensive evaluation by providing information from a neutral informant (Jiang et al., 2019). Classroom observations can help capture information about behaviors, such as subtle inattentive symptoms, that may be missed by teachers. Observations can be more useful than global rating scales for gathering information about the individualized antecedents and consequences that may precipitate and maintain a student's challenging behaviors. Although classroom observations may be helpful for treatment planning, there are also several structured classroom observation measures that can be used to gather these data such as the Behavioral Observation of Students in Schools (BOSS; Shapiro, 2003), Student Behavior-Teacher Response Observation Rating System (SBTR; Pelham et al., 2008), Direct Observation System (DOF; McConaughy & Achenbach, 2009), and the Classroom Observations of Conduct and Attention Deficit Disorders (COCADD; Atkins et al., 1985).

Functional Behavior Analysis (FBA)

FBA is a comprehensive evaluation method in which the treatment team seeks to understand the contextual factors that precipitate and maintain a student's challenging behaviors in the classroom (see Sattler 2014 for review). Many core behaviors associated with ADHD may also be caused or exacerbated by other learning, emotional, and behavioral difficulties. For example, a student may fail to finish work because of inattention, oppositionality, avoidance related to anxiety, or difficulty understanding the material due to a learning or intellectual disability. To conduct an FBA, practitioners should clearly define the challenging behavior, conduct a comprehensive assessment that includes assessment tools discussed above, synthesize assessment information to develop hypotheses about the potential causes of the behavior, and develop an intervention to

target the behavior. A high-quality FBA will be ongoing and involved continued assessment throughout intervention to evaluate the effectiveness of the plan.

SMH Interventions for Elementary School Students

In the following section, we provide an overview evidence-supported psychosocial treatment for students with ADHD that can be implemented in elementary school classrooms. Many of these interventions are based on behavioral techniques, specifically, operant conditioning (Pfifner & Haack, 2014). Although several of the interventions discussed in the section on interventions for secondary school students may also be adapted to help young children, this section focuses on behavior management techniques that are commonly used at the elementary school level.

Universal Services

Students with ADHD benefit from many techniques that are considered best practice in universal classroom management. Students thrive in environments that promote positive teacher-student relationships combined with structure and clear expectations. This is often best accomplished with strong home-school partnerships and effective classroom behavior management. Establishing a foundation for warm communication with parents at the beginning of the year can be helpful in the future should the student begin to exhibit behavioral, academic, or social difficulties. It is important to share information about the child's strengths and to allow parents/guardians to discuss their perspectives and goals for their child. Open and warm communications with parents/guardians can help identify differences in expectations across settings that may impact a student's performance in the classroom (Kourea et al., 2016; Allen & Steed, 2016).

Effective classroom behavior management can also help teachers establish supportive relationships with their students and support the suc-

cess of students with ADHD. Effective classroom management begins with clear and reasonable classroom rules. It may be helpful to involve students in the collaborative development of classroom rules to increase ownership and commitment to the expectations. Once classroom rules are established, it is important to implement a clear and predictable system for encouraging adherence to the rules and discouraging behaviors that are incongruent with classroom expectations. Most evidence-based behavior management strategies are based on operant conditioning. The primary goal of these systems is to shape students' behavior by providing reinforcers (e.g., praise, attention, rewards) when expectations are met and providing undesirable consequences such as reprimands, removal of attention, removal of privileges when expectations are not met.

Verbal praise is an important social reinforcer used in most classroom management systems. Verbal praise is most effective when praise-to-reprimand ratios are high (Caldarella et al., 2020) and teachers use labeled-specific praise to make clear the behavior for which the child is being praised. For many children, receiving positive adult attention can be a powerful reinforcer. To help increase motivation for engaging in positive behaviors in the classroom, some teachers implement a class-wide reward system. When such systems are used, it is important that teachers clearly define the reward (e.g., a prize or privilege) and the behaviors that will be rewarded, track the behavior using a method that is clear and visible to students, and provide the earned reward soon after the goal is met.

When expectations are not met, it is critical that punishments are also clear, predictable, and reasonable. Although some people claim that they do not use punishment, it is likely that they use them frequently. Punishment is any consequence that reduces the likelihood of the student repeating the behavior. For example, ignoring and statements correcting a student's behavior are mild forms of punishment. Disruptive or harmful behaviors often warrant correction and other forms of punishment (e.g., time in the quiet area, reparations, notification of parents, office referrals). In the context of universal classroom

management, teachers should rely on reinforcement to a greater degree than punishment. If punishments are being used frequently to address the behaviors of a particular student, it may indicate that the student is in need of targeted interventions to promote positive classroom behavior.

Targeted Services

Although universal classroom management techniques provide a strong foundation for supporting students with ADHD, many students with this disorder will require more intensive individualized services at some point during their schooling. Because students with ADHD may be less sensitive to social praise than are typically developing children, they may require more salient and tangible rewards to be motivated to work toward behavior change. In the section below, we outline the evidence-based targeted interventions that can be used in schools to address impairment in elementary school students with ADHD.

Daily Report Card (DRC)

DRC is a behavioral intervention that has been shown to produce positive behavior change in students with ADHD (e.g., Fabiano et al., 2010). To create a DRC, the intervention team should select and carefully define 3 to 5 target behaviors, obtain baseline information about how often each target behavior occurs, and set attainable goals for making gradual changes. Next, a reward system is created to allow the student to receive prizes or privileges for reaching their daily goals. The reward system often involves parents/guardians providing reinforcement but may also involve rewards and privileges given in school. Once the system is in place, it is time to track the target behaviors each day and meet with the student to determine whether the daily goals were met. As with other behavioral interventions, DRCs involve a strong emphasis on ensuring the student is experiencing success. As such it is critical that the DRCs include attainable goals and if

the student is not experiencing frequent success, the goals should be modified. The recent development of an online version of the DRC, the Daily Report Card Online (DCR.O, Owens et al., 2019), has increased the ease with which teachers can develop and implement DRCs with students. The DRC is a feasible and effective means for addressing the impairment of students with ADHD.

Individualized Token Economies

Token economy systems are another targeted approach to behavior modification in the classroom. Token economy systems allow teachers or other school personnel to provide feedback and reinforcement in the form of tokens (e.g., stickers, coins, and checkmarks) that students can accumulate and exchange for prizes or extra privileges. Token economies differ depending on the age of the student and the nature of the target behavior. However, there are several common steps that help ensure their effectiveness (DuPaul & Stoner, 2014, McGoey & DuPaul, 2000).

First, it is important that the system be presented in a positive and enthusiastic manner, framing it as a way for the student to earn more rewards and privileges. A teacher or another school mental health professional should work with the student to define the target behavior and ensure that the student has clear understanding of the behavior they are expected to exhibit (or refrain from exhibiting) to earn a token. Next, it is important to collaborate with the student to develop a list of motivating rewards and privileges. Because many salient rewards (e.g., ice cream, time on video games, trips to the movie theater) are easier to offer in the home environment, it can be helpful to collaborate with parents to develop the reward list. However, school personnel can also develop a list of privileges (e.g., extra time in specials) that may work within the school. Once the plan is in place, the adult in charge of implementing the token economy should monitor the student's behavior, providing a token immediately after the target behavior is

displayed. In elementary school, teachers are ideal candidates for implementing the token economy system because they are typically with the child throughout the day. However, other school personnel may be invited to participate to assist with behavior monitoring and token distribution or to help with providing access to the rewards and privileges. Token economies, like most behavioral approaches, are evolving processes and should be updated as needed to help the student work on improving new target behaviors and to ensure that the reward and privilege list continues to be motivating.

Parent Behavioral Management Training

In clinics, the first line behavioral treatment for elementary school-age children with ADHD is Parent Behavioral Management Training (PBMT) (e.g., Barkley, 2013). Most parent training programs share the common goals of increasing positive interactions between parents and their children and developing a clear and effective discipline system based on behavioral principles. Although PBMT is not traditionally viewed as school-based intervention for ADHD, there are two primary reasons why teachers and school mental health professionals should be familiar with PBMT. First, ADHD is a disorder that impacts the child across settings (APA, 2013). Strong consistency of expectations and consequences across school and home can help ensure student success (Strickland-Cohen et al., 2021). In fact, many school-based behavioral training programs involve a school-home partnership to maximize effectiveness. Second, given that parents are accustomed to visiting schools to support their child's success, parents may be open to receiving parent training from an SMHP. Further, several models for parent training have been developed for implementation in the school setting (Cunningham et al., 1993; Molgaard, 2000). Thus, SMHPs may be ideal candidates for providing this frontline intervention for students with ADHD in a setting that is accessible to families.

Educational Support

Given high levels of comorbid learning disability and general academic difficulties in students with ADHD (DuPaul et al., 2013), high quality educational supports are also critical to helping students with attentional and behavioral regulation difficulties. Many educational supports presumed to improve academic performance for students with ADHD are intended to increase engagement and interest in the educational material. For example, to facilitate engagement during teacher-led instruction, teachers may intentionally incorporate Opportunities to Respond (OTR) during academic lessons. This may involve eliciting responses from individual students at multiple points during a lesson or using response sheets or hand signals (e.g., raise your hand if you think this statement is true) to allow the whole class to provide a response simultaneously. This technique facilitates active engagement to help students with inattentive and hyperactive/impulsive tendencies participate constructively in group instruction (Zentall & Meyer, 1987).

To facilitate engagement during independent seatwork, teachers may incorporate student choice into academic work. By allowing a student to choose assignments such as the worksheet they complete, the book they read, or the topic of the essay they must write, teachers encourage autonomy, ownership, and interests in the assignment that can increase engagement and decrease disruptive behaviors (Raggi & Chronis, 2006). When seatwork does not require independent completion, teachers may consider peer tutoring (Greenwood, 1997). Using this strategy, students with ADHD work closely with a peer to complete a task or assignment. The students in the dyad take turns being the tutor and the tutee; the tutor may be provided with a script and is encouraged to elicit responses and provide feedback and encouragement to the tutee.

Despite the utility of the above-discussed strategies for supporting academic success, it is important to acknowledge that some students with ADHD have comorbid learning disorders that warrant direct academic intervention (Fletcher et al., 1999). For these students, target-

ing ADHD symptoms alone may fail to produce substantial gains in academic skills (Tamm et al., 2017). As such, it is recommended that students with comorbid ADHD and LD receive interventions designed to target problems associated with each disorder.

Social Skills Training

Another domain in which children with ADHD may experience impairment is in peer relationships (McQuade & Hoza, 2015). Social skills training allows students and teachers to share a common language and operational definition of expected classroom behaviors and responses to difficult situations (e.g., sharing, asking to join in a game, asking for help from a teacher). There are many commercially available social skills training programs that can be implemented by a teacher with the whole classroom or by a school mental health professional with small group of students with ADHD. Social Skills Training is a broad term that captures a variety of programs designed to improve students' effectiveness in social contexts. Examples of programs include Socially ADDept (Giler, 2011), Second Step Program (Frey et al., 2000), Child Life and Attention Skills program (Piffner et al., 2014). Typical components of SST are direct instruction, modeling, role plays, practice, and sometimes homework. However, it is important to note that there is limited evidence that social skill programs alone improve outcomes for children with ADHD (Evans et al., 2018; Storebø et al., 2019). Rather, effectiveness typically requires that social skill interventions be combined with the behavioral approaches discussed above to improve student outcomes.

SMH Interventions for Secondary School Students

There are a handful of school-based interventions designed and evaluated for adolescents with ADHD (see review by Fabiano & Pyle, 2019). In this review, they noted the shift away from a pri-

mary emphasis on behavior management approaches toward training approaches. The rationale for this approach is described in other publications (Evans et al., 2018; Evans et al., 2019) and summarized below followed by descriptions of SMH interventions that were developed and evaluated for adolescents.

Training Interventions

As described in the previous section covering interventions for elementary school-aged children with ADHD, behavior management approaches that rely on parents and teachers to strategically apply reinforcement and punishment contingent on the behavior of students are best practices for these youth. As children enter adolescence it becomes increasingly difficult to implement traditional behavioral approaches. Adults are less in control of salient rewards for adolescents than they are for young children. Further, adults can rarely employ contingencies more salient to an adolescent than those provided by peers in terms of attention, approval, and relationships. In addition, effective behavior management requires adult monitoring of behavior. As children enter and progress through adolescence there is a decreasing amount of their behavior that is observed by adults. This can severely limit an adult's ability to effectively implement behavioral approaches. Although behavioral influences certainly shape everyone's behavior throughout their lifetimes, the contingencies become less controllable by adults as children age. As a result, there was a need to expand our intervention toolkit for adolescents and training interventions have been shown to be an effective additional approach.

Training approaches do not involve providing reinforcement or punishment although behavioral techniques can be used with training interventions. Training approaches begin with education about the behaviors being trained, discussion of when to use the behavior, and modeling or demonstrations. Depending on the complexity of the behavior being trained this can take as little as 10 min or up to half an hour. *The*

crux of training interventions is frequent practice over time with performance feedback. For many behaviors this can require multiple practice sessions per week over a month. It is best for the practice sessions to occur in a context that is as similar to the point of required performance as possible. Progress monitoring measures should target correct implementation of the behavior in the target setting.

Training approaches are used frequently to teach children and adults how to read, perform math operations, play golf, and play many other sports. For example, a basketball player may wish to improve their ability to shoot from the top of the key. A coach will discuss when is the best time to attempt that and describe and model optimal form (education phase). The player will then practice the shot repeatedly over time and progress can be aided by the coach observing the shot and providing performance feedback. Developing a good shot from the top of the key can take many hours of practice over months. In the early stages of practice, the player will think about all of the little steps involved in being successful such as position of the feet, where to look, position of the hands, and follow-through. After extensive practice, these steps will not require any attention as the shot will be automatic and all pieces will flow without attending to the details of each of them. This is the level of automaticity that is pursued with training interventions for any behavior. For example, early readers sound out words and think about context clues, but advanced readers read without thinking through the details.

One of the most studied interventions for secondary school students is organization training which was initially developed as part of the Challenging Horizons Program in 2000. This targets organization of a student's materials in their binder and bookbag. Disorganized materials are a very common problem for adolescents with ADHD and lead to failure to complete assignments (or even know what was assigned), lost materials, and a lack of preparedness for class. The intervention begins by establishing a set of criteria for determining what constitutes organized materials. For example, one criterion may be that all papers are in the appropriate subject

folder. Further, another criterion may be that the only papers in a folder are those that belong there (e.g., math homework). A list of eight to twelve criteria is typical for this intervention. Once established, the student and the adult (i.e., teacher, aide, and counselor) go through all materials in the student's binder and bookbag and make them correspond to the criteria. Following this initial meeting to get the intervention started, the adult and the student meet briefly and frequently to check the contents of the binder and bookbag against the criteria. If a criterion is not met, then the adult marks that on the tracking form (see Fig. 8.1 for an example form) and the student corrects it in the binder. As the student makes progress these sessions can become very short (<5 min), but repetition and feedback are still the key elements. A behavioral element can be added by providing a small reward if the student meets a certain percentage of the criteria. Our experience is that the majority of middle school students do not need this reward in order to make progress and very rarely do high school students need this. Nevertheless, it can be helpful for some students.

Training interventions can be applied to many other behaviors that are problematic for secondary students with ADHD. This approach has been found beneficial to help students take accurate notes in class (Evans et al., 1995) as well as interpersonal skills (Evans et al., 2022). There are opportunities to creatively apply training interventions to many other areas of school impairment for adolescents with ADHD. For example, this approach could be effective for behaviors as simple as students raising their hand and waiting to be called on before they speak, putting all materials under their seat when they enter the classroom, and putting their name and date on all assignments. In addition, the approach has potential for many more complicated behaviors such as double-checking the answers to all items on a test before turning it in and checking the homework folder in the binder for homework that needs to go in the teacher's homework tray at the beginning of every class. One of the advantages of the training approach (in contrast to behavioral interventions) is that there is evidence suggesting that

Sample organization tracking sheet for middle school students on an odd/even day schedule

Get Organized!

Get Organized! Be able to find your assignments and turn them in! Be able to locate notes to study for tests! Open your binder and go down the checklist: for each item, write Y (for yes) if you meet the question fully or N (for no) if you do not meet the question fully. When finished checking divide the number of Ys recorded by 11 and record this in the last space as the percentage of your binder that's organized.

BINDER	DATES						
Is the assignment notebook secured by three rings so that it is the first thing you see when you open your binder?							
Is your binder free of loose papers (are all papers secured in folder pockets or attached by 3 rings)?							
Is the Homework Folder attached by three rings behind your assignment notebook?							
Inside the homework folder: are homework assignments need for even days in the even day pocket?							
Inside the homework folder: are homework assignments need for odd days in the odd day pocket?							
Is there a pocket for papers you parents need to see, and only these papers are in it?							
Is there a folder for each class you are taking? (1. Math, 2. Science, 3. English/Reading, 4. Social Studies, 5. P.E./Health, 6. other extracurricular courses)							
Within each subject folder: Are all non-homework papers for that subject in the right pocket of the folder?							
Are the notes from each subject organized from oldest to newest behind the subject folder and secured by the three-rings in the binder?							
Are all papers in the correct section of the binder? (no papers in the wrong section)							
Are all the papers that are in the binder school related? (no drawings, scrap paper, notes, etc.)							
What percent of your binder is organized? Divide the number of Y's by 11 and then multiply by 100.							

Fig. 8.1 Sample organization tracking sheet for middle school students on an odd/even day schedule

behavior change extends past the end of the intervention and gains continue to increase over time.

Challenging Horizons Program

A version of the Summer Treatment Program (STP) designed specifically for adolescents was the first psychosocial treatment developed and evaluated for adolescents with ADHD (STP-A). In the STP-A medication studies (Evans & Pelham, 1991; Evans et al., 2001) and training intervention studies to help adolescents with ADHD improve school functioning were conducted (Evans et al., 1995). This work became the foundation for developing the Challenging Horizons Program (CHP). The CHP is the product of development work that began in 1999 in an after-school program that was a collaboration between the lead developer (Evans) and staff at a local middle school. The organization intervention described above was developed as part of the CHP along with other training approaches to

interventions for adolescents with ADHD. Training approaches for improving writing skills, study skills, and reading comprehension were developed and piloted as part of the CHP. In addition, a new approach targeting social impairment of adolescents with ADHD was developed. Traditional social skills interventions were not effective for children with ADHD (Evans et al., 2018) and early attempts to use them with adolescents yielded a similar lack of benefit. Common social skill interventions are primarily a psycho-education intervention. They typically include explaining social behaviors to youth, practicing the social skills in a group context, and then moving on to the next social skill in subsequent sessions. In the context of CHP development an alternative approach was developed that took a training approach, development of social goals, and repeated practice with performance feedback over an extended period of time.

The CHP is a collection of training interventions designed to be delivered at middle schools and high schools to adolescents with ADHD. It

has been evaluated in two primary models. The first is an intensive program with a group of students meeting with staff between 5 and 7 h per week. This version of the program was provided in the context of an after-school program that met two to three times per week as well as a “course” attended 5 days per week during the school day. The CHP was also provided as a mentoring intervention with staff and students meeting individually one to two times per week. It has been evaluated at the middle and high school level in schools ranging from urban to suburban to rural. Early development and feasibility studies were helpful in fine-tuning the procedures and making the program fit the school environment leading to the conclusion that the after-school version of CHP could not be provided in many schools. This led to the development of the mentoring model which required far fewer resources than the after-school program, but was not likely to be as beneficial as the more intensive version. In fact, research revealed that for middle school students the mentoring approach yielded very few benefits relative to the intensive version over the course of an academic year (Evans et al., 2016). However, the mentoring version when provided over the 3 years of middle school did lead to meaningful gains in academic and social functioning that increased over time (Evans et al., 2007; Schultz et al., 2009). When evaluated at the high school level only the mentoring version of the CHP was evaluated as the after-school program was not considered a feasible option. Results indicated frequent individual sessions (at least 2 per week) are likely needed to achieve meaningful change (Evans et al., 2014b) and a full evaluation at the high school level resulted in modest academic gains, but large improvements in social functioning that resulted in mean parent ratings of social functioning in the normal range (DuPaul et al., 2021; Evans et al., 2022). The most striking finding from research at the middle and high school is that the benefits of CHP (i.e., differences between the treatment group and community care control group) increased over the year following the termination of treatment (DuPaul et al., 2021; Evans et al., 2016). This is a unique finding among psychoso-

cial and medication treatment research for youth with ADHD and is likely due to the training approach employed in the CHP.

Homework Organization and Planning Skills

The Homework Organization and Planning Skills (HOPS) intervention is a school-based intervention for middle school students with ADHD. This intervention is similar to the CHP mentoring version and focuses on organization of school materials, recording homework, and planning and time management. In addition to taking a training approach, HOPS also includes a point system that rewards progress with the opportunity to receive gift cards. Finally, HOPS includes two parent meetings at school to orient parents to the intervention and encourage them to monitor and encourage use of the skills at home. Instead of the intervention lasting an entire academic year or longer like the CHP, HOPS is provided over 16 sessions lasting 20 min or less during the school day over 11 weeks. In an evaluation of the HOPS program research staff met with students two times per week for five weeks and then once per week for the final six sessions (Langberg et al., 2018). In this study, HOPS was compared to a program designed to reinforce work completion and on-task behavior.

Results indicated meaningful gains in parent ratings of homework completion and organization for participants in both intervention groups. Teacher reports indicated similar gains, but only for those in the HOPS group. It is interesting to compare outcomes with the CHP mentoring condition as the interventions are similar. Improvements in parent and teacher ratings on organization and homework management were greater for HOPS participants than the CHP mentoring participants and HOPS participants had notably fewer meetings with staff than did participants receiving the CHP mentoring. The demographics of the HOPS sample and the CHP mentoring samples were similar; however, the participants in the HOPS study received the intervention from research staff and the participants in

the studies of the CHP mentoring condition received the intervention from school staff (i.e., mostly teachers) who were encouraged and coached to meet consistently and provide interventions with adherence. There were no significant benefits of HOPS or the CHP mentoring condition on school grades although there were significant GPA benefits in the intensive version of the CHP. The HOPS study and CHP study both revealed a similar pattern in grades with those in the control conditions receiving declining grades over an academic year and those in the treatment conditions showing slight gains or no change. This suggests that the academic training interventions in HOPS and CHP may be most effective in preventing academic decline rather than improving grades.

Students Taking Responsibility and Initiative Through Peer Enhanced Support

Students Taking Responsibility and Initiative through Peer Enhanced Support (STRIPES) is a peer mentoring program that takes a training approach with organization skills and related academic skills with high school students with ADHD. The investigators integrated motivational interviewing approaches into the training procedures used in CHP and HOPS (Sibley et al., 2020). Pulling mentors and mentees out of class during the school day to meet was contrasted with after-school meetings and meeting during lunch. Overall, few of the sessions were attended by the participants (average 5.83 sessions out of 16); however, participants who were pulled out of class to meet held more than twice as many sessions as those in the other two conditions (8.42 compared to 3.5 and 4.58 out of 16). Thus, pulling students out of class to meet appears to be the best method for enhancing the amount of intervention. Even with such limited attendance, those who were pulled out of classes demonstrated significant gains in bookbag organization and student ratings of their feelings about school success. STRIPES is early in the development process, but if techniques for improving attendance can be

identified and integrated successfully, the model may provide a very effective alternative to the adult-provided training services of CHP and HOPS.

Self-Monitoring

Self-monitoring is a flexible strategy that can be used to help students keep track of adherence to behavioral and academic goals. This technique is similar to other behavioral techniques in that it involves defining a target behavior, monitoring and tracking the behavior, and providing reinforcement for engaging in the target behavior. However, this strategy differs in that the student is expected to be responsible for tracking. The tracking sheet may take many forms depending on the nature of the behavior. An innovative approach to using self-monitoring was developed and evaluated by Harrison et al. (2020). These investigators developed a self-monitoring tracking system linked to play in a video game to increase on-task behavior of middle school students. The results of the four case studies reported suggested that this approach has potential to enhance on-task behavior.

Conclusions and Future Directions

There are a growing number of effective SMH interventions for children and adolescents and those that have evidence supporting their use take a behavioral or training approach. Unfortunately, many of the most frequently used services in schools for students with ADHD tend to reduce expectations for students instead of focusing on enhancing competencies. These “accommodations” have been compared to behavioral and training interventions in a small pilot trial and demonstrated important meaningful benefits for providing behavioral and training interventions compared to reducing expectations (e.g., extended time, providing copies of teacher notes to students) as well as some iatrogenic effects of reduced expectations (Harrison et al., 2022). Prioritizing interventions that enhance compe-

tencies so students can independently meet age-appropriate expectations is the foundation of the Life Course Model (Evans et al., 2014a). Although interventions are often more labor intensive than reducing expectations, evidence supports providing them for at least some of a student's areas of impairment.

Although the number of effective interventions is growing for students with ADHD, there are still some important areas for which they are not available. For example, as a major goal of our education system is to help students successfully transition to the workforce or higher education, vocational training should be an important focus. This is even more important for students with ADHD compared to those without as far fewer young adults with ADHD enroll in a 4-year college than individuals without ADHD (29.5% vs. 76.8%; Kuriyan et al., 2013) and even fewer graduate from a 4-year college (17.8% with ADHD vs. 37.1% without; Hechtman et al., 2016). High school-based vocational training often includes skill development (e.g., HVAC, plumbing), but may not include other skills that are central to becoming employed after graduation. Interviewing for jobs is the gateway to employment and is a necessary prerequisite to applying one's skills. Research by Fabiano et al. (2018) revealed that the job interview is particularly problematic for youth with ADHD and differentiated them from youth without ADHD. Significant differences were reported between the groups in overall ratings of the written application as well as overall ratings of the interview. Further, observers rated the participants with ADHD as notably more inattentive and overactive than those without ADHD based solely on watching the interview. Given these findings, specific training on interview skills is one example of the need for additional intervention development needed for secondary school students with ADHD.

Behavioral approaches implemented by educators and other school staff are most likely to be effective for young students and training interventions have primarily been evaluated with secondary students. There is a lot left to learn about how to consider both evidence-based approaches

depending on the age to the child and the nature of the problem. It seems likely that approaches that combine behavioral and training strategies may be effective, but we do not know how these combinations may need to vary based on areas of impairment and age of the student. Finally, dissemination that promotes implementation with adherence has always been a challenge in this field and researchers are developing and evaluating innovative new approaches to this problem (e.g., Owens et al., 2017).

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School-Based Mental Health Interventions for Autistic Youth: Current Practice and Promising Future Directions

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Introduction

There is growing awareness of the mental health burden experienced by autistic individuals across their lifespan. More than 70% of autistic individuals, beginning in childhood and regardless of intellectual functioning (Brookman-Frazee et al., 2018; Joshi et al., 2010; Simonoff et al., 2008, 2020), are diagnosed with at least one co-occurring mental health condition, including internalizing disorders (e.g., anxiety, depression), externalizing disorders (e.g., attention deficit hyperactivity disorder [ADHD], disruptive behavior disorders), and trauma-related disorders (e.g., post-traumatic stress disorder [PTSD]). There is also increasing evidence that co-occurring mental health concerns may contribute, in large part, to impairment observed across multiple contexts including academic, daily living, and employment (e.g., Sikora et al., 2012; Sturm & Kasari, 2019; Turygin et al., 2015; Yerys et al., 2009). As a result, the demand for school-based mental health services is high and has reached every level of education, from primary to post-secondary (Cox et al., 2017; Hodgetts et al.,

2015). Researchers, self-advocates, and families have called for not only services to address existing co-occurring mental health concerns, but also prevention interventions that may address mental health needs before they manifest as clinically significant (Vasa et al., 2013).

School, specifically primary and secondary, is an ideal setting in which to deliver mental health services for autistic youth (Strein et al., 2003). Universal access to school for youth in the United States allows for potential equity in access to services, in addition to consistent monitoring and oversight of service delivery. Despite the potential opportunity in providing intervention in a school context, currently mental health support needs related to internalizing and externalizing symptoms and disorders are often not adequately addressed in schools and many barriers exist to successful implementation. Researchers who test interventions most often test intervention efficacy (i.e., whether or not the treatment works under “ideal” conditions) in a clinic setting, and may never attempt to disseminate and test the treatment in a real-world community context (i.e., “effectiveness”) (Schaeffer et al., 2005). The resulting research-to-practice gap may be particularly deleterious for autistic youth, who have an even greater need for mental health supports specific for the social, sensory, and educational challenges of the school context.

Unfortunately, system-wide special education services available to address areas of documented

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need under autism eligibility are extremely limited and are rarely evidence-based. There are many barriers to provision of mental health services in a school context for autistic youth, including lack of recognition of the impact of mental health on learning outcomes, availability of mental health services, training of staff, feasibility of implementation, and access (Skaar et al., 2020). Additionally, there is a paucity of information available about intervention and prevention programs that are efficacious specifically for autistic youth. Though many behavioral intervention and prevention programs exist to target various subclinical and clinical mental health concerns in targeted populations, few of these programs have been tested specifically in autism and even fewer have been rigorously tested in a school setting.

In this chapter, we aim to summarize existing evidence-based and promising mental health interventions for autistic students in a school setting that address internalizing (i.e., anxiety, depression) and externalizing (i.e., ADHD, disruptive behavior disorders) symptoms and disorders. The structure of each section will mirror the sequence of traditional mental health intervention development for autistic youth, which most often begin with modifications made to interventions that were originally developed for neurotypical youth. Each section begins with a brief review of interventions deemed effective in both clinic and community-based settings in neurotypical populations. Available evidence supporting adaptations of these interventions for autistic students at school will then be reviewed, in addition to promising prevention interventions. Each section will conclude with recommendations for future work and commentary on the potential of the intervention for use as a part of more personalized intervention.

Modular Treatment Necessitates Accurate Differential Diagnosis

The established prevalence of complex mental health needs among autistic student demands flexible intervention approaches that can target

specific mental health concerns using targeted intervention, in a sequence that can be optimally efficacious. Evidence demonstrating the superiority of modular approaches compared to stand-alone manualized treatments supports the potential benefit of considering modular, individualized tailored treatment for autistic youth in schools (Kasari et al., 2006; Weisz et al., 2012). In order to apply this flexible intervention approach, however, we need to be able to first identify presenting mental health concerns that require intervention using accurate differential diagnosis and be able to pull from a wealth of modular evidence-based treatments to address each concern effectively in an autistic population.

Effective assessment is critical, yet differential diagnosis is often complicated, particularly among school-aged youth. Difficulties with differential diagnosis occur across mental health conditions. For example, ADHD-related inattention can present as social difficulties (Carpenter Rich et al., 2009; Grzadzinski et al., 2016), compulsions in OCD and motor tics in chronic tic disorders can present similarly to repetitive behaviors in autism (Canitano & Vivanti, 2007; Stewart et al., 2016), social oddity may characterize a childhood premorbid stage of schizophrenia or specific schizophrenic vulnerability (Hameed & Lewis, 2016; Poletti & Raballo, 2020; Raballo, 2009), among others. In order to support effective implementation of modular evidence-based treatments, it is imperative that autistic students are appropriate and accurately assessed.

Internalizing Symptoms and Disorders

Anxiety

High rates of anxiety disorders and subclinical anxiety symptoms are reported among autistic individuals across the lifespan (Davis et al., 2011; Kerns et al., 2020; Uljarevic et al., 2019). Anxiety symptoms are present as early as infancy, are persistent, and stable or increase across childhood (Gordon-Lipkin et al., 2018; Teh et al., 2017). At least 40% of autistic children and adolescents experience clinically elevated anxiety or an

anxiety disorder (Brookman-Frazer et al., 2018; van Steensel et al., 2011; Vasa et al., 2013; Zaloski & Storch, 2018), and 25% of school-aged autistic youth report subclinical anxiety (Vasa et al., 2013). Of all co-occurring mental health conditions, research exploring the phenomenology and treatment of anxiety in autistic individuals is the most widely researched with the greatest strength of evidence. This section will explore evidence-based treatments for pediatric anxiety in neurotypical populations, followed by modifications made to anxiety interventions for autistic students, and available evidence to support the use of effective anxiety interventions for autistic students in schools.

Existing Evidence-Based Psychosocial Treatments for Anxiety in Neurotypical Populations

The most common behavioral treatment for anxiety is cognitive behavioral therapy (CBT), which involves graded exposure to a feared stimulus, enabling an individual to hypothesis-test and learn from the consequences of their specific anxiety-provoking situation. Cognitive restructuring, where children identify and challenge automatic thoughts, is used to facilitate this learning. Some CBT interventions also involve concrete skills training in relaxation, affect recognition, social skills, and problem-solving (Creswell et al., 2020). CBT has been found to be efficacious across individual, group, and internet-assisted formats (Creswell et al., 2020), and there is also evidence for sustained benefits in youth (Gibby et al., 2017). In addition, other psychosocial therapies have been tested in pediatric populations (e.g., supportive child-centered therapy (Silk et al., 2018); acceptance and commitment therapy (Hancock et al., 2018)), however insufficient evidence exists to conclusively determine efficacy (Creswell et al., 2020).

Modifications to CBT for Anxious Autistic Youth

CBT is also the most widely studied and utilized intervention for the treatment of anxiety in autistic individuals (Kreslins et al., 2015; Sukhodolsky et al., 2013; Ung et al., 2015; Vasa et al., 2014;

Walters et al., 2016; Weston et al., 2016; Wood et al., 2020). Modifications to existing CBT interventions have focused primarily on the structure and mode of delivery (e.g., visual presentation of information, simplified activities, greater parent involvement, breaks integrated into sessions, inclusion of special interests, increased therapy duration), with few changes to intervention content including emotion recognition training and concretizing lessons (Moree & Davis, 2010; Walters et al., 2016).

CBT has been found to be efficacious for the reduction of anxiety symptoms in autistic youth in both individual randomized trials (e.g., Facing Your Fears (FYF); Reaven et al., 2012; Multimodal Anxiety and Social Skills Intervention (MASSI); White, 2011; Behavioral Interventions for Anxiety in Children with Autism [BIACA] program; Wood et al., 2020), and in systematic and meta-analytic reviews (James et al., 2013; Warwick et al., 2017). However, autistic youth show a reduced full recovery rate (12.2–36.7%) compared to their neurotypical peers (47.6–66.4%) (Warwick et al., 2017). Some suggest that greater modification to existing protocols may be required for autistic youth to derive comparable benefit (Walters et al., 2016), while others emphasize the need to understand differences in the underlying etiology of anxiety in autism (Kerns & Kendall, 2012).

Evidence to Support CBT Effectiveness in Schools for Anxious Autistic Youth

Preliminary evidence supports the effectiveness of CBT for anxious autistic youth in schools, demonstrating a significant decrease in symptoms of anxiety (Clarke et al., 2017; Drmic et al., 2017; Luxford et al., 2017). Necessary modifications were made to all programs to facilitate implementation including fewer sessions (6–10), a small group format, and supplemental meetings with parents outside of school hours to deliver parent content. Only one of the trials could be categorized as a full effectiveness design (Drmic et al., 2017) as sessions were led exclusively by school staff, including learning and behavioral support staff and school psychologists.

These preliminary trials show the promise in potential widespread implementation of CBT to address anxiety among autistic students in schools, but also the considerable effort required to make this possible. Only one of the studies tested a full effectiveness trial that would be sustainable in schools without the support of research staff (Drmic et al., 2017). The trial was conducted in Singapore and required collaborative modification of session content to be culturally appropriate for its students, and an intensive 3–4 full day training for school staff in CBT techniques. Though school staff reported high satisfaction with the training, improvement in CBT knowledge was mediocre, with school staff demonstrating an average of only 70% mastery of material after training. Fidelity was also not reported, as school professionals did not have enough time to complete the measure.

Future Directions for School-Based Anxiety Interventions for Autistic Youth

Though partial and full effectiveness trials show preliminary support for the use of CBT in schools for anxious autistic youth, more work must be done (Slaughter et al., 2020). Thus far, studies examining effectiveness of different protocols have not been replicated, and the outcome measures used to determine effectiveness are often inconsistent with questionable reliability. Trials have relied primarily on self, parent or teacher report—all of whom struggle to recognize symptoms of anxiety and distinguish these symptoms from core autism-related traits (Kreslins et al., 2015).

Across school-based trials, modest symptom reduction and remission rates were observed, mirroring clinic-based findings. Additionally, one school-based trial found changes in anxiety symptoms, but no changes in the underlying mechanisms by which anxiety was hypothesized to manifest (i.e., attentional control and attention bias to threat; Luxford et al., 2017). Before modular interventions targeting anxiety can be tested in a school context, it is important to understand the components of CBT that may be most effective for autistic youth in order to maximize treatment gains. Additionally, effectiveness of CBT

for anxious autistic youth in schools has only been demonstrated for primarily males, ages 10–15, with an IQ over 70. Thus, results cannot be generalized to the larger autistic school-aged population including females, those with impaired intellectual functioning, and younger youth and older teens. Moreover, the majority of studies implemented CBT in high-income schools, with mostly White middle-class participants. Future studies will need to include more diverse samples in order to establish an evidence base for individuals with ASD.

Depression

Autism confers significant risk for clinical and subclinical depression across the lifespan. As many as 29% of children report depression symptoms, and 50% of adults report a history of depression in their lifetime (Hudson et al., 2019; Wigham et al., 2017). Adolescence represents a particularly sensitive period, as depression symptoms have been found to increase from adolescence into middle adulthood (Uljarevic et al., 2019). Marked increased risk of suicide attempts among autistic adolescents and adults compared to neurotypical controls (Chen et al., 2017; Hannon & Taylor, 2013) are possibly attributable to anxiety and/or depression symptoms (Y. Chen et al., 2020). Additionally, depressive symptoms have been found to drive the relationship between autistic symptoms and poor psychosocial outcomes (Chiang & Gau, 2016). Autistic females, who are at increased risk compared to males of experiencing symptoms of depression across the lifespan, are particularly vulnerable (Sturm & Kasari, 2019; Uljarevic et al., 2019).

Despite the prevalence of co-occurring depression in autism, the severity of the consequences of untreated depression, and the clear and established need for treatment (e.g., Green et al., 2000; Strang et al., 2012), very few studies have evaluated evidence-based practices for the treatment of depression in autistic youth, and far fewer have examined implementation of school-based services. The vulnerability of autistic adolescents to subclinical and clinical depression makes this a potentially critical time to intervene, necessitating an intervention approach that can be widely

implemented. Due to the potential catastrophic impact of depression, there is also a sizable focus on indicated prevention trials for neurotypical children and adolescents. This may be particularly relevant in autism for those who are diagnosed late (Hosozawa et al., 2020). In the following sections, we will explore existing efficacious evidence-based practices for the treatment of depression in neurotypical and autistic populations, prevention programs, and future directions for the treatment and indicated prevention of depression in schools.

Existing Psychosocial Evidence-Based Treatments for Depression in Neurotypical and Autistic Youth

Many psychosocial interventions have been tested for the treatment of depression in neurotypical adults (Cuijpers et al., 2013); however, fewer treatments have been tested among youth. The most compelling evidence for the efficacy of psychosocial interventions for depression exists for adolescents. The efficacy of both CBT and Interpersonal Psychotherapy (IPT) is well-established for depressed adolescents, through multiple trials conducted by independent investigative teams (Weersing et al., 2017). Evidence for the efficacy of psychosocial treatments for children is more mixed, with CBT the only psychosocial intervention to be possibly efficacious (Weersing et al., 2017). Attempts to disseminate psychosocial treatments to community and school contexts using effectiveness trials have generally been unsuccessful. In community contexts, effectiveness was poor for CBT and we know little about the long-term effectiveness of CBT delivered in schools (Weersing et al., 2017). There have been no effectiveness trials for psychosocial interventions targeting depression in elementary-aged pediatric populations.

Given the limitations of depression interventions available for neurotypical pediatric populations, it is unsurprising that available evidence for the treatment of depression in autistic children and adolescents is even poorer. There is limited evidence regarding the use of psychotherapy for the treatment of clinical depression in autistic children and adolescents (Cameron et al., 2020).

The majority of existing investigations are single-case reports, or quasi-experimental designs. Only two studies have addressed treatment efficacy using a controlled experimental design in an autistic pediatric population (McGillivray & Evert, 2014; Santomauro et al., 2016), however these were small trials that have not yet been replicated in independent evaluations. Preliminary evidence suggests that group CBT for the treatment of depression in autistic adolescents may be efficacious for those with elevated depression symptoms (McGillivray & Evert, 2014; Santomauro et al., 2016); however, improvement may be limited to particular cognitive-affective and not somatic symptoms of depression (McGillivray & Evert, 2014). Across these two investigations, few treatment modifications were described. Though, Santomauro et al. (2016) indicated an increased focus on emotion recognition and emotion awareness throughout the intervention to address the needs of the specific population, consistent with work in CBT for anxiety.

Depression Prevention Programs for Neurotypical and Autistic Youth

School-based prevention programs have shown effectiveness in the universal and targeted prevention of depression symptoms among youth, particularly among adolescents over age 13.5 (Bernaras et al., 2019; Stice et al., 2009). Though effect sizes are generally small (Werner-Seidler et al., 2017), over 75% of trials investigating prevention programs have deemed the interventions effective (Arora et al., 2019). Prevention programs also demonstrated long-term effectiveness, with gains sustaining at 24-month follow-up (Werner-Seidler et al., 2017). Researchers have noted the potential impact of prevention programs, despite small effect sizes. At the population level, small effects can be associated with meaningful improvement and effectiveness in the prevention of disorder onset (Werner-Seidler et al., 2017). Indeed, prevention programs are effective in reducing both onset of internalizing disorders and symptoms up to 12 months following program delivery (Ma et al., 2020; Stockings et al., 2016). In the school context, targeted

prevention programs that are delivered by individuals external to the school (e.g., mental health professionals, researchers, and trainees) show the greatest effectiveness (Werner-Seidler et al., 2017).

Only one small study (N = 29) has investigated the effectiveness of a depression prevention program specifically targeted for autistic adolescents (Mackay et al., 2017). The prevention program, *Resourceful Adolescent Program-A-ASD* (RAP-A-ASD), was adapted from an existing evidence-based CBT-focused program to support autistic students. RAP-A-ASD was delivered over 11 50-min sessions and included lessons about building self-esteem, emotion recognition, awareness and regulation, cognitive restructuring, problem-solving, and identifying and maintaining social support. Though the program was not effective in reducing symptoms of depression among autistic adolescents, parent-reported coping self-efficacy was found to increase as a result of the program, an effect that was maintained at 6-month follow-up. The authors highlighted that null findings may have been related to the necessary implementation of concurrent depression-specific interventions outside of the study for youth who exceeded clinical cut-offs at study entry (55% of sample had subclinical or clinical depression), or the suboptimal power to detect an effect given the small sample.

Future Directions in Treatment of Depression in Schools

Despite the importance of prevention and treatment of depression in autistic youth, the lack of evidence supporting efficacy or effectiveness of psychosocial depression treatment is striking. Before successful implementation of evidence-based services for school can be achieved, more work is needed to understand the etiology and mechanisms of depression in autistic youth. Mindfulness-based interventions have shown preliminary efficacy in the treatment of depression in autistic adults (Menezes et al., 2020), and may be a promising and feasible intervention approach to implement in a school context given the growing dissemination of mindfulness-based programming in schools (e.g., McKeering &

Hwang, 2019). Additionally, given the increased involvement of parents in interventions adapted for autistic youth, augmentation with strengths-focused programming directed toward parents may be valuable (Shochet et al., 2019).

Investigators who develop depression prevention programs designed for autistic youth in schools will also need to be mindful of recruitment difficulties related to the tiered approach to prevention within the Multi-tiered Systems of Support (MTSS) model (Weist et al., 2014). This model indicates that unique approaches to prevention are necessary when targeting all students (universal prevention), students identified as at-risk for the identified mental health concern (targeted prevention), and students who are in need of a high level of support (indicated prevention). Depression intervention and prevention studies in autistic youth have reported a high incidence of depression-related mental health needs discovered during initial study evaluation that require immediate treatment, such as suicidal ideation in treatment studies (McGillivray & Evert, 2014), and clinical levels of depression in prevention programs (Mackay et al., 2017).

The management of depression symptoms in autistic youth is clearly complicated, yet a critical area for further intervention development. There are several promising intervention approaches that may be effective when applied in the school setting for autistic youth (e.g., CBT, mindfulness, and CBT-based indicated prevention). A greater understanding of depression etiology in autism and intervention components that may target specific depression-related concerns (i.e., modular interventions) would further advance the field.

Externalizing Symptoms and Disorders

Among autistic school-aged youth, externalizing behavioral disorders (e.g., ADHD, oppositional defiant disorder [ODD], conduct disorder [CD]) and behavior problems more broadly (e.g., aggression, challenging behaviors, hyperactivity, impulsivity, irritability, noncompliance) are very common (Kaat & Lecavalier, 2013). More than 50% of autistic youth engage in aggression (Kaat & Lecavalier, 2013), between 40% and 78% of autistic school-aged youth have a co-occurring

ADHD diagnosis (Brookman-Fraze et al., 2018; Gordon-Lipkin et al., 2018; Stevens et al., 2016) and as many as 58% meet criteria for ODD and 11.7% for CD (Brookman-Fraze et al., 2018; Kaat & Lecavalier, 2013; Lecavalier et al., 2019). However, investigators and self-advocates have questioned the validity of traditional ODD symptoms in autism (e.g., Cholemkery et al., 2014; Leyfer et al., 2006), finding that many autistic children do not understand the concepts central to many of the ODD diagnostic criteria, including spitefulness, vindictiveness, and intentionally blaming others for one's own mistakes (Leyfer et al., 2006). Similar validity concerns have been described for conduct disorder symptom presentation in autism. Shared social difficulties in both disorders have been, in part, attributed to difficulties with empathy. However, overlapping social difficulties in the two disorders have been associated with different empathic mechanisms. Specifically, autistic youth demonstrate more impairment in cognitive empathy while youth with CD demonstrate greater impairment in emotional empathy (Schwenck et al., 2012). Autistic youth are also more emotionally reactive to films depicting emotionally loaded situations, providing further support to stronger emotionally empathic responses among autistic youth (Schwenck et al., 2012). Finally, higher rates of ODD and CD diagnoses at first-time appointments among Medicaid-served African American children later diagnosed with autism compared to White children further highlights validity concerns regarding the co-occurring diagnoses (Mandell et al., 2007).

Despite evident issues in validity of disruptive behavior diagnoses, co-occurring externalizing behavioral disorders and behavior problems have been found to amplify the impact of ASD symptoms on social, academic, and daily living domains. These effects include lower adaptive functioning (Lyll et al., 2017; Sikora et al., 2012; Turygin et al., 2015; Yerys et al., 2009), lower quality of life (Sikora et al., 2012), more severe social impairment (Rao & Landa, 2014; Yerys et al., 2009), lower cognitive functioning (Lyll et al., 2017; Rao & Landa, 2014), more impaired executive functioning (Yerys et al.,

2009), lower academic engagement (Sturm & Kasari, 2019), and greater risk for being bullied in school (Montes & Halterman, 2007). A co-occurring ADHD diagnosis can also reduce the effectiveness of pediatric behavioral treatments for co-occurring mental health concerns (Antshel et al., 2011). Presence of additional co-occurring oppositional symptoms has been found to further amplify these effects (Gadow et al., 2008).

Despite the clear impact of externalizing behavioral disorders and behavior problems on a majority of school-aged autistic children, few rigorous experimental studies have empirically examined the efficacy or effectiveness of behavioral interventions and training approaches targeting co-occurring externalizing behavioral disorders and behavior problems. In the following sections, interventions that were developed for youth with behavior problems or impaired executive functioning will be explored. Additionally, challenging behaviors, a term predominantly used to describe behavioral problems in autistic youth, will be addressed and comparisons will be drawn between behavioral programs found to be effective for ADHD-only and those effective for decreasing challenging behaviors in autism. Though medication management is an important treatment component for the management of ADHD symptoms in some youth, (AACAP, 2011; Evans et al., 2018; Wolraich et al., 2019), medication management is conducted outside of the school setting and is not included in the sections to follow.

ADHD and Disruptive Behavior Disorders

Training Interventions to Strengthen Executive Functioning

There is an established need for support around domains of executive functioning (EF) for autistic students. Autistic students experience broad EF deficits in concept formation, mental flexibility, fluency, planning, response inhibition, and working memory that persist into adulthood (Demetriou et al., 2018). Studies have repeatedly demonstrated the profound negative impact of impaired EF on concurrent and future adaptive

behavior (Bertollo & Yerys, 2019; Kenny et al., 2019; Pugliese et al., 2016), and social functioning (Kenny et al., 2019; Leung et al., 2016) among autistic individuals. Interestingly, EF subtypes in autism have been documented, where youth may show broad deficits, but typically show particular weakness in one facet of EF, namely (a) flexibility and emotion regulation, (b) inhibition, or (c) working memory, organization, and planning (Vaidya et al., 2020). A study examining the specificity of EF deficits in autism determined that EF ability was accounted for completely by ADHD symptoms rather than autism symptoms (Lukito et al., 2017). The relationship between ADHD symptoms and EF in autism supports the importance of identifying relevant EF interventions that have been found effective for youth with ADHD-only, and consider how these interventions may be applied and/or adapted to strengthen EF in autistic youth. The following section will explore EF interventions that have been developed for students with ADHD, and will follow with a brief discussion of an EF intervention program developed specifically for autistic students.

School-Based Programs for Improving EF for Students with ADHD

EF interventions designed to support school-aged youth with ADHD in the classroom focus primarily on organization skills training (OST). OSTs are intended to target organization skills, and occasionally involve adjunctive therapeutic strategies that address other domains of EF, most notably time management and planning skills. Modifications are made to programs to support the developmental needs of children. For example, substantial parental involvement is required in early grades, particularly in triangulation between teachers, parents, and therapists. With development, youth become more active participants in the trainings, and parents play a more secondary role and their involvement seems to be more to encourage awareness of strategy use. The following sections will thus describe the evidence-based EF OST training programs implemented in elementary school, middle school, and high school, respectively.

Elementary School

OST interventions have been found to be efficacious for elementary school-aged students with ADHD (Abikoff et al., 2013; Pffiffner et al., 2007). These interventions target academic organizational skills, including tracking of assignments, organization of school materials, breaking tasks down, among others (Abikoff et al., 2013; Pffiffner et al., 2007). Both evidence-based interventions, Organization Skills Training (OST; Abikoff et al., 2013) and Child Life and Attention Skills Program (Pffiffner et al., 2007) are delivered in a clinic-based context for 10–12 weeks, with 1:1 instruction with the student, and a combination of separate parent training sessions, family sessions, and frequent communication with the students' teacher. Teacher involvement is somewhat limited, and teachers are primarily included to encourage the generalization of strategy use at school. However, implementation of the OST intervention strategies by general education teachers in a classroom context may also be efficient and is currently being explored. The comprehensive and intensive training is necessary to meet the students at their developmental level and ensure the generalization of skills across contexts (e.g., school and home).

Developmentally, elementary school students are often not ready to manage academic skills with a high EF demand without support around the specific skills. Parents can also be helpful by creating an environment with consistent expectations in order to optimize successful skill implementation (e.g., creating routines, effective commands, negative consequences, modifying environmental antecedents) (Pffiffner et al., 2007).

Middle School/High School

OSTs provided within the Homework, Organization and Planning Skills program (HOPS; Langberg et al., 2008, 2012) and the Challenging Horizons Program (Evans et al., 2016), can be effectively delivered in a school context to support the academic-related EF of students with ADHD. OSTs for middle school students focus on increasing independence in academic skills necessary for achievement, including organization (e.g., organization

checklists and organization of school materials), homework recording and management, planning and time management, and study skills (e.g., notetaking, summarizing, writing skills). Most intervention programs occur over 8–11 weeks and may extend up to a year with at least twice weekly meetings with school staff during the school day (Evans et al., 2016; Langberg et al., 2012) or undergraduate students supervised by research staff in an afterschool program (Evans et al., 2016; Langberg et al., 2008; Molina et al., 2008). Parent involvement, relative to elementary school, sharply declines as students are expected to be able to independently manage their implementation of tasks. There are opportunities for parent involvement in both HOPS and CHP, but involvement is less central to the intervention than it is in the OST models tested for elementary school students.

Few interventions, specifically the Challenging Horizons Program (AACAP, 2011; DuPaul et al., 2021; Evans et al., 2014) and Students Taking Responsibility and Initiative through Peer Enhanced Support (STRIPES; Sibley et al., 2020), have been tested with high school students in a school context. The Challenging Horizons Program mirrors the program that was originally developed for middle school students. Paraprofessionals delivered the interventions directly to students 1:1 weekly during one school year. Parents completed a 10-session psychoeducational program about the intervention to improve skill generalization. The intervention was found to be somewhat effective in targeting inattention and academic impairment; however, variability was seen in effectiveness depending on intervention dose. Future work is needed to replicate the findings (Evans et al., 2014). The STRIPES intervention program includes instruction in both OTP and motivation and utilizes a unique peer-delivery model that aimed to improve intervention uptake and generalizability (Sibley et al., 2020). Intervention development included separate (1) feasibility and acceptability and (2) efficacy studies to refine intervention delivery to optimize impact. Peer mentors who were supervised by a school staff sponsor met with two students weekly for 16 weeks in the school context.

STRIPES showed efficacy in reducing declines in organization (book bag organization) in sociodemographically diverse schools. Effects for importance of academics, confidence in academic ability, and willingness to try one's hardest academically, however, were site-specific. Increased support or incentives (e.g., graded class) for intervention attendance in the high school age group may be necessary to achieve treatment gains.

OSTs designed to improve EF among youth are clearly effective, yet time and labor-intensive across grades. Despite the significant effort required to support EF skills among youth, EF interventions designed for students with ADHD-only may be promising for autistic students with EF weaknesses with minimal adaptation. The target skills in OSTs are delivered with concrete instruction, lessons are heavily scaffolded, and inclusion of parents can be an important component of the intervention to improve skill generalization. Environmental modification strategies are also consistent with strategies used in autism to manage challenging behaviors. Programs are also designed to be developmentally appropriate for the expected behaviors of a particular developmental period to support students in meeting target academic and organizational expectations. The delivery of content in a group format for middle and high school grades supports potential widespread implementation. Finally, lessons delivered in OSTs are often modular. It would therefore be possible to test effectiveness of individual treatment modules depending on a child's specific EF support needs.

School-Based Programs for Improving EF in Autism

Only a single randomized trial tested the efficacy of an executive functioning intervention for autistic students grades 3–5 in schools; Unstuck and on Target (UOT; Kenworthy et al., 2014). UOT was designed to target primarily cognitive flexibility in autistic students, but also effectively improved problem-solving, planning/organization, and classroom behavior. The intervention was delivered over the course of one school year in 28, 30–40 min lessons by school

staff during the school day. The intervention utilizes several instructional methods (e.g., videos, discussion, role-play, games), and specifically those instructional strategies that have proven effective in the CBT for anxiety literature for autistic students, including concrete lessons and experiments, and visuals. Consistent with larger meta-analytic studies that identified the importance of explicit instruction in self-regulation for youth with neurodevelopmental differences (Takacs & Kassai, 2019), UOT also employs self-regulation training through the teaching of scripts.

There is also growing interest in the use of computerized trainings to target EF skills in both neurotypical and neurodiverse samples. Although computer-based trainings have not been tested in a school context, one lab-based study including autistic children ages 8–12 tested the efficacy of two computer-based trainings in working memory and flexibility (Vries et al., 2015). The investigators found that participants' performance on proximal lab-based tasks of working memory and flexibility improved. However, changes to real-world EF were nominal. These findings reflect larger reviews of the general population that indicate a greater benefit of school-based interventions compared to computerized training (Diamond & Ling, 2019).

Future Directions in EF Interventions for Autistic Youth

Given the effectiveness of EF interventions in schools for youth with ADHD-only, it is critical that we evaluate if the same interventions are effective for autistic students with co-occurring ADHD symptoms. It will be necessary to understand modifications that may need to be made to improve treatment uptake, such as increased parental involvement or changes to the method of delivery of content as has been shown to be necessary in CBT for anxiety. Existing studies in ADHD-only samples have indicated variability in maintenance of gains at long-term follow-up, particularly for elementary-aged youth (Takacs & Kassai, 2019). Due to the importance of early executive functioning to later adaptive outcomes, it is essential that targeted, continuous, develop-

mentally appropriate EF interventions can support youth across early development.

Challenging Behaviors and Behavior Problems

Challenging behaviors as described in autism include behaviors characterized by autism core deficits (e.g., self-injurious behaviors, stereotypic behaviors) and behaviors with a multitude of possible etiologies (e.g., tantrum, aggression, property destruction) (Lory et al., 2020). Challenging behaviors have also been described to include behavior problems that are characteristic of externalizing disorders and symptoms. Behavior problems include a diverse set of behaviors that may disrupt the classroom environment including minimally severe behaviors such as off-task behavior, incomplete work, and noncompliance to more severe behaviors such as aggression and destruction of property. The management of challenging behaviors in autism is complicated by the fact that it is often difficult to disentangle the underlying cause of the behavior, which may include disruptive impulsivity-related behaviors (i.e., externalizing behaviors/behavioral problems in ADHD), or challenging behaviors that result from autism-specific impairment such as sensory hypersensitivity, fatigue following challenging social interactions, among others. Despite the difficulty in understanding challenging behavior etiology, management of problem/challenging behaviors in the classroom is increasingly important as we move toward more inclusive education for students with developmental disabilities, including autism.

Autism-Specific Interventions for Challenging Behavior

Few interventions have attempted to systematically decrease challenging behaviors in a school setting. The majority of interventions developed to date that specifically address challenging behaviors in autism have focused on parents as the intervention agents and have occurred in clinic (e.g., Bearss et al., 2015; Ros & Graziano, 2019). Though these interventions have shown efficacy in reducing problem behaviors reported by parents, generalization of the behavior change

has not been extended to school (Dababnah & Parish, 2016; Ginn et al., 2017; Ros & Graziano, 2019).

Several meta-analyses and systematic reviews have evaluated interventions for challenging behaviors among autistic students in school (de Bruin et al., 2013; Lory et al., 2020; Machalicek et al., 2008; Martinez et al., 2016; Rivera et al., 2018). These reviews summarize almost exclusively studies that used single-subject designs to assess effectiveness of behavior management strategies, making it difficult to discern their efficacy or effectiveness for the majority of students. Though there are evident issues with generalizability of research findings, the reviews indicate that teachers and school staff can be effective intervention agents and significantly decrease challenging behaviors among autistic students. The most evidence exists for antecedent-based interventions and for multicomponent interventions that may include a combination of antecedent-based, function-based, reinforcement, instructional, and/or consequence-based interventions (de Bruin et al., 2013; Lory et al., 2020; Machalicek et al., 2008; Martinez et al., 2016; Rivera et al., 2018). Other school-based services that are frequently assigned to manage challenging behaviors of autistic students in schools (e.g., one-to-one aides) have not been tested (Sansosti & Sansosti, 2012).

Interventions for Behavior Problems

In contrast to the evolving evidence for challenging behaviors in autism, there are strong evidence-based interventions that target behavior problems in the classroom, particularly for students with ADHD-related inattention and hyperactivity/impulsivity. Though significant effects of behavior parent training in a clinic-based context have been found to reduce behavior problems among youth with externalizing behaviors, there may be limited generalization to natural contexts of home and school. In school, teachers may manage over 100 challenging behaviors per hour (Owens et al., 2018), all of which may directly impact student learning. The intervention approaches aimed to address student behavior problems in the classroom are typically classified

as behavioral classroom management strategies (Hoza et al., 2008). Behavior problems manifest differently across development, and a variety of strategies are required to address behavior problems within each of the developmental periods during childhood and adolescence. The following section will therefore review school-based programs for behavior problems that have been evaluated for use in ADHD, organized by developmental level (preschool, elementary, middle/high school).

Preschool Behavioral Classroom Management Strategies

Management of behavior problems in the classroom is critical as early as preschool for children with externalizing behaviors. Children diagnosed with ADHD have higher expulsion rates from preschools compared to their neurotypical peers, in part due to behavior problems (McGoey et al., 2002). Behaviorally supported interventions, specifically parent-behavior training have the strongest evidence for preschool children according to clinical guidelines and systematic reviews (AACAP, 2011; Charach et al., 2013; Evans et al., 2018). There is inconsistent support, however, for combined home and school/daycare interventions (Charach et al., 2013). There is a need for greater study of school-based interventions that effectively target behavior problems in children exhibiting behavior problems, and those with a diagnosis of ADHD, and these interventions may be most critical for the transition between preschool and Kindergarten entry.

Elementary Behavioral Classroom Management Strategies

A variety of behavioral classroom management strategies, termed classroom contingency management, aimed at reducing problem behaviors have been tested and found to achieve varying effectiveness for elementary school students. Daily behavior report cards demonstrate the most consistent effectiveness and have been implemented in classrooms for decades to target challenging behaviors (Volpe & Fabiano, 2013). The use of daily behavior report cards has also been found specifically effective in reducing ADHD

symptoms (Iznardo et al., 2020) and disruptive behavior (Fabiano et al., 2010), and increasing on-task behavior (Fabiano et al., 2010; Jurbergs et al., 2010) and “target behaviors” (Owens et al., 2012). Appropriate teacher responses to rule violations have also been found to be predictive of fewer classroom rule violations (Owens et al., 2018). Appropriate teacher response includes using a neutral tone of voice to (1) gain the attention of the target student, (2) describe, briefly, the alternative desired behavior, and (3) allow the student time to exhibit the desired behavior (Owens et al., 2018).

Time-out from positive reinforcement, labeled praise, and effective commands and requests are additional classroom management strategies that have been tested. These classroom contingency management approaches are not effective, on average; however, there may be considerable individual variability in effectiveness. For example, labeled praise and effective commands and requests are not significantly related to students’ classroom behavior problems (rule violations), on average (Owens et al., 2018), but successful use of these strategies in single-subject designs suggest that some students may benefit from this approach (e.g., Matheson & Shriver, 2005; Sutherland et al., 2019). Similarly, there is considerable variability in student’s response to time-out from positive reinforcement, where an individual is moved from a situation that is reinforcing to a situation that is not reinforcing following a target behavior. Though the strategy is not effective for a subset of children (Fabiano et al., 2004), a significant decrease in problem behaviors is observed on average across children, regardless of time-out length (Fabiano et al., 2004). These elementary behavioral classroom management strategies have not been tested on a large scale for autistic students in the classroom, but show promise, particularly for inclusive classrooms that serve many students with diverse needs.

Middle School/High School Behavioral Classroom Management Strategies

Behavioral classroom management strategies are not well studied in adolescent populations with externalizing behaviors. The behavior changes

that occur during puberty in addition to the differences in context between middle school/high school and elementary school may limit generalizability of these strategies. Autistic students may also need unique support for behavior management in middle school and high school relative to their peers. On average across all children in a classroom, classroom rule violations decline with age (Owens et al., 2018), possibly reflecting general age-related improvement in effortful control and self-monitoring and management (Carlson et al., 2013). Autistic students, however, may continue to exhibit higher rates of challenging behaviors (Kaat & Lecavalier, 2013) as they continue to be exposed to changes in routine, aversive sensory experiences, and challenging social situations that all tax a student’s ability to effectively manage their emotions. Future work will likely require careful study of the distinction between oppositional behavior related to impulsivity, and challenging behaviors related to overwhelm among autistic secondary students before testing and modification of extant strategies can occur.

School-Wide Positive Behavioral Supports

School-wide positive behavioral interventions and supports show effectiveness in reducing the consequences of student behavior problems (e.g., student office discipline referrals, suspensions) in non-randomized and randomized large-scale efforts across grades and in sociodemographically diverse schools (Caldarella et al., 2011; Flannery et al., 2014; Noltemeyer et al., 2019). Implementation of positive behavioral support strategies within specific classrooms also has been found to be effective for this age group (Närhi et al., 2017). However, there is inconsistency in strategies used across trials making it difficult to distill the active components of the intervention. Additionally, the specific effectiveness of PBS for autistic students is also unknown. Individualized behavior programs using a PBS approach have been tested using single-subject designs (e.g., Blair et al., 2011) and found to be effective for individual students.

Behavioral classroom management strategies have been found to be effective in managing

behavioral problems among students with ADHD. However, many of the strategies have indicated significant individual variability in effectiveness. This suggests that some of these strategies may be more appropriate for some students than others. Future work will require identification of student characteristics that may predict intervention strategy effectiveness, and the use of modular designs that can be flexibly used to quickly identify behavioral management techniques that might be more effective for a specific child. Finally, behavioral classroom management strategies have yet to be tested with autistic students with co-occurring ADHD-related behavioral problems. Though behavioral problems are manifest among many autistic students, these behaviors have been termed “challenging behaviors” and have involved different intervention approaches described earlier.

There is clearly significant research needed to establish evidence-based standards of practice for addressing externalizing behaviors among autistic students. Researchers and clinicians have yet to test interventions that may specifically target externalizing behaviors among autistic students. The intervention practices described in the previous section that are effective for children with ADHD-only are unlikely to be equally effective for children with co-occurring ADHD and autism due to the breadth of underlying causes for behavioral problems. There may be promise in utilizing a modular approach to intervention for challenging behaviors, where different strategies may be employed depending on the etiology of the behavior and the environmental stimulus. Targeted intervention based on behavior etiology and context has shown promise, as Iadarola et al. (2018) demonstrated significant reductions in challenging behaviors among elementary school-aged autistic students during daily routine transitions in a randomized trial.

Conclusion

This chapter reviewed the available evidence on effective mental health interventions for autistic students in school. Empirical studies and qualita-

tive narratives indicate that co-occurring mental health conditions drive impairment in many domains that are critical for independent living (e.g., academics, daily living; Sikora et al., 2012; Sturm & Kasari, 2019; Turygin et al., 2015; Yerys et al., 2009). Though there is significant promise in mental health interventions for autistic youth, it remains an area of immense need. The strongest evidence exists for the treatment of anxiety in schools. The treatment of depression and externalizing symptoms and disorders lags far behind. There are available evidence-based interventions that have been tested in targeted populations (e.g., anxious, ADHD, depressed); however, these interventions have not yet been tested for autistic youth. There are several barriers that first interfere with our ability to test interventions. We generally do not understand the mechanisms by which some of these co-occurring conditions exist in autism (e.g., Lory et al., 2020). This is compounded by issues of measurement, both in accurate measurement of symptoms of co-occurring conditions, and adequate outcome measures to assess change over time with treatment. We also do not know if there is a particular sequence in which interventions should be delivered for co-occurring mental health conditions in order to maximize efficacy. It is possible that certain skills (e.g., affect recognition) may be necessary before a child can derive full benefit from specific intervention approaches. Further, it will also be necessary to address co-occurring mental health concerns not covered in this chapter. For example, recent work is revealing the need for trauma-informed therapists who are aware of the sources of trauma in autism and their unique presentation (e.g., Haruvi-Lamdan et al., 2018). Little is known about trauma among pediatric autistic populations, although evidence-based trauma programs are available for neurotypical students in schools (e.g., CBITS; Jaycox et al., 2012). Finally, exploration of distal outcomes including long-term follow-up of anxiety symptoms and other important indicators of future success (e.g., well-being, self-determinacy) are also needed to determine benefit of school, family, and research professional investment in this effort. Successful implementation of

evidence-based practices in schools to address mental health in autism requires the collaborative effort and dedication of school administration, school personnel, families, and researchers. Researchers must be willing to work with schools to make and test the appropriate adaptations to existing efficacious programs in order to ensure the mental health and well-being of autistic students.

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Part II

Promoting Meaningful Engagement and Leadership by Diverse Stakeholders



Enhancing Stakeholder Engagement, Collaboration, and Family–School–Community Partnerships in School Mental Health

Mark D. Weist, Ariel M. Domlyn, and Darien Collins

Collaboration and partnerships are critical for successful implementation of school mental health (SMH) programs and services (Roche & Strobach, 2019; Weist et al., 2006, 2012), with the SMH movement growing progressively in the past few decades, and particularly critical now, given the reverberating effects of the COVID-19 pandemic on child and adolescent mental health (Hertz & Cohen Barrios, 2021). Without adequate engagement and collaboration between critical stakeholders, SMH services are less likely to be implemented with quality (Kern et al., 2017; Langley et al., 2010; Lendrum et al., 2016), and will encounter greater sustainability and funding challenges (Kern et al., 2017; Massey et al., 2005; Vona et al., 2018). In SMH, there are many interacting systems and stakeholders affecting youth outcomes. The diversity of collaboration and partnership types is equally broad, including working alliances between stakeholders employed within the school system (e.g., teachers, administrators, counselors), in the broader community (e.g., local youth-serving organizations, social services), and between leaders and staff in these systems and the students and families served by them. This section of this School Mental Health Handbook builds from prior volumes (Weist et al., 2003, 2014) with

increased emphasis on the critical role of collaboration and partnerships.

In the chapters that follow, we review ideas for enhancing collaboration and partnerships between families and school staff (Garbacz et al., [this volume](#); Minch et al., [this volume](#)), students and school staff (Pate et al., [this volume](#)), between professionals within and beyond schools (Martin et al., [this volume](#)), and between schools, community organizations and universities (Wargel et al., [this volume](#)). We also place emphasis on the critical role of communities of practice/learning communities (Orenstein et al., [this volume](#)), and building an educational system of care with emphasis on cultural competence/humility (Clauss-Ehlers & Garagiola, [this volume](#)) in establishing genuine, mutually supportive partnerships.

All chapters connect to the theme that well-done relationships are foundational for progress in research, practice and policy in SMH, with systematic agendas (e.g., advancing evidence-based programming to assist students experiencing trauma in schools) resting on top of established relationships. These relationships represent important social capital, and are instrumental to the success of an innovation, and to its sustainability and scaling up (Mellin & Weist, 2011). Our experience is also that particular projects come and go, but relationships, when appropriately cultivated and emphasized, sustain, and may create “fertile ground” for the next

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innovation. Relationships are on a continuum from knowing of someone, to knowing them, to collaborating with them, to having an ongoing and mutually productive partnership. This same schema pertains to relationships among groups, such as the University of South Carolina (UofSC) School Behavioral Health Team, South Carolina Departments of Education and Mental Health, the Southeastern School Behavioral Health Community (www.schoolbehavioralhealth.org), and national centers for SMH (www.schoolmentalhealth.org) and Positive Behavioral Interventions and Supports (PBIS, www.pbis.org). This schema also reflects purposeful attention to establishing and continually enhancing vertical (e.g., state department of education to school district to school building) and horizontal (e.g., educators, school- and community-employed mental health professionals, administrators, families and students in a school) collaborative relationships.

The chapters in this section highlight critical considerations for understanding disparate aspects of SMH-related collaboration and partnerships, and for advancements in research, practice, and policy. This introductory chapter synthesizes cross-cutting elements and key takeaways from this section with two overarching themes focused on *Systems Analysis and Change*, and *Building Communities of Practice/Learning Communities*.

Systems Analysis and Change

School systems are complex entities, embedded within broader systems of district/community, state, regional, and national contexts. Highly relevant to collaboration and partnerships in SMH is systems thinking. Systems thinking refers to understanding the interrelated parts in a system, including individual elements (e.g., students, schools, communities), linkages between each element (e.g., student–teacher relationships, district policies affecting school climate in school buildings) and the boundaries that define each system (Williams & Hummelbrunner, 2010). Several principles are inherent – being reflective,

recognizing that systems are adaptive and complex, understanding that structures and patterns within systems will change over time, that actors within a system are responsible for working toward solutions, and appreciating that each subsystem such as SMH programming is connected to other parts of the system, such as academic curricula and pedagogy (Williams & Hummelbrunner, 2010). The chapter by Minch et al. (this volume) provides an overview of how systems thinking connects to improving schools' multi-tiered systems of support (MTSS) and assuring family voice and leadership within them. Within systems, it is critical to understand, and honor the ideas of diverse stakeholders, and for SMH, there are many relevant stakeholders, including students, families, educators, school- and community-employed mental health staff, support staff, school administrators, and other groups (Checkland, 2000; Lever et al., 2003). In efforts to strengthen and scale-up SMH as in this book, these stakeholders provide valuable perspectives, but commonly, efforts to join them together and/or to seek guidance from particular groups (e.g., students, families) are limited (Garbacz et al., 2020). Chapters in this section explore diverse stakeholder perspectives and strategies for coalescing their ideas toward enhanced family–school–community collaborations and improved SMH programming. An important resource for this work is the Family–School–Community Alliance developed with support from the Center of PBIS and emphasizing genuine collaboration with families and youth as co-creators of school environments with school staff and leaders and those from other youth-serving systems (see <https://fscalliance.org>).

Family–school–community partnerships are formed to identify needs and resources, create plans, implement change, evaluate program effectiveness, conduct ongoing quality improvement and evaluation, and ultimately to scale up strategies that work (Roche & Strobach, 2019). Disparate actors within the collaboration have responsibilities to each other for ensuring these activities are enacted successfully. Ideally SMH development at multiple levels of scale (e.g.,

schools, districts, states) includes purposeful systems analysis and change efforts guided by metacognition, or leaders actively “thinking about thinking” (see Seow et al., 2021). For example, within a team meeting at a school to plan for SMH programming, questions would be asked such as: (1) Are the right people here? That is to include diverse school staff (administrators, educators, school-employed mental health professionals and specialists, support staff), collaborating staff from the mental health system and other systems as indicated (such as juvenile justice, child welfare), and family members and student leaders (see Garbacz et al., [this volume](#); Pate et al., [this volume](#)). (2) Is the meeting well organized and structured, with clear agendas, excellent leadership, note-taking, managing of sidetracking, and action planning? Here use of formal meeting organizational strategies such as the Team-Initiated Problem Solving (TIPS, Todd et al., 2011) framework is a critical, but often a missing process. (3) How is bias affecting decision-making in this meeting, where/when are the vulnerable decision-making points, and what is being done to neutralize vulnerable decision-making toward more equitable outcomes for students, including those subjected to higher bias in decision-making such as youth of color (McIntosh et al., 2014)? (4) Are decisions made in meetings followed up on associated with ongoing quality improvement of programming, scaling up of effective practices, and reduction/elimination of ineffective practices (Eber et al., 2020; Weist et al., 2007)? (5) Are team members attending meetings consistently, actively participating, and are relationships being strengthened toward improved team functioning and impact (Markle et al., 2014)? Two overarching dimensions to this metacognition in SMH analysis and planning are evaluation/quality improvement, and implementation support, reviewed in the following.

Evaluation/Quality Improvement Data collection and evaluation are necessary for monitoring and assessing implementation of any activity, but particularly for effectiveness of SMH (Martin et al., [this volume](#); Minch et al., [this volume](#)). These critical activities affect perceptions of

progress and the likelihood of program sustainability and future funding (Nabors et al., 2000). However, which evaluation questions are asked, and which data are collected depend on the prevailing vantage point within a system (Mertens & Wilson, 2018) often driven by school policies and the perspectives and leadership style of school administrators (Garbacz et al., [this volume](#)). Involving stakeholders at all levels of a system broadens the ideas considered, mitigates bias, and enhances the credibility of the evaluation (Mertens & Wilson, 2018). Challenges to SMH evaluation are numerous (Nabors et al., 2000), in large part related to the many staff involved and contingencies operating within their work roles. For example, teachers are often stretched thin with persistent time pressure for what could be argued are too many tasks and expectations that are unreasonable (Skaalvik & Skaalvik, 2017), limiting their involvement in school program analysis and improvement efforts. For them to be meaningfully involved in these efforts as they should be, their roles should be analyzed and empowered, and similar analyses and action steps should be taken for all key players on school teams (Splett et al., 2017).

While most chapters in this section focus on bringing together families, educators, and mental health professionals, the role of the student is equally important to gain their perspectives and recommendations on school programming in relation to their personal experiences generally, within school, and with SMH (Pate et al., [this volume](#)). Critical mass within schools and SMH programs is enhanced through school–university partnerships, presenting a range of mutual benefits including university students gaining practical experience in a prominent community setting and schools gaining state-of-the-art knowledge, and enhanced personnel time and resources from the university (Wargel et al., [this volume](#)). Although involvement of multiple stakeholder groups in SMH quality improvement and evaluation takes time and may be perceived as slowing down key processes (see Cashman et al., 2014), doing so improves the quality of the analyses and actions that follow (Minch et al., [this volume](#);

Roche & Strobach, 2019; Weist et al., 2007). As these highly vested and diverse stakeholder groups interact and work together over time to evaluate and improve SMH programming, paying particular attention to the quality of relationships toward genuine partnerships represents another critical dimension of evaluation (Orenstein et al., [this volume](#); Weist et al., 2012). Methods of evaluating collaborations continue to be developed but are generally completed by educators and school administrators, with a need to broaden stakeholder involvement in evaluating SMH and broader programming within the multi-tiered system of support (MTSS) at school and district levels (Garbacz et al., [this volume](#)). Although this research avenue is relatively new, there is early evidence that such an emphasis on partnership in evaluation and quality improvement is associated with improved student-level outcomes (Bates et al., 2019; Roche & Strobach, 2019).

Implementation Support Implementation support takes many forms and includes any activity that seeks to build the capacity of an organization to implement or sustain a practice (Albers et al., 2020). This is variably referred to as coaching, technical assistance, knowledge brokering, knowledge transfer, consultation, or improvement facilitation. Strategies of support typically include relationship development, training and education, evaluation (as above), and adapting programming to the particular context and its presenting strengths and challenges (Albers et al., 2020). Tangible aspects of support such as training and professional development are commonly discussed (as in this book). Relationship development is an often undervalued but critical component of ensuring that support activities are successful. Relational coordination theory posits that there is a positive correlation between relationship quality (frequent, timely, accurate, and problem-solving communication along with shared goals, shared knowledge, and mutual respect) and positive health service outcomes (Gittell et al., 2013). However, relational coordination theory has not yet been used in SMH literature, although related interventions have

shown promise. In schools, one effective intervention for improving relational coordination is a boundary spanner, or a person who coordinates between school staff and practitioners from other youth-serving systems, such as community mental health practitioners (Wargel et al., [this volume](#); Martin et al., [this volume](#)). Another effective approach for improving relational coordination is sharing accountability across roles (e.g., the roles discussed in this chapter such as teacher, clinician, administrator, family leader) for involvement in evaluation, implementation support, and quality improvement (Van Rooyen, 2018). In this approach, staff and stakeholders share responsibility for challenges but also share benefits when implementation is successful (Bolton et al., 2021).

Skills for developing and maintaining positive partnerships are not inherent, with clear needs for school leaders to emphasize the value of such partnerships, associated with ongoing training and education to continually enhance them (Kern et al., 2017; Weist et al., 2006). Such training should move beyond simplistic models involving repetition of content toward making partnership development engaging, integrating principles of adult learning, and emphasizing strategies for effective coaching and implementation (Massey et al., 2005). A single training, or series of trainings, is not sufficient (Langley et al., 2010). Often, training for staff in schools may be conducted separately for different professional groups; for example, for teachers versus SMH staff, and this may add challenges to effective interdisciplinary collaboration (Kern et al., 2017; Rimkunas & Mellin, [this volume](#); Weist et al., 2012). Therefore, after training, a comprehensive professional development approach including ongoing coaching and support could reduce limitations in professional knowledge (Clauss-Ehler & Garagiola, [this volume](#); Kern et al., 2017), build implementation capacity (Langley et al., 2010; Martin et al., [this volume](#)), and enhance collaborations toward growing and sustaining partnerships (Wargel et al., [this volume](#); Vona et al., 2018). One “silver lining” of the COVID-19 pandemic has been increased fluency among staff

who work in schools to use virtual platforms for planning meetings, and training and outreach events, and this advance may also facilitate partnerships with key stakeholder groups (Clausser-Ehlers & Garagiola, [this volume](#)).

Building Communities of Practice/ Learning Collaboratives

A number of chapters in this section emphasize the need for and benefits of building relationships, moving from discussion to dialogue, to active collaboration, ideally leading to policy improvement and resource enhancement for effective practice (Cashman et al., [2014](#); Mellin & Weist, [2011](#); Rimkunas & Mellin, [this volume](#)). The terms communities of practice (Wenger et al., [2002](#)) and learning collaboratives (Nadeem et al., [2014](#)) are used to describe this work, based on recognition of the foundational role of relationships in advancing any systematic agenda such as scaling up of effective SMH in a community. In developing these collaboratives, a critical recognition is that there are many stakeholders with a vested interest in SMH, obviously including education and mental health leaders and staff, but also including families and youth, and leaders and staff from other systems/organizations in a community, such as child welfare, juvenile justice, primary care, disabilities, and faith and business leaders. As reviewed earlier, there should be a strong spirit of vertical (e.g., state to district to school building and back up) and horizontal (e.g., interdisciplinary relationships within a school building) collaboration in advancing the SMH agenda, with this emphasis seen in many of the chapters in the section of this book.

To provide a personal example, research, practice and policy initiatives of our team here at the University of South Carolina, build from the Interconnected Systems Framework (ISF) for SMH and Positive Behavioral Intervention and Support (PBIS, see Barrett et al., [2013](#); Eber et al., [2020](#)). This conceptual framework describes true integration of mental health and education systems and staff in advancing SMH,

with all work within schools' multi-tiered systems of support reflecting a collaborative and coordinated approach in all relevant dimensions (e.g., team functioning, data-based decision-making, choosing and refining evidence-based programs, connecting and aligning programs across tiers). Within the ISF framework, there is emphasis on an interdisciplinary and cross-system District-Community Leadership Team (DCLT), which should ideally involve all stakeholder groups referenced here, including stakeholders with authority who meet regularly and guide the implementation and scaling up of effective SMH practices. Here, there also should be symmetry in approach across levels of scale; for example, using the TIPS tool (Todd et al., [2011](#)) to structure meetings at school building, district and state levels so that meetings are the most effective in leading to action strategies that lead to improved and more effective programming.

There are numerous benefits for these collaboratives and strategies to operationalize stakeholder involvement and guidance as in DCLTs, including the development of social capital (see Mellin & Weist, [2011](#); Rimkunas & Mellin, [this volume](#)), expanded professional networks, enhanced mutual support and knowledge sharing, increased team effectiveness, and improved staff capacity for EBP implementation and ongoing program quality improvement (Nadeem et al., [2016](#)). Orenstein et al. ([this volume](#)) describe two options for forming SMH learning collaboratives and provide evidence that these collaboratives strengthen relationships across multiple system levels, while improving the quality and impact of SMH. Wargel et al. ([this volume](#)) also emphasize the fundamental value of formal cross-system partnerships that often emanate from learning collaboratives and underscore the advantages of university–agency partnerships (also see Iachini et al., [2013](#)).

Systems, collaboratives, and partnerships are composed of individuals, and individual attitudes and beliefs along with overall organizational culture affect the potential success of knowledge-sharing collaborations (Rohman et al., [2020](#)). Following the principles of systemic thinking (Williams & Hummelbrunner, [2010](#); also see

Algozzine et al., 2005 for an education example) requires a degree of reflexivity and openness, appreciating that one single perspective is insufficient for understanding a complex problem. Clauss-Ehlers and Garagiola (this volume) expand on this through the concept of cultural humility, or understanding that the human experience is profoundly diverse, and that one must have training in cultural humility to work across cultural contexts and intersectional identities. The term cultural humility also emphasizes the challenging nature of this endeavor, acknowledging that becoming culturally “competent” may not be achievable for many professionals. These concepts are explored more in-depth in the American Psychological Association’s (APA) 2017 Multicultural Guidelines (APA, 2017), through a task force led by Dr. Clauss-Ehlers. Further, recognizing students as experts on their own experiences in schools and with SMH enables them to be active players in identifying problems and solutions, as “co-creators” of the school environment with the other stakeholder groups referenced in this introductory chapter (Kushman, 1997; Levin, 2000; Mitra, 2004; Pate et al., this volume).

Successful partnerships that address students’ needs incorporate each stakeholder’s unique skills and strengths with a desire to learn from one another (Sheridan & Kratchowill, 2008). Meaningful family–school collaboration allows families and schools to connect around important issues and to be informed and responsive when acting in their separate roles, which in turn can increase student feelings of belonging in school, connection with the curriculum and instruction, and improved learning (Levenson et al., 2019). To ensure this collaboration, two-way genuine, responsive, reciprocal, and supportive communication is vital (see Garbacz et al., this volume; Minch et al., this volume). Amplifying these family–school–community partnerships is a spirit of interprofessional collaboration, wherein professionals within schools (e.g., teachers, administrators, counselors) seek to understand and provide support for improving each other’s roles (Rimkunas & Mellin, this volume).

Conclusion

Systematic emphasis on better understanding and building collaboration and partnerships in school mental health will help to advance this growing and increasingly prominent approach to meeting child and adolescent mental health needs, reducing/removing barriers to their learning and improving their school success. This emphasis on stakeholder engagement, and furthering collaboration and partnerships is receiving increasing emphasis (as in the Family–School–Community Alliance, see <https://fscalliance.org>), yet science is lagging behind. To address this lag, a new *Science of Engagement Initiative* (SEI) is being launched by the Patient-Centered Outcomes Research Institute (PCORI), a nongovernmental, nonprofit organization funded by Congress in 2010 to improve healthcare in the United States by conducting research guided by patients, caregivers and the broader healthcare community. PCORI is expanding its portfolio to increase emphasis on child, adolescent, and school mental health research (including a number of projects for our research team at the UofSC) and its SEI emphasizes the need to build knowledge on engagement, collaboration, and partnership strategies, and this need is clear for the SMH field. It is our hope that this section of this third Handbook on School Mental Health, published by Springer, helps to support the further development of this critically important agenda for the field.

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Advancing Research to Improve Family–School Collaboration in School Mental Health

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Working together in collaboration, families and schools can provide consistent support to promote children’s social–emotional competencies, problem-solving skills, and positive relationships with others. The purpose of this chapter is to advance research to improve family–school collaboration in the context of integrated school mental health programs. We begin with an overview of key family–school terms and associated definitions. Next, we describe research support, and focus specifically on the need for research and implementation efforts that are specifically focused on promoting equity. Following the review of research support, we describe key research needs. In the context of existing research support for family–school collaboration, consonant with research needs, we describe specific research-supported strategies and primary next

steps. We conclude with a discussion of implications for policy.

Defining Features of Family–School Collaboration

For decades, researchers have sought to understand how educators and families can work together effectively to support the needs of students (Garbacz et al., 2017a, b). Within the robust body of literature on family–school collaboration, a number of terms have emerged to describe work across home and school settings. Terms such as family involvement, family-centered services, family–school partnerships, and family engagement may sound similar, but there are considerable differences in how each is defined, which in turn reflect different approaches and perspectives for how schools and families should work together. Here we provide a brief overview of each of these terms.

Family Involvement describes the process by which parents and other caregivers support their children’s education (Henderson & Mapp, 2002). Research in this area focuses on discrete parenting activities that reinforce a child’s educational experience (Fishel & Ramirez, 2005). Commonly cited forms of family involvement include embracing parenting practices that support children in their roles as students, communicating with school staff, volunteering for school-based

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activities, and helping students with homework (Epstein et al., 2018). *Family-Centered Services* emphasize the belief that all families should be treated with dignity and given the agency to participate meaningfully in matters related to their child. Furthermore, family-centered services target family functioning in order to promote positive outcomes for youth (Dunst, 2002). These services empower families by focusing on strengths, building child and caregiver capacity to solve problems, and facilitating resource mobilization (Sheridan & Kratochwill, 2008).

Family-School Partnerships describe an approach in which educators and families work together to promote positive academic, social-emotional, and behavioral outcomes for children (Holmes et al., 2020). By engaging in cooperation, coordination, and collaboration, caregivers and educators are able to provide a comprehensive continuum of support for students that spans home and school settings (Sheridan et al., 2014). In partnership-oriented collaboration, parents and teachers work as equal partners in solution-focused problem-solving, decision-making, and planning for students (Garbacz et al., 2017a, b). Family-school partnerships embrace many of the core assumptions of family-centered services including building on strengths, a belief in the dignity of all families, and practices that emphasize family agency (Garbacz et al., 2017a, b). In a partnership, parents shift from being mostly passive supporters to active change agents with the power to shape school systems and practices (Ishimaru, 2020). Concurrently, school staff actively engage caregivers by (a) adopting school-wide practices that foster a welcoming climate for all families, (b) establishing positive feedback loops across home and school settings, (c) providing resources to support caregivers' use of evidence-based parenting practices in the home, (d) creating leadership opportunities for family members, and (e) engaging families in co-creating school policy (Garbacz et al., 2016). Therefore, *Family Engagement* is primarily a process whereby school personnel or other stakeholders aim to engage families in professional relationship to support their child. Family engagement focuses on understanding family expectations and culture, identifying and mitigating possible obstacles to engaging, and promoting

a process that centers on family goals (Winslow et al., 2016).

In order to sustain collaborative work between schools and families, partnership approaches strive to be responsive to family context and culture (Booster et al., 2020). Through collaborative problem-solving and embracing systems thinking, family-school partnerships contextualize children's challenges within family systems. This ensures that support planning aligns realistically with the child and family's personal needs, capabilities, and access to resources (Dunst, 2002). School-family partnerships are responsive to family culture in that they emphasize building on existing strengths and expertise rather than focusing on deficits. This encourages recognition of the multi-faceted ways that families from different cultural, linguistic, and socioeconomic backgrounds support their children (Baquedano-Lopez et al., 2013).

In practice, however, engaging families as true partners can be challenging in the face of contextual and cultural factors (Stefanski et al., 2016). Within schools, deeply ingrained attitudes and beliefs by staff about the deficiency of certain families can represent significant barriers to effective schooling (Ishimaru, 2020). Additionally, when families have a long history of negative interactions with school staff and the education system as a whole, it can be difficult to establish trusting relationships (Sheridan & Eastberg, 2020). Differing cultural expectations around the roles and responsibilities of caregivers and school staff can also present a challenge to establishing true partnerships. Finally, within the context of the broader community, a variety of complex social and political factors such as race, ethnicity, immigration, and socioeconomic status can have a significant influence on how schools and families interact (Miller, 2019). Family-school partnering efforts often fail to address such aspects of the historical and sociopolitical context, which maintains inequitable relationships between school staff and families (Ishimaru, 2020).

Critiques and Needs

After several decades of research on family-school connections, there are several key cri-

tiques. Most notably, there is a lack of consensus about how to define and operationalize collaborative work between schools and families (Stefanski et al., 2016). In research, this is apparent in highly theoretical frameworks with inconsistent definitions and use of terminology across studies, a lack of consistent methodology to directly examine the mechanisms of family–school collaborations, and a lack of specific examples of how to implement core components in a school setting (Garbacz et al., 2017a, b). These factors may make it challenging for schools to effectively translate partnership and engagement models into practice.

The lack of consensus on how to define family–school work is evident in the variety of terms that are used. Although family involvement, family centeredness, family engagement, and family–school partnerships have distinct meanings with differing implications for work with families, they are often used interchangeably in both research and educational policy (Stefanski et al., 2016). Most notably, the field is moving from an emphasis on promoting family involvement to more collaborative processes (Garbacz et al., 2017a, b). Despite this shift in research, models of family involvement continue to persist in practice, as educators value school-based parenting activities and de-emphasize the value of parents as equal partners (Ishimaru, 2020; Stefanski et al., 2016). The family involvement construct places responsibility on families to become involved (on the school’s terms) rather than on schools to create systems and practices that engage families as collaborators (Garbacz et al., 2017a, b). A troubling implication of this dynamic is that when family involvement is low, parents/caregivers (rather than school systems) are characterized as deficient (Baquedano-Lopez et al., 2013).

Advancing Family–School Collaboration as an Inclusive Approach

We suggest that terms used in the family–school literature do not capture an inclusive approach to the work that families and schools share in their

support of youth mental health. We argue that the field should move toward an approach that creates non-hierarchical dynamics among families and educators that emphasize authentic collaboration among families, schools, and mental health systems. Family–school collaboration positions families and educators as co-equals in planning and problem-solving. The collaborative approach should be flexible and dynamic, integrating families’ culture and identities. These collaborative, non-hierarchical, flexible strategies should be clarified with families and educators in school and district documentation and used by researchers during study conceptualization and methodology. Such an approach centers on family voice, integrates family voice with educator perspectives in a collaborative manner, and allows these stakeholders to be empowered in taking ownership over the care for their child.

Research Support for Family–School Collaboration

Family–school collaboration is an empirically supported approach for supporting positive youth mental health outcomes (Sheridan et al., 2019a, b). Observational studies show that family–school collaboration is associated with improved emotional, behavioral, and academic functioning in youth (Castro et al., 2015; Fantuzzo et al., 2004; Smith et al., 2019). Across developmental periods, engagement between families and schools predicts increased positive behaviors, including prosocial skills, and decreased negative behaviors, such as concentration problems and disruptive behaviors (Smith et al., 2019). In children, parent educational involvement is associated with improved social skills (Powell et al., 2010). Among adolescents, parent involvement has been shown to predict growth in positive peer affiliations (Garbacz et al., 2018). In addition, studies show that academic achievement is higher among students whose parents are more involved in their education (Castro et al., 2015). Multiple dimensions of parent involvement, including home-based and school-based involvement, have been linked to more adaptive behaviors in youth (Fantuzzo et al., 2004; Garbacz et al., 2018).

Research shows that collaborative parent–teacher relationships strengthen children’s emotional and behavior functioning. Minke et al. (2014) found that teacher report of children’s social skills and externalizing behaviors were more positive when teachers and parents shared positive perceptions of the parent–teacher relationship, compared to when their perceptions of the relationship differed. Furthermore, parents’ perceptions of teacher responsiveness were associated with better child social adjustment (Powell et al., 2010). In sum, when parents and teachers form positive, reciprocal relationships, they can reinforce child competencies and ameliorate concerns, in order to improve youth mental health.

There is strong research support for the efficacy of family–school interventions for youth mental health. Notably, Smith et al. (2020) conducted a meta-analysis on the effects of family–school partnership interventions on academic and social–emotional functioning. Family–school partnership interventions focus on joint family–school efforts to support children by strengthening connections across home and school. Results of the meta-analysis by Smith et al. show that family–school partnership interventions have positive effects on child mental health ($\delta = 0.34$), social behavioral competence ($\delta = 0.32$), and academic achievement ($\delta = 0.25$) and behaviors ($\delta = 0.25$). School-to-home communication and collaboration contributed to multiple positive intervention effects, and bidirectional communication was associated with intervention effects on child social–behavioral competence specifically (Smith et al., 2020). A separate meta-analysis by Sheridan and colleagues (2019a, b), which examined both family–school partnership interventions and parent-involvement interventions, also identified positive intervention outcomes for child social–behavioral competence and mental health.

Family–school interventions have improved outcomes for youth from diverse backgrounds and across developmental periods (Sheridan et al., 2019a, b; Smith et al., 2020). Smith et al. (2020) found that family–school partnership intervention effects were not moderated by child race and ethnicity, while Sheridan et al. showed

that family–school intervention effects on mental health were largest for African American children. These results support the use of a collaborative approach to working with parents from diverse backgrounds, who may have differing values and expectations regarding their involvement at school and their child’s behavior (Smith et al., 2020). In addition, Smith et al. (2020) showed that family–school partnership interventions were effective across age groups and that certain relational intervention components may be uniquely impactful when intervening with parents of older children. Sheridan et al. (2019a, b) found that family–school intervention effects on mental health were greater for children from non-urban and rural settings, as compared to urban settings. Family–school interventions may be particularly beneficial in augmenting existing resources in the context of rural communities that have less access to services (Sheridan et al., 2019a, b).

Family–school interventions leverage a collaborative approach to problem-solving that strengthens and supports parent–teacher relationships (Sheridan et al., 2012). Sheridan et al. (2012) examined parent–teacher relationships as a mechanism of change for intervention effects in Conjoint Behavioral Consultation (CBC), an evidence-based, family–school partnership approach for child emotional and behavior concerns. Results showed that enhanced parent–teacher relationships mediate the effects of CBC on positive changes in child behavior (Sheridan et al., 2012). In addition, the Family–School Success intervention for children with Attention Deficit Hyperactivity Disorder (ADHD) has been shown to improve the quality of family–school relationships (Power et al., 2012). CBC has been shown to lead to greater gains in teacher report of children’s social skills when parents’ and teachers’ communication with one another has low congruence, compared to when their communication has high congruence (Garbacz et al., 2015). These results suggest that CBC’s collaborative, relational approach is particularly beneficial for parents and teachers to begin the CBC process with divergent views about their communication with one another.

The Family Check-Up (FCU) is another evidence-based approach for family–school collaboration. The FCU is a brief, family-centered intervention that is tailored to the individual strengths and needs of families. The FCU utilizes a motivational approach to facilitate the uptake of evidence-based parenting practices in schools and other service settings, including parenting practices that promote home-to-school connections (Stormshak et al., 2010). Research supports the efficacy of the FCU for family–school engagement at home (Garbacz et al., 2019). Critically, the FCU has been shown to prevent declines in family–school engagement at home across the transition from kindergarten to elementary school (Garbacz et al., 2019). The FCU also enhances key child competencies and reduces mental health concerns. Among children and adolescents, the FCU has been shown to have positive effects on self-regulation and effective parenting strategies that, in turn, are associated with decreased emotional and behavior problems (Chang et al., 2014; Stormshak et al., 2010, 2020).

Family–school interventions have demonstrated social validity. Social validity refers to the extent to which individuals are satisfied with an experience or intervention, such as CBC (Wolf, 1978). Relative to teacher-only consultation and parent-only consultation, teachers and parents have indicated a preference for CBC for resolving student concerns and have rated CBC as more acceptable (Freer & Watson, 1999). Parents and teachers have reported perceiving CBC as effective and acceptable, as well as being satisfied with consultants (Sheridan et al., 2001). In addition, a partnership-oriented approach has been shown to predict teacher acceptability and satisfaction with the CBC process (Garbacz et al., 2008). Together, these studies highlight the utility of a collaborative family–school approach for increasing the social validity of interventions designed to support youth mental health.

Family–school interventions have been evaluated using a range of research designs, including randomized controlled trials, group quasi-experimental designs, and single case methods (Sheridan et al., 2001; Smith et al., 2020). Of

note, Sheridan et al. (2012) conducted a four-cohort, large-scale cluster randomized trial, wherein small groups of students within classrooms were assigned to either a CBC or business as usual control condition. Randomized controlled trials of CBC have assessed intervention outcomes at immediate post-test (Sheridan et al., 2012), as well as three-month (Power et al., 2012) and one-year follow-up (Sheridan et al., 2019a, b). In another study, Sheridan et al. (2001) examined effects from a variety of single-case design studies. CBC has also been examined through multiple baseline, multi-treatment, and reversal designs to evaluate CBC effects (Sheridan et al., 1990). Findings from single-case design studies have found benefits for children in a range of social, behavioral, and academic outcomes (Garbacz et al., 2016; Schemm, 2007; Sheridan et al., 1990).

Equity and Minoritized Populations

Additional work is needed that centers family–school research on equity and prioritizes minoritized populations, or individuals who have faced stigma and prejudices. Several needs exist in how family–school work is conceptualized and measured. The family involvement construct reflects a white, middle-class standard for parenting, which marginalizes families from non-dominant backgrounds who do not adhere to these norms (Yull et al., 2014). When schools maintain involvement-oriented approaches, they perpetuate attitudes that children and families from non-dominant backgrounds are inherently flawed and need to be fixed through didactic (rather than collaborative) interactions with school staff (Ishimaru, 2020). Family involvement approaches also emphasize school-centered parenting activities where parents are expected to passively support the policies and demands of school staff with little opportunity to actively engage in agenda-setting or decision-making (Ishimaru, 2020). Failing to provide meaningful opportunities for all families to engage in active decision-making results in school policies and practices that reflect educator priorities rather than the needs and val-

ues of the surrounding community (Stefanski et al., 2016). These cultural and contextual issues are reflected in the significant challenges that schools report in their attempts to engage families, especially those from minoritized backgrounds (Kim, 2009).

In order to engage families from all backgrounds in equitable partnerships, family-engagement and partnership frameworks must address the importance of context and culture (Ishimaru, 2020). In practice, efforts to promote equal partnerships within school contexts often place the burden of responsibility on parents to engage rather than on modifying school systems that are inaccessible (Ishimaru, 2020). In a qualitative study examining the implementation of three different school initiatives to engage families, Ishimaru (2019) found that despite a goal of establishing partnerships, schools still defaulted to unidirectional strategies that focused on increasing parents' school-based involvement, rather than promoting systems-level change. These frameworks often fail to address the power dynamics that do not provide opportunities for non-dominant families and the feelings of distrust that discourage them from meaningfully engaging in school contexts (Miller, 2019). Additionally, partnership-oriented frameworks do not directly address how issues of intersectionality impact the educational experiences of children and their families (Baquedano-Lopez et al., 2013). To effectively collaborate with families, school policies and practices address the intersection of identities and additive effects of multiple marginalized identities (Proctor et al., 2017).

Inconsistent definitions in existing research are confounded by limited diversity within research samples among existing studies further impeding the translation of family-school collaboration research to practice particularly with historically marginalized and excluded families. The majority of existing family-school collaboration research provides empirical support for school-centric approaches that lack family and youth voice in school decisions, noticeably reinforcing the preferences, power, and authority of educators over families (Booker & Goldman,

2016) and until recently, a limited focus on closing achievement or discipline gaps (Sondergeld et al., 2020). Typical approaches to family-school collaboration require families to fit into school-preferred approaches for partnering with educators and supporting their children's learning (e.g., attending school events during typical business hours), rather than further investigating ways to facilitate implementation of promising family-school collaboration practices across all socioeconomic and racial groups (i.e., subtle forms of engagement including what families discuss and the various ways families support children at home; Jeynes, 2010; Sheridan et al., 2019a, b).

Traditional school-centric approaches often have a negative impact on the family-school collaboration relationship with historically marginalized and excluded families (Baquedano-Lopez et al., 2013; Huguley et al., 2020; Weininger & Lareau, 2003). Traditional approaches further marginalize families within educational processes and communicate the value of dominant-culture perspectives (Harry, 2008). Interpersonal relationships are likely affected by ineffective strategies employed as educators report feeling ill-equipped to effectively reach out to minoritized families (Eberly et al., 2007). Research and implementation efforts focused on family-school collaboration should address improving the relationships between schools and historically marginalized families will need to consider confounding influences of (a) educator and families' negative prior family-school collaboration experiences, (b) cultural, developmental, and skill-level differences at play within individual relationships between families and schools, (c) as well as aggregate, school-level effects of these considerations within studies. Additionally, attention is needed for the role of immigrant and refugee status and length of time in host country, availability of language support within studies to better understand factors affecting family-school collaboration for immigrant families (Antony-Newman, 2019).

Social capital is an important topic to consider in family-school collaboration. Social capital refers to the degree to which families have connections and relationships with others (Goddard,

2003; Sheldon, 2002). Creating opportunities for families to learn about family engagement behaviors from one another can normalize the challenges of parenting and supporting student success and well-being and may reinforce the importance of these behaviors. Increasing equitable parental ties with other families of children enrolled at the school offers a potential strategy to increase family–school collaboration (Goddard, 2003; Sheldon, 2002).

Research Needs

Family–school research has progressed considerably over the last 50 years (see Garbacz et al., 2017a, b for a review). Research has increasingly emphasized experimental investigations and sought to understand how family–school interventions promote positive outcomes for families, educators, and children. In addition, conceptualizations of family–school constructs have moved from emphasizing one-directional, involvement-oriented approaches to more dynamic, flexible, and collaborative approaches. Despite these improvements, significant needs remain to advance family–school collaboration toward improved equity and authentic collaboration among all families. Research is needed that addresses (a) increased connection to practice and (b) centering on family voice and experience. With those points in mind, we position qualitative research, research to specifically better understand family–school interventions with minoritized populations, community-based participatory research, research–practice partnerships, research that uncovers mechanisms within family–school interventions responsible for positive outcomes, and hybrid designs as essential needs to propel research on family–school collaboration and enhance outcomes for children, youth, families, and schools.

Qualitative Research

One of the core elements of family–school collaboration is the recognition of the value of

family voice in educational contexts (McKenna & Millen, 2013). Within this approach, the assumption is that caregivers have important ideas about their children and that it is critical for educators to be receptive to this information (McKenna & Millen, 2013). Despite the centering of family perspectives in family–school frameworks, caregiver and youth perspectives are often left out during the development of educational theory, policy, and practices (Ishimaru, 2020). Through the use of qualitative research methodology in education, children and families are positioned as valuable sources of data that can be used to guide program design, evaluate effectiveness, and inform school-based practices (Brantlinger et al., 2005).

A qualitative approach is also critical for understanding how stakeholders from various groups make sense of and experience school practices and family–school interventions (Dotson-Blake et al., 2009). Although qualitative research encompasses a broad variety of research methodologies, qualitative strategies that may be used to capture child and caregiver perspectives include focus groups, interviews, and story-telling (Brantlinger et al., 2005). Furthermore, qualitative research methods are particularly powerful for addressing equity in family–school collaboration efforts. By allowing participants to express their lived experiences in their own words, qualitative work gives voice to groups who have been historically marginalized or otherwise excluded from educational research (Brantlinger et al., 2005). Qualitative work lends nuance to our understanding of the complex experiences of marginalized groups within the education system and enriches the quality of data interpretation (Yull et al., 2014). Moving forward, research on family–school collaboration should focus more on qualitative methods in order to focus on family ideas, perspectives, and experiences. Such qualitative research may uncover problems that have led to failed scale-up efforts of family–school interventions and perpetuated a lack of research-supported practices used in schools (Dishion et al., 2020).

Family–School Research with Minoritized Populations

Research is needed to investigate the role of family–school collaboration, particularly with historically marginalized families, to better understand the possibilities for improving racial inequities among students. Recently, efforts to prioritize equity within all facets of research have provided general recommendations to the field including ensuring researchers are aware, intentional, and committed to examining their own biases, digging deeper into the data, engaging communities as partners, guarding against using White as the normative comparison, and ensuring their research has a positive impact on communities (Andrews et al., 2019). Within the space of family–school collaboration for historically marginalized and excluded families, emphasis on increased family and youth voice to inform school practices and processes is essential.

The emerging studies in the space of family–school collaboration with historically marginalized and excluded groups often utilize case studies or small samples as the primary methodological approach (Ishimaru et al., 2016). However, these approaches lack replicability and limit the support and utilization of approaches in the field as evidence-based practices. Future studies should consider methodological rigor and replicability to increase implementation of practices in the field (Ishimaru et al., 2019). Community-based participatory design research shows promise as a methodological approach that fundamentally reshapes the connections between families and schools by centering family and youth voice within the research process (Bang & Vossoughi, 2016). In the section that follows, we expand on how a participatory approach can advance family–school collaboration.

Community-Based Participatory Research

In the development of sustainable family–school partnership programs, it is critical to consider the

broader context and culture of the community as well as the processes that shape interactions between families and school staff (Booster et al., 2020). Therefore, research on family–school collaboration moving forward should seek to include experiences of families from their perspective and work with families in a research process that starts with understanding needs and opportunities, which can lead to identifying research questions that are relevant to families. Such approaches will allow researchers, practitioners, and families to integrate family and youth voice within policy and practice (Huguley et al., 2020). Critical participatory action research (Brooks et al., 2020), participatory design research (Bang & Vossoughi, 2016), and design-based research (Ishimaru et al., 2019) center the voice of families and students in the design of the study allowing for a truly family-driven, contextually responsive research-based strategy.

Despite existing support limited to small sample sizes (Ishimaru et al.'s 2019), principles from cultural-historical activity theory used in participatory design research studies offer suggestions for future family–school research. Cultural-historical activity theory offers a framework to better understand the relationship between what individuals think and feel, how they behave, and their relationship with each other (Engestrom, 2011). Suggestions that emanate from this framework include examining family–school collaboration as an outcome, focusing on experiences from historically marginalized and excluded families, better understanding the tensions among historically marginalized families and school staff, and allowing the goals of family–school collaboration to be defined by a local school-based team (Engestrom, 2011; Ishimaru et al., 2019).

These frameworks integrate collective learning from youth and families allowing for improved beliefs and skills among educators to better partner with historically marginalized and excluded families (Bertrand & Rodela, 2018; Brooks et al., 2020; Lac & Mansfield, 2018). Continuing to investigate design frameworks that center local voices and contextual fit within the design and research process show promise for

improving family–school relations, particularly for historically marginalized families (Ishimaru et al., 2019).

Community-based, participatory approaches allow for examining community context and aligning prevention and intervention efforts to community needs and priorities (Blitz et al., 2013). These frameworks align with context through soliciting key stakeholders' (e.g., parents, teachers, school administrators, community members) perspectives to guide program development, implementation, data collection, interpretation, evaluation, and revision (Booster et al., 2020). Community-based, participatory approaches are distinct from investigator-driven models in that the beneficiaries of the research are active collaborators throughout the process. During the active collaboration process, community members take ownership over their goals and develop plans to address those goals. This results in culturally relevant prevention and intervention efforts that empower community by building the capacity of stakeholders to solve their identified challenges (Garcia, 2019). Consistently engaging families, community members, and educators throughout the research process also increase the likelihood that programs will be feasible and acceptable to those stakeholders that are likely to lead to improved implementation fidelity and better alignment with the resources and capabilities of a given context (Booster et al., 2020).

A vast majority of family–school research has centered around the assumption that caregivers interact with schools in the same way, without recognizing that minoritized families have unique experiences with the school system (Yull et al., 2018). Through including qualitative methods such as focus groups and an emphasis on stakeholder input, community-based, participatory approaches can serve as a powerful way to elevate the voices of minoritized students and families and to tailor recommendations to their unique experiences (Yull et al., 2014). This has proven to be a useful study design in medical research, another area where minoritized groups have been historically disenfranchised and where quality partnerships with families are important to effective practice (Moreno et al., 2009). Moving for-

ward, research on family–school collaboration needs to embrace a community-based participatory approach to design programming that is responsive to a variety groups, geographic contexts, and communities (Blitz et al., 2013; Ishimaru, 2020; Yull et al., 2018).

Mechanism of Family–School Interventions

Family–school research is needed that uncovers mechanism and longitudinal implications of family–school interventions. There is a lack of studies examining whether the mechanisms of change by which family–school collaboration improves child mental health outcomes differ across families from diverse sociodemographic backgrounds. As families from diverse backgrounds may have varying expectations and perceptions of their role in their child's education (Smith et al., 2020), it is important to examine how this variability may shape change processes when families collaborate with school staff. Second, there is a need for further longitudinal intervention research on family–school partnership interventions, in order to determine if intervention effects on the parent–teacher relationship and child mental health are maintained over time. Third, additional research is needed to identify if specific family–school intervention components have differential effects on various child mental health outcomes, in order to understand which components are empirically supported for which domains of mental health.

Hybrid Designs

Hybrid designs combine elements of qualitative research and experimental design. In hybrid designs, there is a concomitant focus on examining the impacts of the intervention on family, school, and student outcomes, as well as a careful study of the implementation process, including focus groups and interviews with stakeholders who were involved in the delivery of the intervention and families and students who received the intervention (Curran et al., 2012). In a hybrid

design, researchers specify a set of impact research questions, such as the impact of a family–school partnership intervention on improving social skills for children at risk for emotional and behavior concerns. In the next set of research questions, researchers specify a set of implementation-oriented questions. These implementation questions focus on understanding the implementation process and how stakeholders experienced the intervention.

Hybrid designs have been applied in a majority of cases to scale up efforts, to better understand the process of moving an intervention from efficacy to effectiveness through dissemination research (Curran et al., 2012). However, any stage of the intervention development process would benefit from using a hybrid design. Indeed, findings consistently support the need to better understand how individuals participating in interventions make sense of the intervention and its implementation in their daily life (Castillo, 2020). Including hybrid designs at earlier stages of the intervention development process allows for a more proactive orientation to the design of interventions, grounding them in family, student, and educator voice from exploration, through iterative refinement, into efficacy testing, to effectiveness, and scale-up. In fact, such proactive approaches to integrating hybrid designs may help prevent a scenario where a family–school intervention shows evidence of efficacy, only to experience implementation problems during scale-up (Dishion et al., 2020).

High-Impact Approaches to Promote Family–School Collaboration

In this section, we highlight a few strategies that show promise across studies and contexts as high-impact family–school approaches that center on equity and prioritize collaboration. We focus specifically on school proactive outreach to families, dual capacity building, effective two-way communication, and dynamic and authentic collaboration. Although much more research is needed, and there are limitations with existing research, these approaches could be considered

as both an implementation priority and as a foundation for future research.

To promote family engagement, schools might consider reaching out to families proactively before concerns arise. Indeed, such an approach holds promise for promoting positive student behavior and family–school collaboration (Garbacz et al., 2020). With proactive outreach, schools are using multiple modalities to reach families about collaboration, such as sharing how family voice can be amplified in school decision-making. Proactive outreach can also be focused on positive contacts about positive student behavior (Fefer et al., 2020). Proactive strategies allow schools to establish a connection with families that is grounded in a positive interaction. These positive interactions may help serve as a foundation for follow-up contacts if concerns arise. Fefer et al. (2020) showed support for a positive outreach strategy within classrooms by identifying students who may benefit from additional support but were demonstrating targeted or individual support needs and defining teacher-initiated positive communication with parents about their child’s positive behavior. Additional research is needed on these methods of positive outreach at the school and classroom level.

Families and teachers do not have a roadmap for collaborating with one another (Weist et al., 2017). When families and educators do interact, findings suggest that it is about problems, which can strain relationships and erode trust (Santiago et al., 2016). A dual capacity-building framework acknowledges that families and schools may benefit from additional support in collaborating with each other and positions those supports as important for establishing and sustaining collaborative relationships (Mapp & Bergman, 2019). Additional research is needed that examines approaches to supporting families and educators as they enter and sustain shared, partnership-centered work.

Research supports that effective communication strategies are key to promoting family–school collaboration. Home–school communication is a primary method of building trusting family–school relationships (Adams & Christenson, 2000). In addition, bidirectional communication between families and schools

promotes children’s social–behavioral competencies (Smith et al., 2020). When families and schools engage in two-way communication, behavior supports for children can be aligned across home and school, in order to reinforce and strengthen effective behavior management techniques (Sheridan et al., 2012). Family–school problem-solving teams that address shared concerns about children can be used to enhance communication between families and schools (Adams & Christenson, 2000). Research also suggests that working toward common goals, exchanging positive feedback, and establishing consistent behavioral expectations across home and school can facilitate effective communication between parents and teachers when supporting positive child behavior (Strickland-Cohen & Kyzar, 2019).

Empowering family members to actively participate in school decision-making is instrumental to family–school collaboration (Jones & Hazuka, 2013; Minke & Anderson, 2003). Family–school conferences that are centered around family strengths and explicitly value family members’ input on their child are one approach to increase family empowerment (Minke & Anderson, 2003). Culturally responsive practices are also critical to forming collaborative family–school relationships (Jones & Hazuka, 2013). By affirming the experiences and values of families from diverse cultural backgrounds, as well as acknowledging the cultural values embedded within the school itself, schools can help form the basis of meaningful partnerships with families (Jones & Hazuka, 2013). In addition, by connecting with community partners who have knowledge of families’ cultural values, schools can create school environments in which children and families feel a sense of belonging (Jones & Hazuka, 2013).

Implications for Policy

Several implications for policy emanate from research needs to advance family–school collaboration. First, federal education policy often suggests that families and educators should

collaborate to support students, yet the policies lack clear guidance for how collaboration should happen (e.g., Every Student Succeeds Act, 2015). Future education policy would be better served through clearer definitions, role and position clarifications, and scoped and sequenced recommendations for how schools and families should ground their collaborative work. Second, dedicated funds are needed to allow educators and families to collaborate in schoolwide decision-making and to support individual students. Public education can convey to families their value by acknowledging their time with dedicated funds. Finally, grant application calls often perpetuate a focus on classical rigorous quantitative methodology. Such approaches are not always well aligned with family–school research. For example, all families may not have the time to complete a lengthy psychometrically sound measure. In addition, quantitative methods often leave out an in-depth understanding of family voice and experience. Grant application calls should be restructured to prioritize pragmatic methodologies and allow for timelines that are conducive to research–practice partnerships, and community-based, participatory approaches where stakeholders and context are prioritized. Such approaches may have the best chance of creating translational change in schools and communities.

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Assessing and Evaluating Family–School Collaboration in Schools

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Assessing and Evaluating Family–School Collaboration in Schools

Implementation of tiered prevention frameworks in schools, like multi-tiered systems of support (MTSS), proactively identifies student needs and provides responsive supports to ensure *all* students are successful (McIntosh & Goodman, 2016). Family–school collaboration has been identified as an essential component to effective implementation of school-based MTSS frameworks (e.g., Response to Intervention [RtI], Jimerson et al., 2015; Positive Behavioral Interventions and Supports [PBIS], Sugai & Horner, 2002; Interconnected Systems Framework [ISF], Eber et al., 2019; Culturally Responsive PBIS [CR-PBIS]; Levenson et al., 2019). Access to high-quality, efficient, and actionable data is essential to assist schools with continuous improvement efforts toward integrated and effective family–school collaboration within MTSS (Garbacz et al., 2019c; Minch et al., 2020). Quality assessment tools and evalu-

ation systems that allow schools to identify current status, strengths, and areas for improvement with respect to family–school collaboration efforts along with tools that position families as co-equal partners in the identification of student learning goals and needs are essential for advancing this work in districts and schools.

The purpose of this chapter is to describe current and future approaches to assessment and evaluation of family–school collaboration within schools. We begin with a description of the theoretical and research support for the key features of effective family–school collaboration within MTSS. Next, currently available family–school collaboration evaluation and assessment tools are described, including limitations of those tools and considerations for future approaches of family–school collaboration that are important for youth success and well-being in school. We conclude with a summary of implications for research and practice including updates from the Family School Community Alliance (FSCA), an international group, collaborating to advance this work.

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Definition, Research, and Theoretical Support

Family–school collaboration refers to two-way communication, home–school coordination, and joint problem-solving between families and educators (e.g., teachers, support staff, administration)

to make educational decisions for the purpose of supporting student success (Garbacz et al., 2019c). Family–school collaboration is characterized by voluntary, co-equal, and authentic partnerships between families and educators (Cox, 2005; Christenson & Sheridan, 2001). Family, rather than parent, is the preferred terminology inclusive of all significant caregivers (e.g., parents, grandparents, stepparents, foster parents) in children’s educational processes to promote learning and well-being (Fishel & Ramirez, 2005). Decades of research consistently identifies family–school collaboration as a factor essential for student success, associated with improved academic, social behavior, mental health, and educational engagement outcomes (Cox, 2005; Garbacz et al., 2019d; Henderson & Mapp, 2002; Sheridan et al., 2019; Smith et al., 2020; Stormshak et al., 2011; Wilder, 2014). Meta-analyses investigating educator and family collaboration activities and behaviors associated with improvements in student outcomes identify two-way communication, home-based involvement, behavioral support, parent–teacher collaboration, and the overall parent–family relationship as the essential ingredients of home–school collaboration that demonstrate the strongest associations with improved student outcomes (Cox, 2005; Sheridan et al., 2019).

The interpersonal characteristics of the family–school relationship that facilitate effective family–school collaboration include trust facilitated by genuine, responsive, reciprocal, and supportive two-way exchanges of information and ongoing communication between home and school (Adams & Christenson, 2000; Sheridan et al., 2019; Smith et al., 2020). Research continues to investigate the relative importance of specific practices that cultivate positive and effective family–school collaboration and how these practices may vary across demographic groups, grade-levels, and contexts (Smith & Sheridan, 2019; Smith et al., 2020). Comparisons of home-based forms of engagement (e.g., discussions between families and children about school and educational aspirations, reading books together) and school-based forms of engagement (e.g., attending school meetings, conferences, partici-

pating in the school’s Parent–Teacher Association) find that home-based involvement, with the exception of homework assistance, was consistently associated with a range of improvements in functioning across various demographic groups and age levels (Barger et al., 2019; Jeynes, 2007, 2010). Together, these seminal studies suggest that what families and educators do together and what families and children discuss and engage in together at home have a significant impact on student success in school.

Ecological systems theory has guided decades of research supporting the importance of comprehensive and bidirectional relationships between schools and families pointing to the importance of consistency and predictability across children’s primary developmental contexts to support positive child development and success in school (Bronfenbrenner, 1986; Christenson & Reschly, 2010). Ecological systems theory is depicted as concentric circles, with the child at the center, representing the influence of proximal and distal contexts on child development (Bronfenbrenner, 1986). Microsystems are the most proximal contexts, where children spend significant time, such as home and school. The mesosystem represents interactions among microsystems, which shows the influence of home–school relationships on child development. The exosystem reflects more distal influences, such as neighborhoods, with the larger sociopolitical context reflected in the macrosystem. In the chronosystem, the influence of each context is considered over time in its influence on child development.

Applying the ecological systems theory to the concept of family–school collaboration helps to highlight the importance of the multifaceted relationship of the family–school dynamic that affects how the child interacts within the ecological systems. Family–school collaboration represents the active partnerships between home and school, the two most essential and proximal contexts influencing child development. The interactions between home and school systems (i.e., the mesosystem) are situated within larger contexts (communities, societies; exo- and macrosystems), each demonstrating reciprocal and interactive

influences within and across contexts. Family–school collaboration allows families and schools to connect around important issues and to be informed and responsive when acting in their separate roles. When children’s learning experiences at school relate to their familial cultural experiences, students report increased feelings of belonging in school, connection with the curriculum and instruction, and improved learning (Levenson et al., 2019). Further, when families have information about their child’s learning progress, behavior, and general information about school services, families are empowered to support and respond to children’s needs at home (Sheridan et al., 2019). These actively and ever-evolving relationships between home and schools require schools to have ready access to information about the quality of those relationships to inform changes and improvements that better support effective family–school collaboration within their systems.

Within effective MTSS, perhaps best operationalized by the PBIS framework, systems and practices that allow for family–school collaboration efforts are readily integrated within existing priorities of the school (see Weist et al., 2017). Furthermore, tiered prevention frameworks such as MTSS ensure family–school collaboration efforts are implemented in ways that are directly connected with student learning and development. Given the important role schools play in welcoming, valuing, and reaching out with explicit and intentional efforts to collaborate with families (Patrikakou & Weissberg, 2000; Ritblatt et al., 2002), the essential practices, features, and critical areas of assessment and evaluation of family–school collaboration within schools are described below.

1. **Positive Home–School Relationships:** Positive home–school relationships are foundational to any strategy intended to connect families and schools. Proactively planning ways to build and maintain positive, trusting relationships with families and asking families their perspective about the quality of home–school relationships to inform ongoing improvements are essential components to

positive home–school relationships (Hoover-Dempsey et al., 2010).

2. **Two-Way Communication:** Two-way communication is the essential feature of family–school collaboration allowing active, ongoing connections between families and educators (Sheridan et al., 2019). This requires schools to identify and be responsive to families’ preferences and needs for maintaining open communication systems with the school. Obtaining and utilizing family input allows the school to focus their limited resources on responsive efforts with a higher likelihood of success inclusive of options beyond family attendance at school-based events (McQuiggan & Megra, 2017).
3. **Shared Decision-Making and Family Voice for Equitable Discipline:** Culturally and contextually responsive school policies and practices of schools require family voice and input (Bal et al., 2016; Barajas-Lopez & Ishimaru, 2016; Levenson et al., 2019; Thorius et al., 2013). Obtaining and utilizing comprehensive and representative family voice and input is foundational to truly shared decisions between *all* families and schools and helps to inform the how, when, and why of family–school collaboration that is inclusive and responsive to the perspectives and needs of local stakeholders. Recent efforts in the field have underscored the important role schools play in specifically reaching out to families affected by disproportionate discipline and obtaining and using their voice to improve disciplinary systems and practices to achieve equitable discipline outcomes for all students (Sandomierski et al., *in press*).
4. **Training and Support for Family–School Collaboration:** Family–school partnerships are reported as an area in which educators receive the least amount of training and support (Evans, 2013) but an area of practice amenable to training and professional development (Smith & Sheridan, 2019). Additionally, providing families with opportunities to increase knowledge, skills, and capacities to navigate educational systems and support student learning demonstrates

positive outcomes for families and children (Smolkowski et al., 2017). The degree to which families perceive educator outreach as genuine, positive, and effective is associated with family reciprocity of outreach and home-based support behaviors (Fefer et al., 2020). Thus, providing training and support options for both families and educators has the potential to significantly improve family–school collaboration and subsequent student outcomes.

5. Evaluation: This feature is the focus of the following chapter, highlighting the importance of high-quality assessment and evaluation systems that allow schools to engage in regular and ongoing assessments of the status of family–school collaboration. Data, evaluation, and assessment systems allow schools to ensure practices are responsive to local stakeholders and contexts and regularly adjust efforts when changes are needed (Feinberg et al., 2020; Ferguson et al., 2010).

Identifying features of family–school collaboration that can be improved offers great potential for positively impacting student outcomes but requires more advanced assessment and evaluation systems that move beyond school-centric conceptualizations and assessments of family–school collaboration traditionally emphasized in schools (e.g., family attendance at school-based events; Garbacz et al., 2018) and matches with the tenants of ecological theory and its emphasis on the interaction among systems. The dynamic nature of family–school collaboration within educational systems requires broad systems-level assessments of practices in addition to aggregate family and educator perspectives of the quality of the collaborative relationship to ensure schools are on track for cultivating positive family–school collaboration for the purpose of supporting student learning and development. Schools continue to report family–school collaboration as an area of needed improvement and readily available, high-quality data on family–school relationships would enable schools' improvement efforts.

Barriers to Family–School Collaboration

Despite the strong theoretical and research support for family–school collaboration, there are many challenges to putting this into practice. Schools consistently report family–school collaboration as an underdeveloped area within their MTSS (Berkely et al., 2020; Gerzel-Short & Conderman, 2019), yet is often touted as an important and desired practice. Schools traditionally call on families to be involved in times and in ways that are preferred by schools (e.g., meetings or school events) that require families to be available and attend school during typical business hours when many families are working. When families are unable to attend or engage with schools in ways and during times preferred by schools, families are often perceived as disengaged rather than a schedule or logistical conflict (McWayne et al., 2019). Additionally, when family perspectives and input are shared but differ from educator or school perspectives, they can be perceived as challenging to the school (Lawson, 2003; Marchand et al., 2019). Without regular review of family perspectives and input to inform policies and practices, it prevents communication and feedback loops from being perceived positively. Regular review of the quality and fidelity of family–school collaboration is essential to ensure responsive and locally relevant approaches.

Despite this evidence base for family–school collaboration (e.g., Stormshak et al., 2011), many of these efforts have failed to achieve equitable family–school collaboration within schools requiring local, contextual adaptation. Contextual adaptation of any evidence-based practice requires schools to understand the unique needs within each community to ensure responsive services and practices. Often, limited resources are allocated to support systematic and representative collection and review of high-quality information about family–school collaboration efforts, leaving schools with incomplete information to inform practices. Ensuring access to high-quality information about the quality and fidelity of

family–school collaboration allows readily available data for informed decision-making within school teams (Minch et al., 2020). In the following section, we review existing family–school collaboration assessment and evaluation tools along with strengths and limitations of these measures.

Family School Collaboration: Assessment and Evaluation Systems

In the following section, we highlight some of the existing tools available to assist schools with assessing and evaluating their family–school collaboration systems and practices in the context of tiered prevention frameworks (e.g., MTSS, ISF, PBIS). The tools are organized by their function and use with the first group including those tools designed to assist schools with measuring the quality and fidelity of their family–school collaboration systems and practices and the second group including tools that position families as co-equal informants regarding student learning, instruction, and interventions needs in schools. We end with a brief description of the limitations of existing tools before describing considerations for future conceptualizations for assessment and evaluation of family–school collaboration within tiered prevention frameworks in the next section.

Existing Tools for Family–School Collaboration

Several existing measures assess aspects of family–school collaboration systems and practices that can be used in the context of tiered prevention frameworks. Please note that in practice, many of these measures are adapted to include a combined focus for ease of administration with families and use by educators often including both family perspectives of student learning needs as well as family perspectives on the school’s efforts to support positive family–school relationships (see Weist et al., 2017).

Assessing Fidelity and Quality of Family–School Collaboration Practices

Measures designed to assess the fidelity and quality of family–school collaboration systems and practices vary in their respondents (e.g., families vs. educators vs. both) and their representative nature of respondents (e.g., a school’s leadership team’s self-assessment vs. perspectives of all staff in the school). Tools that measure the fidelity of implementation of tiered systems of support often include a few items regarding the extent to which schools are collaborating with families (e.g., Schoolwide PBIS Tiered Fidelity Inventory [TFI]; Algozzine et al., 2014), and are one of the lowest rated areas of fidelity. These measures provide limited information about how to improve family–school collaboration efforts within tiered systems of support. Additionally, these measures rely on self-report from a smaller leadership team of educators within the school limiting the quality of information and consideration of family perspectives. The measures and tools described below highlight available tools schools can use to comprehensively assess and evaluate the quality and fidelity of their school’s family–school collaboration efforts as part of ongoing improvement efforts.

Many available measures to assist schools with assessing the quality and fidelity of their family–school collaboration efforts are completed by educators participating on school leadership teams. One example completed by school leadership teams is the Family–School Practices Survey–School Teams (FSPS; Garbacz et al., 2014, 2018). The FSPS is designed to assess the level of implementation of family–school collaboration practices within PBIS including (1) Communication, (2) Family–school Activities, (3) PBIS Practices at Home and School, (4) Decision-making/Shared Ownership, and (5) Resources. The items within the FSP-PBIS assess the school’s family–school collaboration efforts within Tier 1 as well as students receiving Tier 2 or 3 interventions along with open-ended items prompting for facilitators and barriers to family–school collaboration (Garbacz et al., 2018). The FSPS asks school teams to rate the level of

implementation of practices across the five domains from *Not in Place* (0) to *Partial* (1) to *In Place* (2) in addition to discrete yes/no questions about the school's practices for family-school collaboration (e.g., "Do you communicate with families about universal [i.e., Tier I] PBIS systems?") as well as items that ask schools to rate frequency and perceptions of the quality of those efforts on Likert scales (e.g., 1 = *poor*, 10 = *excellent*). The FSPS measure has been used in previous research with promising initial psychometric evidence for internal consistency reliability ($\alpha = .801$; Garbacz et al., 2018) and continues to be used by state PBIS leaders in the field (Feinberg et al., 2020). Results from FSPS can be used to help inform school team action planning as part of ongoing evaluation and improvement efforts related to family-school collaboration. The measure is available upon request (from the second author of this chapter, AG).

Another measure completed by school leadership teams to assess the level and quality of implementation of family-school collaboration practices is the Family Engagement in Multi-Tiered Systems of Support – Innovation Configuration (FACE-IC; Minch et al., 2017). The FACE-IC is completed by school leadership teams and designed to help schools determine the quality and level of implementation of family-school collaboration efforts within their tiered systems of support across six domains and 21 practices including (1) Leadership, (2) Data-based Outcomes, (3) Positive Relationships, (4) Multi-dimensional/Multi-Tiered Approach, (5) Empowering Families, and (6) Collaborative Problem-Solving. The measure is intended to serve as a reflection guide to help schools identify, monitor, plan, and refine areas of family-school collaboration for improvement. Schools rate their level of implementation on a scale from left (1 = *Exemplary*) to right (4 = *Planning*) with values ranging from the most exemplary level of implementation of the practice on the left (1 = *Exemplary*) with decreasing levels or variations of implementation along the right (3 = *Implemented*; 2 = *Partially Implemented*; 1 = *Planning*). Innovation configurations are not intended to be psychometrically sound assess-

ments; they are designed for use within local contexts and allow for adaptation and refinement based on needs specific to local teams and communities (Learning Forward, 2013). Thus, this measure has not been used in research but has been adopted by various state MTSS networks (e.g., Midwest PBIS Network, Virginia Tiered Systems of Support), to assist district and school teams with ongoing efforts to improve family-school collaboration within tiered systems of supports. The FACE-IC is available upon request and at the Florida Positive Behavior Interventions and Support Project (FLPBIS) website (<https://flpbis.cbcs.usf.edu/foundations/FACE.html>).

In addition to team ratings, individual teacher ratings collected through teacher surveys to gather educator-reports of the quality and fidelity of family-school collaboration practices (e.g., Parent-Teacher Relationship Scale II: PTRS II; Minke et al., 2014; Vickers & Minke, 1995). The PTRS II is a 24-item measure that assesses teacher perceptions, parent-teacher joining, and communication within the parent-teacher relationship. Research on the PTRS II has examined its construct validity, and yielded a two-factor structure, reflecting joining among parents and teachers, as well as communication among parents and teachers. Internal consistency reliabilities for the total score are high ($\alpha = .93$ for parents, $\alpha = .95$ for teachers; Minke et al., 2014). In terms of a brief measure to examine proactive outreach to families, three items that could be considered include (a) parents are contacted before child behavior problems get out of hand, (b) parents are regularly informed about their child's positive behaviors, and (c) this school clearly communicates with families about expected student behaviors at school (Garbacz et al., 2020). The three items of this brief scale showed an internal consistency reliability of $\alpha = .63$. This tool can be used to gauge the overall status of family-school collaboration within the school as well as disaggregated by grade level, department, or other method to strategically inform areas for further coaching, professional development, and overall improvement.

In addition to gathering educator perspectives, it is equally important to gather family perspec-

tives about the quality and fidelity of family–school collaboration efforts. Depending on the resources available within the school, these tools can be administered to all families to inform schoolwide family–school collaboration systems and practices that are responsive to family input and can be administered to a smaller subset of families to inform focused areas of improvement. One measure intended to be administered to all families to inform family–school collaboration efforts within tiered systems of support is the Stakeholder Input and Satisfaction Survey- SISS Family (SISS-F; Center on PBIS, 2020). The SISS-F is a 37-item survey administered to all families in the school and includes questions about (1) family perspectives on the implementation, quality, and frequency of the school’s practices for family–school collaboration, (2) family preferences for collaborating and communicating with the school, and (3) open-ended questions about the school’s overall strengths and areas of improvement. Although there have been no studies to date published about the use of the tool in practice or psychometric properties of the tool, the items included within the tool demonstrate promise for improving responsive efforts to partner and collaborate with families. The SISS-F tool is available for piloting upon request.

Another measure administered to all families to obtain their input and preferences on the school’s family–school collaboration efforts is the Family Engagement in Problem-Solving/Response to Intervention Survey – Family (FERS-F; Minch, 2012). The FERS-F is a 40-item survey that assesses families’ (a) beliefs about the importance of family engagement, (b) perceptions of knowledge and skills for participating in family engagement activities, (c) perceptions of their own practices for supporting student learning, and (d) perceptions of educators’ practices to reach out to and engage families in student learning. Families respond to items by rating their level of agreement (1 = *Strongly Disagree* to 5 = *Strongly Agree*) or frequency (i.e., communication with the school, 1 = *Never* to 4 = *Always*). As part of tiered prevention frameworks, the intensity of interventions and supports matches student need, and therefore,

some of the items allow for a *Not Applicable* option as not all families may experience Tier 2 or Tier 3 interventions for their child. Although this measure has been used in research and demonstrated psychometrically sound properties (Minch, 2012), little is known about the utility of the tool in practice. Content validity was established through an expert review of items along with construct validity through exploratory factor analyses producing a six-item factor structure generally consistent with the way in which items were constructed (Castillo et al., 2016). Internal consistency reliability estimates using Cronbach’s alpha for the six factors ranged from $\alpha = .66$ (Educators’ Family Engagement Practices) to $\alpha = .95$ (Family Knowledge and Skills for Family Engagement; Castillo et al.). A strength of the tool includes items assessing cognitive and behavioral components known to be important aspects in assessing family–school collaboration efforts (e.g., family beliefs about family–school collaboration, family perceptions of skills for family–school collaboration, family activities for supporting student learning) and the addition of accessible tools that include families as a respondent in the assessment and evaluation of the family–school collaboration relationship. Additionally, it is a freely available tool to assess family beliefs and needs relative to practices unique to tiered systems of support (e.g., understanding of and satisfaction with student interventions and progress monitoring data). Survey results can be aggregated to inform Tier 1 approaches and used to inform individualized approaches for families of students receiving more intensive supports (i.e., Tier 2 or Tier 3). The tool is available in Survey Monkey upon request as well as within Chapter 5 of the Technical Assistance manual available on the Florida Problem Solving/Response to Intervention website: http://www.floridarti.usf.edu/resources/program_evaluation/ta_manual_revised2016/ta_manual_revised2016.pdf.

Additional measures designed to obtain family perspectives about important features of family–school collaboration may not be freely available or accessible for use in practice. The Family Involvement Questionnaire (FIQ;

Fantuzzo et al., 2000; Manz et al., 2004) asks families to rate their frequency of engaging in school-based, home-based, and home-school communication. The FIQ is available for early childhood (Fantuzzo et al., 2000) and school-age years (Manz et al., 2004). The Family Involvement Questionnaire has been applied to different countries with support for a multi-dimensional conceptualization of educational involvement (Garbacz & Sheridan, 2011; Garbacz et al., 2019b). Studies in the United States have examined its construct validity with results that suggest that the FIQ measures three dimensions of family educational involvement: (a) home involvement ($\alpha = .88$), (b) school involvement ($\alpha = .84$), and (c) home-school communication ($\alpha = .91$; Manz et al., 2004). Schools can administer this questionnaire to all families or a smaller, targeted group to assess the level of and ways families are engaged and supporting student learning. Schools can use this information to better align their outreach and collaboration efforts with family preferences for family-school collaboration.

Families as Co-equal Informants of Student Needs

This group of tools includes those that position families as co-equal informants and partners in responding to student learning, instruction, and interventions needs in schools. These measures can be administered to all families as a parent-respondent schoolwide screener and administered with a smaller subset of families of children receiving Tier 2 or Tier 3 interventions to help inform supplemental intervention goals and plans. One measure that is administered to all families as a parent-respondent schoolwide screener is the Positive Family Support-Strengths and Needs Assessment (PFS-SANA; Garbacz et al., 2019a). The PFS-SANA is a parent-report screener to understand parents' perspectives about their children's academic and behavioral strengths and needs and is available at the elementary and middle school level. Items assess parents' perspectives about their child's social, emotional, and academic needs (e.g., sad, worried, irritable; shares with others) on a 4-point

scale (from 0 = *no concern* to 3 = *serious concern*). The PFS-SANA has been used in research demonstrating sound psychometric properties and in practice demonstrating high utility and feasibility (Garbacz et al., 2020; Moore et al., 2016). An examination of construct validity suggested a unidimensional structure with internal consistency reliability at $\alpha = .92$ (Moore et al., 2016). The PFS-SANA can be embedded at Tier 1 within a school's MTSS framework and used to complement teacher ratings of child social, emotional, and academic needs and Tier 2 or Tier 3 interventions and supports. In addition, the PFS-SANA can be used as an avenue to reach out proactively to parents/caregivers as part of a larger schoolwide emphasis on family-school collaboration. Findings suggest that a school's proactive outreach to parents/caregivers may be one avenue to promote student positive social behavior at school (Garbacz et al., 2020). When concerns do arise with a child's behavior at school, data from the PFS-SANA can be used by school personnel to share a broader conceptualization of a child's strengths and areas of concern. Including student strengths in discussions with families creates a positive tone for collaboration, validates areas of student success, and opens opportunities for bi-directional forms of communication and collaboration (Moore et al., 2016).

Measures that obtain detailed information from families often require a greater time commitment for both educators and families to complete and are best suited for use with families of students identified as benefitting from Tier 2 and/or Tier 3 supports to inform intervention goals and plans. These comprehensive tools allow for expanded opportunities and types of collaboration and supports such as wrap-around services and/or community referrals. Many of the available tools have been used as part of tiered prevention frameworks but are a component of packaged curriculums requiring purchase for use (e.g., Family Check-up; Stormshak & Dishion, 2009). Generally, these tools gather more detailed information about family goals, concerns, and motivations for collaborating with the school to support children's success in school (Stormshak et al., 2011). Although the measures used within

Parents and Teachers as Partners and Family Check-Up are not freely available, the tools described below assess similar domains and features included in these measures designed to obtain detailed information from families including a primary focus on family goals for children, family perceptions of student areas of concern, family motivations and perceptions of their role for supporting student success in school. Following the PFS-SANA, these areas of assessment can be considered with families that identified significant student needs to inform Tier 2 and Tier 3 interventions and supports.

Positive parenting and teaching strategies are primary avenues to promote child positive behavior and reduce behavior problems within family–school interventions (Stormshak et al., 2020). Measures of effective parenting strategies can include assessments of limit setting (e.g., McEachern et al., 2012), parent warmth (Metzler et al., 1998), and positive reinforcement (Dumka et al., 2008). Parent monitoring, a particularly effective parenting strategy during adolescence, refers to parents' knowledge and tracking of their child's behavior (Stattin & Kerr, 2000). The Monitoring Scale assesses parent or child reports of parents' engagement in different monitoring behaviors (e.g., How often does at least one of your parents know where you go if you are out with friends? Metzler et al., 1998).

Other relevant domains to parenting and family–school supports include academic socialization and parent competence in problem-solving. Academic socialization is a particularly strong predictor of student achievement and reflects parents' promotion of educational or occupational aspirations (Hill & Tyson, 2009; Jodl et al., 2001). The Educational Expectations/Aspirations for Youth measure (Eccles et al., 1993) can be used to examine parents' aspirations, expectations, and beliefs about expected child performance (e.g., How far would you like your child to go in school?). This measure has evidence of internal consistency reliability with $\alpha = .73$ for mothers and $\alpha = .73$ for fathers. Parental competence in problem-solving is developed through their participation in family–school interventions and can be assessed using the Competence in

Problem Solving Scale (Sheridan, 2004), an 8-item measure with evidence of internal consistency reliability ($\alpha = .88$; Sheridan et al., 2013). The Competence in Problem Solving Scale examines parent and teacher perceptions about their ability to effectively solve problems related to their child's concerns, such as identifying behavior concerns, developing plans, and evaluating progress. These domains and areas can be assessed and considered when designing more intensive supports for family and students; however, accessible and practical tools for use in schools are limited.

Limitations of Existing Measures and Tools

Additional tools not reviewed in detail in this chapter exist to assess the fidelity and quality of family–school collaboration efforts and situate families as co-equal partners in the identification and implementation of supports for students but the majority were developed for research and are not freely accessible or feasible for use in practice. Since many of these measures were developed for research purposes, they are lengthy, impractical, and many times not freely available for use by educators or families in practice. Schools are left with few options leading to use of adapted assessments that include items from various research-based tools limiting the validity and reliability of the data for decision-making in practice. Furthermore, tools often fail to include the features of family–school collaboration that are most important for student success such as the conversations and activities that occur between families and children at home (Jeynes, 2010). The degree to which families regularly communicate their educational aspirations to their children is one of the essential features of family support for children's education that consistently demonstrates strong associations with student outcomes across age levels and demographic groups (Jeynes, 2003, 2005, 2007, 2010) yet is rarely a practice emphasized in practice or an outcome of family–school collaboration measured by schools.

Additional limitations to existing family–school collaboration include single-respondent

perspectives on the quality and fidelity of family–school collaboration. For example, many of the available tools limit quality and fidelity assessments of family–school collaboration efforts to educator respondents only. Family–school collaboration represents a relationship between home and school and obtaining perspectives from only one of the members in the relationship provides a limited understanding regarding the nature of that relationship. Although schools face many challenges in achieving high rates of family respondents, efforts to obtain and use family perspectives within schoolwide prevention systems are among the most essential practices for ensuring integrated and responsive educational services within schools (Malchar et al., 2020). Furthermore, family voice and input are essential to contextual adaptation of evidence-based practices and responsive instruction and supports for students (Levenson et al., 2019). Finally, although the data infrastructure available in districts and schools to support ongoing evaluation and use of data for decision-making continues to improve, readily available data and evaluation systems that provide school teams with information for improving family–school collaboration efforts continue to be limited in practice (Weiss & Lopez, 2011).

Future Considerations for Assessing and Evaluating Family–School Collaboration

Family–school collaboration starts at a point of empowering families and promoting collaboration that benefits families and children (Powell & Coles, 2020). To advance family–school collaboration in schools in a manner that promotes engagement and mitigates barriers to collaboration, it is essential that appropriate assessment and evaluation systems are used to understand characteristics of the family, child, and school, as well as their interconnections (Garbacz et al., 2017). The nuanced, dynamic, and complex connections in family–school collaboration necessitate a sophisticated approach to assessment and evaluation (Garbacz et al., 2015). Given the limi-

tations of existing tools for assessing and evaluating family–school collaboration efforts within tiered prevention frameworks in the sections that follow, we describe considerations for future family–school collaboration assessment and evaluation tools that improve upon these challenges to advance these efforts in practice.

Feasibility, Accessibility, and Utility

As mentioned previously, many of the existing tools used in research to support the importance of family–school collaboration are not freely available and are impractical for use in schools by educators and families alike. As previously emphasized, there is a critical need for accessible, practical, and usable tools that can assist schools with assessing the fidelity and quality of their family–school collaboration efforts and position families as co-equal partners in identifying and responding to student learning needs. Brief measures that can be administered regularly for ongoing monitoring and inform areas of improvement are needed. Accessible tools that are directly connected with tiered prevention frameworks (Stormshak et al., 2011) and easily allow systems-level use as well as use with a smaller subset of families to gather more detailed information will be important to assist educators in translating research findings about important features of family–school collaboration into practice. Future research focused on the development of family–school collaboration within tiered prevention frameworks should focus on usability, feasibility, and acceptability of tools among families and educators for improving family–school collaboration practices.

Useful tools that allow schools to regularly assess the fidelity and quality of their family–school collaboration efforts and easily translate to if interventions align with needed. A tool currently under development, the Tiered Fidelity Inventory: Family–School Collaboration (TFI: FSC; Garbacz et al., 2019c), allows schools to supplement broader fidelity assessments such as the Tiered Fidelity Inventory (TFI; Algozinne et al., 2014) with a brief but detailed assessment of the fidelity and quality of family–school collaboration practices that guide action planning

for improvement efforts. The TFI: FSC is 14-item measure completed by school teams designed to assess the extent to which core features of family–school collaboration are integrated within the PBIS framework across six domains of family–school collaboration including (1) positive home–school relationships, (2) two-way communication, (3) shared decision-making, (4) family voice for equitable discipline, (5) training and support for family–school collaboration, and (6) evaluation. Each of 14 items is rated on a 0 (*not implemented*) to 2 (*fully implemented*) paradigm. The TFI: FSC prompts teams to consider specific data sources (e.g., school plans and policies, meeting notes, survey or focus group data) when rating each item. The scoring criteria emphasize the process and quality of implementing key practices and proactive use of family input to design and continuously improve their practices. The emphasis on continuous improvement ensures schools are remaining responsive to changing family needs and preferences. Ideally, a tool such as the Stakeholder Input and Satisfaction Survey- SISS Family (SISS-F; Center on PBIS, 2020) is used by schools to obtain family voice and input and considered when rating items about representative family perspectives. The TFI: FSC can be used to provide an initial and ongoing assessment to monitor progress and changes in family–school collaboration systems and practices. The TFI: FSC is currently being piloted and will be a freely available tool for use by schools.

Family Respondents

Research on family–school interventions continues to point to the importance of home–school relationships and positive, proactive, and strengths-based approaches to promote positive social, emotional, and behavior outcomes for children (Fefer et al., 2020; Sheridan et al., 2019). Tools that position families as the respondents are needed to assist schools with home–school feedback loops to ensure family voice and perspectives are considered within policy and practice. Measures that obtain cognitive components (e.g., perceptions, beliefs, values) and behavioral components (e.g., frequency of communication with educators) help to ensure the important fea-

tures of family–school collaboration are identified and used to inform areas of improvement. Feasible tools are needed to regularly assess the key characteristics and features of family–school collaboration (1) the activities and discussions families engage in at home (Jeynes, 2010), (2) preferences for bi-directional communication and collaboration between home and school (Sheridan et al., 2019), and (3) family input on child strengths, family values and cultural considerations. Opportunities for schools to regularly and easily identify families' strengths and perspectives on instruction, interventions, and supports allow schools to align services accordingly. Identifying family values, strengths, and cultural considerations establishes a collaborative, positive tone for home–school collaboration efforts and helps to translate to actionable approaches for schools and allows schools to leverage family strengths when considering responses to areas of need.

Families of students receiving Tier 2 and Tier 3 supports should be involved in assessments of social validity including contextual fit, satisfaction, usability, acceptability, and perceived generalizability of interventions (Carnine, 1997; Crone & Horner, 2003; Marchant et al., 2013). Determining if interventions align with families' values, skills, resources, and routines influence family use and engagement with interventions (Carnine, 1997; Crone & Horner, 2003; Marchant et al., 2013; McLaughlin et al., 2012). Additionally, assessments of family–school collaboration for families of students receiving Tier 2 and Tier 3 interventions should include a focus on improving parent/caregiver and teacher competence in problem-solving skills, parenting, and teaching practices (Sheridan et al., 2012, 2013).

Tools that can be used to obtain family perspectives on the quality and fidelity of the school's family–school collaboration systems and practices and family preferences for communicating and collaborating with the school, such as the SSIS-F, and social validity features of interventions for families of students receiving Tier 2 and 3 interventions allow for comprehensive and representative understanding of what is working and for whom to inform improvement

efforts. Data can be used to inform schoolwide plans for collaborating with all families as part of Tier 1 supports as well as more individualized approaches for ensuring increased communication and collaboration with families receiving Tier 2 and Tier 3 supports. These features begin to touch on considerations for equity and broader opportunities for training and support available in community contexts, all of which have important influences on family and child well-being and outcomes.

Family Well-Being

Incorporating an ecological approach to addressing family–school collaboration includes consideration of a broader view of family that addresses families’ strengths and needs to address the context in which families live, such as community and family support, income and job placement, housing, childcare, family health and nutrition, transportation, and education. In addition, consideration of what is important to the family, such as social networks, faith involvement, friendships, is essential. These concepts are vital when considering how the student navigates between the meso-system (e.g., home and school) and the macro-system (e.g., the community they live in; Bronfenbrenner, 1986).

Family well-being is well suited to incorporate an ecological system perspective as this concept incorporates both the context in which a family lives and the value of what is important to the family as a unit. Biglan et al. (2020) define family well-being as the “quality of contextual conditions that affect family” and “quality of family life” (p. 154). Under this definition, contextual conditions that act together to have increased impact include: (a) economic well-being (e.g., Jarjoura et al., 2002; Matthew & Gallo, 2012; Park et al., 2002); (b) homelessness (e.g., Hart-Shegos, 1999); (c) criminal justice system (e.g., Phillips & Gates, 2011); (c) discrimination; and (d) access to unhealthy substances (Nestle, 2002; Ford et al., 2017). Family quality of life might consider how families are: “having their needs met, enjoying their life together as a family, having opportunities to pursue and achieve goals that are meaningful to

them” (Park et al., 2002, p. 153). Taken together, contextual conditions and the family’s quality of life affect how families can relate to the school and are vital areas to consider in the interaction between families and school systems. Currently, there are not enough assessments that address the concepts of quality of life and contextual conditions. Baton et al. (2021) explored the literature on measuring family well-being as conceptualized by Biglan et al. (2020), finding no measures that holistically addressed all the relevant factors in the concept of family well-being.

In addition to considering family well-being, it is important to consider family satisfaction and social validity. Existing measures available to assess features of family well-being include the Family Satisfaction Scale that assesses four features of relationships including: (1) parental relationships, (2) parent/ child relationships, (3) siblings’ relationships with each other, and (4) family relationships in general (Schumm et al., 1986; Carver and Jones, 1992). Family satisfaction scales also have included quality of life measures that address quality-of-life indicators (Butler, 2018; Michalos et al., 2006) and caregiver/school satisfaction (Hampden-Thompson & Galindo, 2017). Using these measures, school systems would be able to identify the impact of services to a community and how those services affect family–school collaboration. For example, a school system can proactively identify and respond to the needs of families within the school community. Adding in such measures to already existing measure of practices, school systems would be able to explore the impact of services and identify ways to improve family–school collaboration systems and practices. While this is a starting point on improving practices for family–school collaboration, stronger measures are needed that infuse the concepts of family well-being and family satisfaction.

Implications for Research and Practice

Despite the importance of family–school collaboration, schools continue to face challenges

assessing the quality and fidelity of these efforts, limiting successful implementation. Many of the assessments and tools currently available include lengthy assessments that are not feasible for regular use among practitioners in schools. Future research should continue to identify the features of family–school collaboration that are important for student social–emotional and behavioral outcomes and connected with student needs that allow for practical and efficient use in practice. Feasibility and usability studies examining the use of tools in practice are needed. Closer partnerships among researchers, practitioners, and families are needed to ensure tools developed and supported in research are usable and feasible among families and practitioners in schools. Additionally, district and school resources allocated for reaching out to and obtaining family voice and input from all families, especially those that may require additional support to share their perspectives, are needed to improve these efforts in practice. Broadening prevention considerations beyond school buildings and systems has the potential for lasting changes for families and communities. Assessing features of family well-being can help connect families with community resources and supports that comprehensively improve family functioning and student outcomes.

An international working group, the Family–School–Community Alliance (FSCA), is collaborating to advance the work described above within research and practice. Initiated by the publication of *Aligning and Integrating Family Engagement in Positive Behavioral Interventions and Supports (PBIS): Concepts and Strategies for Families and Schools in Key Contexts*, an e-book published by the Center on PBIS in 2017, the FSCA consists of researchers, practitioners, and families collaborating to develop products and tools to advance family–school collaboration within PBIS (<https://fscalliance.org/>). The FSCA is actively facilitating the development of the TFI: FSC and supplemental tools and resources to assist schools with implementing family–school collaboration practices. The FSCA remains committed to ensuring freely available, accessible, and practical tools

for use in schools. Assisting schools with identifying the quality and fidelity of family–school collaboration is a prerequisite to improving family–school collaboration systems and practices. Additionally, creating accessible tools that allow educators to collaborate with families as co-equal partners in the identification and implementation of interventions to support students and connecting families to community supports are key for effective tiered prevention frameworks and improved family and student outcomes.

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Students as Co-creators of Educational Environments

13

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Introduction

Despite decades of research on the conditions necessary for learning and success, including safe and supportive relationships and environments, education policies and practices continue to focus on accountability, adult-driven measures of success, exclusionary and punitive discipline, and high stakes standardized testing (Darling-Hammond & Cook-Harvey, 2018; Hannaway & Hamilton, 2019; Skiba et al., 2012). It is understandable then that students—particularly students of color and those from lower socioeconomic status (SES), English learners, immigrants, LGBTQ, and students with disabilities—are increasingly disengaged from formal schooling. When young people do not experience school as a place that acknowledges, affirms, and celebrates their cultures and allows their agency, they lack the investment necessary to be engaged and involved in their education. When young people’s experiences, cultures, hopes, and aspirations are ignored, trivialized, or denied, they may develop apathy, resentment, and learned helplessness.

The disparities between white students and students of color are referred to as the “achievement

gap”; however, many experts have argued that it is not an achievement gap; it is an opportunity gap (Friedlaender et al., 2014). Moreover, this gap is generally considered a student problem; however, experts argue it is not a student (or family) problem, it is a systems and systemic problem. The gap does not account for the complex ways in which both historical and current systemic factors like race, SES, language, and ability status impact the type of education students with less privilege receive and how they and their families are involved in decision-making under oppressive systems. This is further perpetuated by white- and adult-centered beliefs, values, and biases that underlie the majority of educational policies, practices, and leadership. These include notions such as “the adults are the leaders and students are the followers;” “only the adults are the experts and students are learners;” “students and families are passive recipients of services and supports by adults and educators;” and “traditional standardized tests are indicators of current and future success.”

Establishing systems and structures that are grounded in authentic adult-student partnerships and across cultures is the paradigm shift necessary for educational policy and leadership. Education needs an improved way of doing and being—one that recognizes young people’s capabilities, leverages their knowledge and wisdom, and utilizes their contributions. Also, one that understands that students can achieve at

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higher levels when schools teach them how to see, name, and challenge oppressive and unjust systems. A whole person, whole school culture involves creating an environment in which students partner with adults in the design and implementation of curricula, programs, practices, and policies. Students actively contribute ideas about student-centered interventions, student-led learning, and student-driven indicators of success. This involves establishing systems and structures that cultivate and sustain a shared vision of equity and a culture of co-creation. It means that all stakeholders value collaboration, meaningfully engage young people in bi-directional ways of work, and cultivate connectedness and belonging which benefits adults and young people alike.

This chapter begins with an overview of key concepts, typologies, and frameworks and provides a background on the history and research supporting students as co-creators of educational environments. The remaining sections then provide applications and discussions of these key concepts and frameworks, as well as examples and exemplars from the field.

Background

Key Terms and Concepts

In the past several decades, researchers and practitioners have begun to explore and clarify what student voice and agency mean in meaningful and practical ways and more recently how we can leverage the leadership skills of young people and engage them as equal partners in the co-creation of educational environments. Many definitions and frameworks have emerged as they pertain to complex concepts such as student voice, agency, leadership, engagement, partnership, and co-creation. We will offer a summary of the commonly studied and applied terms, along with references for further exploration into these concepts.

A number of age-related terms are used throughout the literature. The age-related terms for this chapter defined herein are:

- “Child” refers to ages birth to 11.
- “Youth” refers to ages 12–20.
- “Young people” refers to everyone between birth and 25.
- “Students” are all young people participating in an educational environment.
- “Young people” and “students” are used interchangeably throughout this chapter.

Student Voice, Agency, and Leadership Student voice as a concept has roots in many theories and practices including social constructivism, metacognition, self-regulation, motivation, engagement, self-determinism, activism, and personalized learning (Fleming, 2015; Hargreaves, 2004a, b; Rudduck, 2006). The concept has been increasingly accepted as a construct (Mitra, 2004) that refers to the expression and communication of ideas, beliefs, perspectives, values, and cultural backgrounds of individual or groups of students about issues that concern them in relation to their education, including but not limited to interests, desires, choices, aspirations, and solutions (Fielding, 2001; Goodwillie, 1993; Levin, 2000; Thomson, 2011). Student voice creates opportunities for adults and students to collaborate and co-determine the content and process of learning, as well as indicators of success and how they are measured.

In order to facilitate student voice, a young person needs agency in their educational context, including the “right” to speak up about and act upon it. Similarly, listening to and acting on student voice provides students the choice or agency in how they experience or act upon the educational environment. Thus, voice and agency are fundamentally interrelated. Agency refers to the ability and will to act and affect change. Student agency is dependent upon the level of autonomy and power students have in the educational context, which creates opportunities for students to “act rather than be acted upon; shape rather than be shaped; and make responsible decisions and choices rather than accept those determined by others” (Organisation for Economic Cooperation and Development [OECD], 2019, p. 2). Allowing

students to act on their agency creates opportunities to determine and be held accountable for their learning, subsequently promoting autonomy, and self-regulation in learners.

Poon (2018a) has summarized student agency using a multipart definition grounded in social psychology and sociology literature with interconnected components, including setting advantageous goals; initiating action toward those goals; reflecting on and regulating progress toward those goals; and self-efficacy. This definition appears to encompass aspects of leadership as well. Definitions of student leadership throughout the literature are unclear; however, they often overlap with terms like voice, agency, and participation (Black et al., 2014). Nonetheless, a growing body of work supports young people's agentive role in leading educational decision-making as a means of co-creating curricula and services with adults to improve and shape the educational environment (Black et al., 2014; Fielding, 2001; Mitra, 2003; Rudduck & Flutter, 2004). Both student agency and leadership are not limited to a few but are rather abilities inherent in all young people. It is the adults and systems in power who determine whether a student is allowed to apply their agency or demonstrate their leadership.

The concepts of voice, agency, and leadership vary across cultures and evolve across the developmental lifespan. A core issue around voice, agency, and leadership is student identity, including age, race, ethnicity, gender, sexual orientation, language, and ability status. In what ways do these and other sociocultural identities shape a young person's expression of voice, agency, or leadership, and in what ways might adults' identities influence the way we perceive students' voice, agency, or leadership (Poon, 2018b)? Poon (2018b) urges educators to consider these and other questions, as we run the risk of viewing student voice, agency, and leadership through a dominant cultural lens. What looks like agency and leadership from a white, cisgender, male-centered lens is likely different from a cisgender female lens or through the lens of a person of color. What appears to be leadership from a Western perspec-

tive ("independent") is often distinct from an Eastern perspective ("interdependent"). What looks like voice from a young person's frame of reference likely looks different from an adult's perspective—and in fact, may make an adult uncomfortable or feel out of control.

The aforementioned concepts are not new to education. Student power and youth empowerment movements of the 1960s and 1970s were a time when young people claimed their power and agency and asserted their rights to participate in democratic decision-making in schools and communities (DeCharms, 1976; Richardson, 2012); however, this nearly disappeared throughout the 1980s (Levin, 2000). The late 1990s saw a resurgence and the last two decades have seen dramatic shifts in the ways young people have become involved in school improvement and school reform in order to create more ethical, equitable, and engaging educational environments (Mitra, 2004; Muncey & McQuillan, 1991, 1996).

These concepts have been increasingly discussed in the school improvement and school reform literature. School improvement is not simply an issue of responding to trendy curricula or evidence-based programs; rather, it is about addressing the entrenched systems and structures of schools and the mindsets, values, and habits they represent (Rudduck & Flutter, 2000). Additionally, the school reform literature suggests that student voice, agency, and leadership are potential paths for improving both school systems and structures as well as student outcomes (Fielding, 2001; Mitra, 2004; Rudduck & Flutter, 2000). Furthermore, Thiessen and Cook-Sather (2007) posit that when students act as co-constructors of their school experience, they become co-participants and co-researchers within critical analysis and school reform, which requires agentive student voice and an intentional democratic orientation. Finally, critical consciousness leaders posit that students can achieve at higher levels when schools teach them how to see, name, and challenge oppressive and unjust systems (El-Amin et al., 2017).

Engagement, Partnership, and Co-creation Students have served as powerful change agents in schools by improving student-teacher relationships, instructional practices, curricula and programs, and assessment (Fielding, 2001; Mitra, 2003; Rudduck & Flutter, 2000). This is done through voice and agency, but requires engagement, partnership, and co-creation with adults.

Many references to student engagement exist in the literature, often used in contradictory ways and associated with competing ideologies (McMahon & Zyngier, 2009; Dunne, 2016). Descriptions include activities employed to motivate and interest students; the time and effort students give to meaningful activities; student representation; and attendance (Bovill, 2020; Kuh, 2009). Although more recent developments in student engagement emerged in the 1990s, there is a long history that associates student learning and engagement—and more recently, democratic practice and social justice—applied by antiracist and feminist philosophies (McMahon & Zyngier, 2009).

Furthermore, the concept of partnership refers to increased voice, participation, engagement, and agency. Partnership in teaching and learning has been described by Cook-Sather et al. (2014) as a “collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualization, decision-making, implementation, investigation, or analysis (pp. 6–7).”

The term co-creation (or co-construction, co-design) indicates increased collaboration between young people and adults to be active designers in their educational experience—both academic and nonacademic. A number of descriptions in the literature exist, including an emphasis on learner empowerment and collaboration with students as active participants in the learning process, constructing understanding and resources with academic staff (Bovill et al., 2016; Ryan & Tilbury, 2013).

Partnering with students to co-identify problems and co-determine solutions prompts adults to realize and remember that students are experts,

with valuable perspectives and exceptional knowledge of school and their experiences (Kushman, 1997; Levin, 2000; Mitra, 2004). In fact, adults are often uncomfortable having conversations about, or simply deny or ignore, issues regarding injustice and equity, whereas students often discourse openly and civilly. Students as partners can begin to identify and address concerns with the systems, cultures, and structures of schools (Mitra, 2003; Wehlage et al., 1989).

Typologies and Frameworks

Just as there are various concepts, as described above, a plethora of typologies and frameworks exist to organize and apply these concepts. We briefly summarize a few of the most commonly applied ones here.

One typology is Hart’s Ladder, originally developed by Hart (1997) and adapted by Fletcher (2008). Hart’s Ladder can provide schools and systems a simple way to reflect on and explore the nature and quality of involvement between adults and young people. Hart’s Ladder outlines eight rungs of participation in student-adult partnerships, with the bottom three rungs indicating nonparticipation and the upper five rungs indicating active participation. The rungs are as follows: (1) Young people are manipulated; (2) Young people are decoration; (3) Young people are tokenized; (4) Young people are assigned and informed; (5) Young people are consulted and informed; (6) Adult-initiated decisions are shared with young people; (7) Young people lead and initiate action; and (8) Young people and adults share decision-making. Rarely are students active co-constructors of their environments—particularly as it pertains to academic curricula, behavior expectations, and decisions about academic and nonacademic services and supports (to or for them, rather than with them). An application of Hart’s Ladder in the school mental health and wellness context for both students and families can be found in Wolf-Prusan and Pate (2017).

A second typology commonly applied in the field is the Spectrum of Student Voice (Toshalis & Nakkula, 2012). The spectrum encompasses

the following from left to right: Expression; Consultation; Presence; Partnership; Activism; Leadership. Thus, students involved as stakeholders and collaborators increase from left to right. Specifically, the need for adults to share authority, demonstrate trust, protect against co-optation, learn from students, and handle disagreement increases from left to right. Additionally, students' influence, responsibility, and decision-making roles increase from left to right. For more information and the application of this framework, see the Prichard Committee Student Voice Team webpage (<https://www.prichardcommittee.org/student-voice/>).

Using typologies like Hart's Ladder and the Spectrum of Student Voice offers students and adults a process through which they can authentically co-reflect on their partnership practices in educational environments. Additionally, these types of models provide leaders a way to examine their attitudes and belief systems so they can begin to shift toward more ethical and equitable partnerships with young people. Overall, we should begin to ask questions about power and control. Whose needs are being served? Do our policies and practices empower those being served or those providing the service (e.g., is emphasis being placed on control rather than the comfort of those being served)?

Another approach to engaging young people that have proliferated in the past several decades is Positive Youth Development (PYD), which originates from the field of prevention. PYD is a prosocial approach rooted in the belief that young people can grow and thrive and contribute meaningfully to their families, schools, and communities if supported and offered opportunities to actively participate and make choices about their life, exercise leadership, foster positive relationships, develop healthy mindsets, and cultivate the skills needed to build on their leadership strengths (Youth.gov, n.d.; Zarrett & Lerner, 2008). Rather than focusing on needs and deficits, PYD is an asset-based framework that focuses on strengths and finding solutions rather than on managing challenges and solving problems. A widely used framework for PYD is developmental assets, created by the Search Institute. Developmental

assets are relationships, opportunities, skills, values, and commitments children and adolescents need to grow up and be healthy, caring, and responsible (Search Institute, n.d.).

Altogether, evidence suggests that programs and interventions aimed at reducing risk and strengthening protective factors yield more positive health and education outcomes for young people, and these outcomes are strengthened when these efforts involved and engaged youth as equal partners (DuBois et al., 2011; Gavin et al., 2010). The remainder of this chapter is dedicated to applying the concepts, typologies, and frameworks previously outlined along with case studies and testimonies from the field.

Discussion and Applications

Co-creation of Services and Supports

In the last 20 years, multi-tiered systems of support (MTSS) have emerged as a framework to proactively establish a safe and healthy school culture and implement interventions and supports for all students to achieve social, emotional, behavioral, and academic success (NASP, 2016). Notably, however, students (and families) have not been involved as equal partners in the development and proliferation of MTSS and student services efforts (Weist et al., 2017).

We are now at a cultural inflection point that recognizes the power of service recipients (students and families)—a shift from being passive receptacles of care to empowered partners in their own wellness and achievement (Wolf-Prusan & Pate, 2017). The implementation of Positive Behavioral Interventions and Supports (PBIS) is experiencing similar shifts—from a focus on harnessing students' behavior to reflect adult expectations in order to drive achievement, to viewing students' behaviors as a reflection of unmet needs, and in turn, creating systemic responses to address those needs (Weist et al., 2017). However, we have yet to fully engage students (and families) as equal partners in this shift.

Historically, we have provided services and supports *to* or *for* students rather than created and implemented these *with* them. In fact, school leaders often use the term “buy-in” as a means to get students, staff, and families “on board” with a given initiative, program, curricula, practice, or support. However, the terms voice, agency, partnership, and co-creation imply engagement, inclusion, leadership, and collaboration. When stakeholders are expected to “buy-in,” this essentially means a stakeholder or group of stakeholders is coming to the table with something, attempting to lure others into accepting, following, or participating. Thus, rather than attempting practices to achieve “buy-in,” consider how to include, engage, partner, and co-create/construct.

For example, consider the following questions: How might we create systems and services that engage young people to improve their experience of learning, school climate, and personal and collective wellness? What might it look like to partner with students? What would it be like to co-construct the assessments, practices, policies, services, and supports that constitute each tier of a system? What would it be like to co-determine “expected” behaviors or wellbeing; or co-define what “positive” behaviors and wellness look like? Overall, we must shift our mindset and approach. Rather than providing services and supports *to* or *for* students, we co-create and serve *with* them. What is at the center of it all? A sense of agency for students, and co-agency and allyship for adults.

In co-creation, the student becomes an active agent with an essential role—especially at the level of inception or ideation. This co-creation perspective is essentially a student-centered perspective, affirming that value is created by students. Adults, in particular, leaders, will need to manage the communication and mutual knowledge among stakeholders in order to understand what students are really seeking. Adults are not simply listening to young people, allowing their voices to be heard, but opportunities are created to power *with* young people, rather than power *over* them. Creating opportunities for students to step into their authentic power allows them

opportunities to be co-determinants and co-creators of their destinies. Not only will students be more engaged, but they are more likely to adopt a practice or service they helped create.

Co-creation can be challenging, and it certainly requires more effort for the stakeholders, but this will increase investment by young people and create a more sustainable solution over time. A major challenge faced when adopting a co-creation approach is the change in roles. Often, those with power experience change as a loss (Heifetz et al., 2009). For some adults, this feels like a loss of control, power, or identity—personally and institutionally. This requires shifts in personal and institutional identities and the capacity for co-creation. Additionally, this requires shifts in mindsets—from power *over* to power *with* (as above); from buy-in or adopt to engagement and partnership. This will require adults to get comfortable with the discomfort, embrace ambiguity, and let go of the need to control. This does not imply, however, that students have free reign, with no structures, boundaries, or accountability in place. Rather, this is an opportunity for young people and adults to begin to understand each other’s needs and hopes and to reimagine and re-design, in partnership, their desired educational experience.

Applying Adaptive Leadership Another challenge that the field of education faces is understanding and addressing adaptive challenges versus technical challenges (Heifetz et al., 2009). Technical challenges require technical solutions and adaptive challenges require adaptive solutions. Thus, we cannot apply technical solutions to adaptive challenges. To differentiate between adaptive and technical work, one should ask (Heifetz et al., 2009): Does making progress on this problem require changes in people’s values, attitudes, and/or behaviors/habits? If yes, then adaptive strategies are necessary. Technical strategies include plans, tools, programs, practices, and policies. However, policies, programs, and practices will not be implemented effectively or sustainably if the underlying mindsets, values, and attitudes do not align and/or if misaligned habits and behaviors have not yet changed.

Additionally, if shifts in priorities, resources, or power are necessary for change, then adaptive strategies must be applied. Simple technical strategies will not suffice. Thus, we cannot implement any student voice or co-creation strategy if adults do not fully believe that students' voices are valuable, that students possess their own power to be shared with adults, and if they are not willing to give up some of their power and/or share it with young people.

Furthermore, existing technical strategies have often been developed apart from the community, not considering the cultures, contexts, connections, or experiences of those being served, particularly for marginalized populations. Thus, they have been ineffective or harmful. Adaptive strategies require communities (including students) to identify the challenge or the change that is needed (not the leader(s) alone), regulate their discomfort and maintain focus, give the work back to the community, and protect the voices of stakeholders (Heifetz et al., 2009). Altogether, adaptive strategies allow for community-driven (student-driven), co-created systems, supports, practices, and policies to be created, realized, and owned by the community.

Applying Implementation Science Following the science of implementation process (Fixsen et al., 2005), adults and students can begin with the Exploration stage and think about what co-creation might look like; listen and learn about students' concerns and aspirations; allow students to identify what the challenges and assets are; identify what mindsets have to shift; begin facilitating discussions and trainings to support stakeholders' capacity building; and begin to establish systems and structures for designing a co-created educational environment. Then in the Pre-Implementation stage, students and adults begin co-creating curricula, schedules, services, supports, climate and culture practices, and evaluation of implementation and indicators of success. Throughout the Implementation and Sustainability stages, young people and adults co-lead, co-implement, and co-refine their efforts. Examples of this and the aforementioned con-

cepts of this in practice are provided in the remainder of this chapter.

Case Study and Testimonies

Peer Health Exchange: A Case Study Peer Health Exchange (PHE) is a youth-serving, peer health education program, founded by young people in 2003, which supports young people to empower themselves by making active, informed choices to benefit their physical and mental health and well-being. PHE recruits, selects, and trains college students to teach a trauma-informed, skills-based health curriculum to ninth graders in under-resourced high schools. PHE's skills-based health curricula are informed by 17 years of experience, evidence-based best practices, and findings from both internal and external evaluations of PHE's impact. PHE's current program is evidence-informed and not only influenced by the transtheoretical model (Prochaska et al., 2008), Life Course Health Development Model (Halfon & Forrest, 2018), and social-cognitive theory (Bandura, 1986) but also heavily centers on PYD frameworks (Zarrett & Lerner, 2008) in curriculum and programmatic activities. Based on a past independent evaluation from the American Institutes of Research, PHE had a statistically significant effect on mental health knowledge, skills, and help-seeking behavior (Brown et al., 2015). From that study, PHE students were more likely to: visit a health center and identify warning signs of poor mental health (Brown et al., 2015). PHE believes that providing youth development opportunities is critical to improving academic and health outcomes for young people. As such, PHE integrates the theory of PYD into its curricula and overall program by supporting, empowering, and educating young people instead of talking at them and hoping they will learn what adults think they should learn.

To promote the skill-building feature of PYD, PHE applies the five steps of experiential learning to health education workshops with young people. The steps include the following: (1) *experience*, which is where young people learn the skill and participate in hands-on activities; (2)

process, which is where young people discuss common experiences and share insights, (3) *generalize*, which is where young people relate the skills and experiences to real-life situations, and (4) *apply*, which is where young people use what they discover to change their behavior or attitude in a new or similar situation. Role-play is a learning strategy PHE often adopts to allow young people to carry out the aforementioned steps to experiential learning.

The latest research on social and emotional learning (SEL) and PYD demonstrates that teaching young people to make decisions, and developing their “positive personal competencies, social skills, and attitudes (i.e., asset development)” has positive effects on mental health, social skills, and academic achievement that persist for months and even years after intervention (Taylor et al., 2017). PHE reaches young people who live in under-resourced communities and face significant social, emotional, and mental health issues that prevent them from receiving better health care, achieving positive outcomes, and succeeding in both school and life. It is often the case with marginalized youth that their inability to surmount these barriers leads them to engage in risk-taking behaviors, which in turn contribute to poor academic performance. When school-based curricula like PHE are intentional about giving students the chance to develop core social and emotional competencies—such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making—increases are evident in enhanced attitudes and behaviors, reductions are evident in negative behaviors and emotional distress, and improved social and interpersonal interactions are evident along with enhanced academic achievement (Durlak et al., 2011; Dymnicki et al., 2012). There has been growing support for considering school-based SEL programs as an ideal public health connection to education, because of their focus on improving the well-being for the general population of students and not just those at the greatest risk of dropping out (Greenberg et al., 2017). PHE’s intention for and attention toward building students’ agency around health stems from the recognition that

strategies that intentionally focus on the asset development of young people have tremendous potential to address inequities that plague both the health and education fields.

Young People as Co-creators with Peer Health Exchange PHE has begun to consider ways to promote the asset development of young people outside of classroom walls through direct virtual engagement with them. PHE has recognized that an important driver of programmatic impact is centering the voices of young people and, thus, has revised curricula, content, and activities based on student feedback. Up until recently, PHE’s engagement with young people could be placed between rungs 4 and 5 of Hart’s Ladder of Youth Engagement (Hart, 1997), in which young people were consulted to inform major curricula enhancements and/or informed about major programmatic impact results. School closures that resulted from the COVID-19 global pandemic brought about an unprecedented program implementation challenge for PHE. For the first time in its 17-year history, PHE halted its core in-person programming and was forced to create virtual and nonschool-based programmatic offerings to reach young people. PHE seized this opportunity to co-develop virtual solutions with the very young people it reaches.

PHE exists because millions of young people in this country, especially those living in under-resourced communities, lack appropriate health knowledge, skills, and access to health resources. The COVID-19 pandemic has exacerbated the long-standing systemic health and social inequities that have put low-income communities and communities of color at an increased risk of experiencing physical and mental health challenges and not receiving adequate access to care. PHE understood the pressing need to create innovative digital solutions for young people *with* the young people from those communities.

As such, PHE recruited and hired eight young people from urban cities across the country to co-design a digital solution that could connect young people to mental health resources and care. These young people care deeply about

health, especially mental health, and recognize the barriers that prevent young people like themselves from accessing mental and emotional health supports and resources (e.g., stigma, knowledge gaps, and lack of access) (Radez et al., 2021). They worked alongside PHE staff and staff from Late Checkout, a digital solutions firm, for six weeks to co-develop a prototype. In order to underscore the value of the young people's voices, PHE set the expectation very early on with them that Late Checkout was there to build a prototype based solely on their collective input and feedback. The young people were given the power to accept or reject the prototype that Late Checkout presented to them at the end of the six-week co-creation period.

The features that the young people required for the mental health digital solution aligned strongly with the PYD features. For example, the young people wanted a solution that gave them agency to access their own mental health care, professional support, and resources without the involvement of adults. They believed that the most impactful mental health digital solution is one that would allow them to connect with their peers who share similar identities and mental health challenges and experiences. The young people's request for connection ties directly into the *connection* aspect of PYD (Zarrett & Lerner, 2008), which emphasizes creating positive bonds among young people and between them and social institutions. Furthermore, the youth co-creators' demand for having agency over and access to their own mental health care reinforces the *confidence* and *competence* aspects of PYD (Zarrett & Lerner, 2008), such that they were asserting and recognizing a belief in young people's capacity and abilities to advocate for their own mental health care.

Social and Emotional Benefits of Co-creation: Young People's Testimony The youth co-creators participated in a debriefing session where they reflected together on their co-creation experience with adults. The young people noted that working with adults to create a digital solution to connect young people to mental health resources was meaningful to them because

the adults made them feel comfortable in the space and valued as contributors. The adult co-creators never shut down the young people's opinions and very clearly centered their design ideas, which were clear signals to the young people that their voices mattered. One of the youth co-creators shared a recount of her participation:

Working with adults for the PHE digital solution co-creation was a meaningful experience for youth because for the most part we all felt comfortable in the space, being able to share our ideas and thoughts without being shut down by the adults. We knew that our voices mattered in the space because the adults made sure to listen to us and made sure our voices were centered in the design.

The young people reflected that they appreciated the adult co-creators' own awareness of *adultism*¹ and saw the intentional efforts the adult co-creators made to mitigate it in the co-design space. For example, the adults relinquished power to the youth by having them decide on the design and flow of co-creation sessions. The young people dictated when and if they wanted to engage adults in their idea-generation sessions. Furthermore, the youth co-creators understood there would be no backlash to any disagreements they had with the adult co-creators. Lastly, the young people were given explicit decision-making authority to approve or reject the prototype that was created by the Late Checkout developers.

Student Reflections Using Typology Tools The young people rated this co-creation experience with PHE as falling between rungs 5 and 7 on Hart's Ladder. They recognized that their engagement and power varied at different stages of the co-creation experience. For example, the youth co-creators noted their understanding that the overall nature of the project was best situated in rung 5 of Hart's Ladder, as

¹Adultism is described as the oppression experienced by young people by adults and adult-created, adult-centered systems. It relates to the socioeconomic and sociocultural disparities and power relations pervasive to adult-child relations (LeFrançois, 2014).

the project was generated by PHE staff, but consulted and informed by young people. However, they noted areas of the co-design process where their engagement was more reflective of rungs 6 and 7 of Hart's Ladder. For example, having approval power of the final prototype and control over the modes of engagement were some notable examples on which the young people reflected.

The youth co-creators reported receiving many social and emotional benefits from their experience. Given the very nature of the co-creation experience, young people were able to apply core SEL skills like reflection, assertive communication, thoughtful decision-making, and advocacy. They drew on their own personal reflections regarding their own mental health needs to provide recommendations for the creation of the prototype. Given that their insights and recommendations guided Late Checkout's creative direction, the young people felt that this experience allowed them to practice and provide assertive communication to the adult collaborators. As a collective, the young people made decisions about which features to showcase on the digital solution and were given an explicit decision-making role in approving the final prototype. Lastly, the youth co-creators were given the space and license to work collectively as advocates for more responsive and youth-centered mental health resources to show up for them and their peers.

Recommendations and Conclusion

Recommendations for Creating Effective Adult-Student Co-creation Spaces

Students Recommendations emerged from the qualitative data from young people's experiences outlined in the case study above, as well as their experiences in related efforts about how adults can effectively work with young people. Student recommendations include:

- Adults should acknowledge and affirm that adultism is real at the onset of working with young people.
- Adults should behave in direct and intentional ways to address adultism.
 - Be explicit about how the adults will share power with or relinquish power to young people at the very beginning of the co-creation experience.
 - Create a culture that encourages and celebrates young people's unique assets.
 - Allow young people to dictate how, when, and if they want to bring adults into their reflection or creation processes.
- Adults should build authentic relationships with student co-creators.
 - Focus on building trust with student co-creators.
 - Create opportunities for young people to provide feedback to adults regarding adultism.
 - Do more active listening.
- Adults should show gratitude toward student co-creators and affirm young people's contributions in authentic ways.
- Adults should become co-conspirators with young people when it comes to addressing adultism more systemically.
 - Challenge spaces where adultism culture is strong.
 - Showcase the benefits adults gain from co-creating with young people.

Adults The following are recommendations by adults working with young people and are grounded in the research outlined throughout this chapter. Adult recommendations include:

- When embarking on this process, follow the stages of implementation.
 - Exploration: With young people, explore what co-creation might look like by listening to and learning about students' concerns and aspirations and allowing students to identify their challenges and assets; co-

identify who has what expertise (e.g., young people have expertise in social media; adults have expertise in legal mandates and district policies); co-identify what mindsets have to shift in order to influence policies and practices; co-facilitate discussions and trainings to support stakeholders' capacity building; and begin to co-establish systems and structures for designing a co-created educational environment.

- Pre-Implementation: Co-create curricula, schedules, services, supports, and climate and cultural practices. Co-determine evaluation practices and indicators of success.
- Implementation and Sustainability: Co-lead, co-implement, and co-refine efforts.
- Adopt an adaptive leadership approach. Allow for community-driven (student-driven), co-created systems, supports, practices, and policies to be identified, created, realized, and owned by the community.
- Apply an equity lens, centering on identity.
 - Look deeply at the positioning of staff, students, and families in the world and consider how these identities influence our perspectives, actions, and opportunities.

See, acknowledge, and affirm young people for their identities; thus, centering the identities of young people in all interactions. Ask them about their experiences of their interactions with adults and whether they feel seen and affirmed. Acknowledge and address personal and institutional bias, oppression, and injustice.

Teach students to see, name, and challenge oppressive and unjust systems. Create safe spaces for students to name and challenge bias, oppression, and injustice.
 - Examine and address issues of power and control.

Ask: Whose needs are being served? Do our policies and practices empower those being served or those providing the service (e.g., is emphasis being

placed on control rather than the comfort of those being served)?

Shift mindsets from power *over* to power *with*; from buy-in or adoption to engagement and partnership.

Create opportunities to power *with* young people, rather than power *over* them. Create opportunities for students to step into their authentic power and allow them to be co-determinants and co-creators of their destinies.

Get comfortable with the discomfort, embrace ambiguity, and let go of the need to control. Begin to understand each other's needs and hopes and to re-imagine and re-design, in partnership, a co-desired educational experience.

- Apply an asset frame.
 - Rather than focusing on needs, deficits, and problem-solving, focus on strengths, assets, aspirations, and solution-finding.
 - Avoid pathologizing students and their behaviors; rather, focus on shifting and improving adult behaviors, student-adult relationships, and educational environments.
- Create a culture of inquiry, reflection, bi-directional feedback, and failing forward.
 - Use typology tools to practice consistent inquiry and reflection in order to co-create and co-refine efforts and improve relationships, policies, and practices.

Be clear and upfront about what the level of engagement is. Not all efforts or interactions will be student-led, and that is normal. However, be transparent about the level of engagement and take accountability.
 - Accept failure and see it as an opportunity to grow and learn forward.
 - Be intentional about soliciting formal and informal feedback from students. Consider and value student and adult feedback equally.
 - Show up with intention, presence, authenticity, and consistency. Address adultism with young people and create a safe space

for them to name it when they see it. Continuously monitor the power dynamics between adults and young people and acknowledge and address them when needed.

Conclusion

Overall, education needs an improved way of doing and being—one that recognizes young people's capabilities, leverages their knowledge and wisdom, and utilizes their contributions. It means that all stakeholders value collaboration, meaningfully engage young people in bi-directional ways of work, and cultivate connectedness and belonging, which benefits adults and young people alike. When young people experience school as a place that acknowledges, affirms, and celebrates their cultures and allows their agency, they have the investment necessary to be engaged and involved in their education. When we account for the complex ways both historical and current systemic factors like race, SES, language, and ability status impact the kind of education students experience and how they are involved in decision-making; when we teach and allow young people to name and challenge these biased and oppressive systems; and when we begin to shift the power dynamic from power *over* to power *with*, we narrow the achievement gap and create more ethical, equitable, and just systems. When young people's experiences, cultures, hopes, and aspirations are valued and supported, they develop empathy, are more engaged and motivated, and subsequently thrive. Altogether, establishing systems and structures that are grounded in authentic adult-student partnerships and across cultures is the paradigm shift necessary not just for school mental health, but more broadly for educational policy and leadership.

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Interprofessional Social Capital in Expanded School Mental Health

14

Naorah C. Rimkunas and Elizabeth A. Mellin

Emotional and behavioral disabilities have surpassed physical impairments among youth, impacting academic and other outcomes for students (Halfon et al., 2012). The immediate and longer-term mental health impacts of the COVID-19 global pandemic for a generation of youth (Golberstein et al., 2020) will also likely have substantial effects on academic outcomes. In response to these problems, mental health professionals, policy makers, educators, and other community stakeholders have been pressed to find ways to provide necessary services to youth in school settings (Warren, 2005). Expanded school mental health (ESMH) programs are one strategy for addressing increasing emotional and behavioral issues in schools. Located in schools and aiming to create a “single point of access” to youth in need of services (Weist, 1997, p. 323), “expanded” means the programs are built on the existing foundation of services provided by school counselors, psychologists, social workers, nurses, and special educators, augmenting and strengthening their work through interprofessional collaboration (Weist et al., 2002). Here we define interprofessional collaboration as a process that occurs when interdependent and committed individuals, with varying access to

resources and power, share a common goal to create and implement strategies to solve a problem.

ESMH is dependent upon collaborative work between school and community-based professionals (Weist et al., 2006). In ESMH, interprofessional teams work with youth and families to deliver prevention, assessment, early intervention, and treatment (Weist et al., 2012). The relationships among school and community professionals along with youth and families are a critical component of ESMH, and the success of service delivery can depend upon how well they are integrated with each other and into the school setting (Weist et al., 2001). To achieve this, collaboration must occur both horizontally (between school and community-based professionals) and vertically (inclusive of families and youth, and senior-level professionals). As such, interprofessional collaboration in ESMH is inherently complex and multidimensional.

Given its promise, interprofessional collaboration is on the rise across fields, yet there is little research to support its effectiveness (Lemieux-Charles & McGuire, 2006; Trach, 2012); this is also true for ESMH (Mellin, 2009). Contributing to this are discrepancies in terminology and lack of consistent models to inform practice and research exploring the assumed relationships between collaboration and outcomes (Mellin & Weist, 2011). At the same time, the rhetoric that promotes interprofessional collaboration often ignores guidance

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needed to support this practice strategy or even evidence of its effectiveness, often further taxing human resources that are already overburdened across school, family, and community systems (Varda & Sprong, 2020). Using a consistent model will likely promote deeper theory building about whether and how collaboration impacts a variety of outcomes in ESMH and produce guidance that can help support practice.

Theory is critical to research and practice in ESMH for three reasons. First, theories help to build rational arguments by logically connecting concepts together (Reeves & Hean, 2013), such as why leveraging resources across professions may be a reasonable way to supplement mental health services for students. Second, theories help articulate complex phenomena (Reeves & Hean, 2013), such as the assumed link between interprofessional collaboration and student achievement. Lastly, theories—especially ones that are data driven—can potentially be operationalized and applied to guide practice (Reeves & Hean, 2013). This creates a feedback loop between research and practice, helping practitioners understand the reasons for, and attributes of, interprofessional collaboration while also informing, proving, and disproving theory (Hean et al., 2012).

The critical and timely nature of collaboration in ESMH, however, can result in resistance to connect theory to practice among professionals who may identify as pragmatic and action-oriented rather than academic. Interprofessional practice without theoretical underpinning, however, runs the risk of being superficial and ineffective (Reeves & Hean, 2013). The purpose of this chapter, therefore, is to synthesize and integrate definitions of interprofessional collaboration commonly used in ESMH programs and suggest a model to guide theory-building, research, and practice.

Interprofessional Collaboration as Interprofessional Social Capital

Interprofessional collaborative practices have long been faulted for being under-theorized (Reeves & Hean, 2013). In expanded school

mental health programs where much is at stake (e.g., student outcomes, funding), tying theory to practice can help researchers and practitioners develop a strong rationale for both program design and intervention planning. Social capital theory is useful for considering collaboration in ESMH because it features notions of trust, collective goals, and person-to-person ties—framing relationships in terms of social networks, community development, civic capacity, and systems of power (Warren, 2005)—all elements that correspond to leading interprofessional collaboration models. Social capital can be described as the “social glue” that engenders the feeling of belonging (Catts & Ozga, 2005), and social programs and policies aimed at improving the lives of youth draw on elements of social capital theory because they underscore the need for, and strength of, relationships and social networks (Forbes, 2009). Social capital theory can help frame problems common to public school systems, such as lack of funding, in terms of resource sharing across systems (Forbes, 2009; Warren, 2005). Trust, civic engagement, and social norms of reciprocity are cornerstones of social capital, and when robust, contribute to the greater good of the community and to collaborative efforts (Häuberer, 2011). Shared language between the terms and theory sharpens the conceptualization of interprofessional collaboration.

Forbes (2009) explicitly uses social capital theory to frame interprofessional collaboration and argues that interprofessional collaboration is a form of social capital called interprofessional social capital. This conceptual framework is presented as a matrix with one axis of the components of social capital—networks, norms, and trust—and the other axis of three types of social capital—bonding, bridging, and linking (Forbes, 2009; Forbes & McCartney, 2010; Halpern, 2005). These concepts are mapped at macro (policy and governance), meso (practice; operation of power) and micro (practitioner; knowledge, skills) levels across children’s services (Forbes, 2009; Forbes & McCartney, 2010; Halpern, 2005). Using this model, a professional (or organization) can reflect

on and plot their engagement in collaboration at multiple levels. The intersection of micro-level, bonding, and networks, for example, is a professional who identifies strongly with their professional training, operates within those knowledge constructs, and collaborates exclusively with others who are like them. A relationship like this might be a new mental health professional working in a school who only seeks guidance from their home agency or supervisor. In contrast, the intersection of micro-level, linking, and trust is a professional who supports and is supported by leadership from other professions, such as a mental health professional working in a school who builds a strong relationship with the school principal, who in turn acts as an advocate for mental health.

Dimensions and Components of Social Capital

Social capital is composed of networks; norms, values, and expectancies; and sanctions, which are sometimes referred to as trust (Halpern, 2005). The *network* can be understood as the local community. In a school, this is everyone who works at, attends, and visits the school, including families. Some members of the community are on campus more than others, such as teachers and school staff. The network can also be understood in terms of proximity, such as classrooms located near one another versus those located in different parts of campus. *Norms, values, and expectancies* are the underlying rules, written and unwritten, that shape how members of a community behave, treat one another, and fulfill obligations (Halpern, 2005). These are shaped by the context or specific setting, which, in the case of ESMH, reflect program design, professional training and background, funding, attitudes, program, and implementation. *Sanctions*, or trust, are the punishments and rewards for breaking or maintaining social norms (Halpern, 2005), such as immigrant families who are marginalized from school activities because of language barriers. Trust may also be formed when the school connects the family with translators and language classes.

Social capital theory can also help to explain the *vertically* and *horizontally* complex relationships that can occur in collaboration (Hausman et al., 2005). This is especially true for ESMH programs that aspire to leverage resources (horizontal connections), for example, between a school district and a local health center, and provide services for people who need them (vertical connections), such as between a school social worker and a family. Szreter and Woolcock (2004) and Forbes (2009) assert that the “three-dimensional” characteristics of social capital—bonding, bridging, and linking—offer the sharpest conceptual framework when looking at social programs (p. 656).

Bonding social capital (homogeneous connection) describes social connections within groups of people who share a social identity leading to strong organizational identity, but at the same time, restricting knowledge and resource sharing (Forbes, 2009; Putnam, 1995; Granovetter, 1973). In schools, for example, teachers may prefer to take their lunch breaks with other teachers rather than with the school counselor, limiting informal knowledge exchange about everyday classroom affairs. Bonding social capital can not only be valuable in the development of professional identity but can also impede collaboration and spur turf wars (Mellin & Weist, 2011). *Bridging social capital* (heterogeneous connection) happens between people who know they are not alike, yet develop relationships of respect and support (Szreter & Woolcock, 2004). These horizontal connections are especially relevant for interprofessional collaboration in ESMH because they advance new ways of thinking, generate knowledge, increase resources, and connect across systems (Mellin & Weist, 2011). *Linking social capital* (also heterogeneous connection) is characterized by connections between individuals and groups of varying resources and status positions that lead to new types of relationships across differing systems of power (Forbes, 2009; Szreter & Woolcock, 2004). These vertical connections happen through direct service with youth and families in need who often have

different status positions (e.g., teacher and student) in schools. They are the “face-to-face” work of ESMH programs that directly impact the welfare of youth (Szreter & Woolcock, 2004, p. 655). They also happen between professionals who work at different levels, such as when policy makers work with school counselors to shape guidelines for service delivery. Connections at both the bridging and linking levels may be what Granovetter (1973) referred to as critical “weak ties” meaning that information and resources are able to flow with less restriction than in strongly bonded relationships (p. 1360). Applying social capital theory to interprofessional collaboration results in a conceptual framework capable of capturing and analyzing professional relationships that shift and reform at all levels including policy, governance, professional practice, and professional identity (Forbes, 2011). As such, social capital theory is a useful starting place for framing and deeper theory-building about the role of interprofessional collaboration in ESMH.

Defining Interprofessional Collaboration

In expanded school mental health (ESMH) programs, interprofessional teams aim to work with youth and families to deliver prevention, assessment, early intervention, and treatment (Weist et al., 2012). Similar to social capital, the resources (e.g., knowledge, experience) inherent in these relationships are assumed to address needs and improve student-level outcomes. Interprofessional collaboration, as it turns out, is at the heart of ESMH and critical to making gains in children’s mental health and learning, yet difficult to achieve in practice (Mellin & Weist, 2011). Some of this challenge arises from confusion about what the term interprofessional collaboration means and how it differs from related concepts such as coordination and cooperation. Before looking at the major models, it is informative to briefly consider the words interprofessional and collaboration individually.

Interprofessional or Interdisciplinary

First, it is important to clarify and differentiate the term interprofessional from the related term interdisciplinary. Interprofessional and interdisciplinary are often conflated or used interchangeably in collaboration literature (D’Amour et al., 2005; Mu & Royeen, 2004) or in iterations aiming at the same meaning, such as “interdisciplinary practice” (Ewashen et al., 2013, p. 334). An important distinction between the two terms, however, is that interdisciplinarity is concerned with knowledge and interprofessionality with practice (D’Amour & Oandasan, 2005). The terms originate from the concurrent development of disciplines and their professions, each owning a knowledge base that subsequently impacts service delivery. Essentially, interprofessional collaboration is interdisciplinarity in practice.

Collaboration among scholars and professionals from different disciplinary backgrounds (or bridging social capital) has been described on a continuum that stretches from multidisciplinary collaboration on one end to transdisciplinary collaboration on the other, with interdisciplinary collaboration somewhere in the middle (D’Amour et al., 2005). Multidisciplinary collaboration occurs when professionals from similar backgrounds work together on a mutual project where concurrent disciplines are additive to the project rather than integrative (Choi & Pak, 2006). Interdisciplinary collaboration is characterized by the quality of integration, where knowledge and expertise remain distinct between disciplines. Through the practice of shared decision-making, however, a common goal can be reached (D’Amour et al., 2005) and results in novel ways of working together that blurs boundaries between professions without collapsing or losing them (Choi & Pak, 2006). Transdisciplinary collaboration happens when professional roles are expanded to include more than one specialization or when disciplinary boundaries are crossed and new knowledge is created through the exchange and transformation of knowledge (Choi & Pak, 2006). Some problems, Klein (1990) points out, may be better addressed through a multidisciplinary, interdisciplinary, or transdisciplinary

approach depending upon the complexity and scope of the issue and this is where further research is needed in ESMH.

In an effort to clarify terms, scholars and practitioners alike are increasingly sharpening their use of terms to qualify collaboration in school-based programs to more accurately reflect the setting. This is illustrated by Bronstein, whose widely cited model for interdisciplinary collaboration has evolved to adopt the term interprofessional collaboration in subsequent related research when indicated (see Bronstein, 2002, 2003; Bronstein et al., 2018; Mellin et al., 2010). Given that many collaborating professionals work in locations dominated by a professional group (i.e., social workers in schools) with different backgrounds and training (Bronstein et al., 2018), the term interprofessional, in contrast to interdisciplinary, more accurately describes professional-to-professional interaction (Mu & Royeen, 2004).

Collaboration, Coordination, and Cooperation

Collaboration in expanded school mental health (ESMH) involves participants from different professional backgrounds (bridging social capital) working together to deliver youth services. A teacher, for example, may identify a student in need of help and then work with a school counselor and school psychologist for further assessment and treatment planning. What is referred to as collaboration in one program, however, may be called any one of several terms such as teamwork, community collaboration, collective impact, service integration, or partnership in another program (Claiborne & Lawson, 2005). Thus, like the term interprofessional, the term collaboration needs clarification.

Collaboration is often used interchangeably with the two related terms cooperation and coordination (Keast et al., 2007) and has become somewhat of a catchall to describe both inter-organizational and interpersonal relationships (Lawson, 2016; Gajda, 2004). Other terms that have been conflated with collaboration are strate-

gic alliance (Gajda, 2004), coalition (Marek et al., 2015), collective action (D'Amour et al., 2008), partnership (Steen & Noguera, 2010), and team or teamwork (Kvarnström, 2008). Further, the constructs and frameworks often cited in collaboration research fail to differentiate between the determinants, processes, and results (D'Amour et al., 2005), resulting in oversimplified conceptualizations. When coupled with sloppy use, the term has lost some meaning (Lawson, 2016). Recognizing this problem, scholars have proposed definitions in an attempt to capture the essence of a complex concept.

By conceptualizing collaboration with its related terms, Keast et al. (2007) provide an expanded explanation of collaboration as part of a continuum ranging from cooperation to coordination to collaboration. Their conceptual model describes collaboration as happening when a group of stakeholders deliberately form a relationship with a common mission to solve a complex problem. Collaborative relationships are characterized by interdependency, strong links, shared resources, aligned activities, and commitment to a time-intensive and long-term process. Cooperative relationships are the most loosely organized, lowest risk, and in turn, may yield only moderate rewards. Coordination is a more organized and formal approach where several stakeholders might plan a project together, share information, and maximize resources while remaining organizationally autonomous. Collaboration is the most intensive and connected of the three relationship types, requiring long-term commitment, highly integrated and interdependent relationships, and densely linked participants (Keast et al., 2007). These relationships (which could reflect bonding, bridging, or linking social capital) accordingly carry higher risk with the potential of higher rewards.

The *high-risk, high-reward* aspect of this definition of collaboration is consistent with the formidable challenges of ESMH. Collaborators in this field, for example, have reported differences in terminology and professional territory (Weist et al., 2012); time constraints due to the chaotic, crisis-driven nature of schools (Langley et al., 2010); and compounding factors such as

limited workspace, unique environmental factors, heavy caseloads, and burnout (Schiele et al., 2014; Weist et al., 2012). By including both interpersonal and structural elements in their conception of collaboration such as trust, interdependency, and time commitment, Keast et al. (2007) have provided a comprehensive lens that is a strong fit to examine interprofessional collaboration in ESMH. Their conceptual framework, along with the continuum of interprofessionalism, and social capital theory inform this examination of models of interprofessional collaboration in ESMH.

Models of Interprofessional Collaboration

Defining interprofessional collaboration only partly illustrates how it functions in a real-world setting. Interprofessional collaboration occurs within a context, such as ESMH, making it subject to external influences such as lack of time or space to meet (Weist et al., 2012). Two prevailing models used for interprofessional collaboration in ESMH attempt to capture its embedded complexities. Bronstein's (2003) model of interdisciplinary collaboration is presented in two parts: (1) the five characteristics of successful collaboration: *interdependence, newly created professional activities, flexibility, collective ownership of goals, and reflection on process*; and (2) the influences on collaboration: *professional role, structural characteristics, personal characteristics, and history of collaboration* (Bronstein, 2003). Mellin and Weist (2011) propose a tripartite model that describes types of, influences on, and perceived benefits of interprofessional collaboration in ESMH in terms of three dimensions of social capital—bonding, bridging, and linking. Types are collaboration with *community mental health professionals, school colleagues, and families*. Influences include *outreach and approach by mental health professionals, school administrator support, interpersonal processes, and school outreach to communities and families*. Perceived benefits are *improved family-school relationships, increased mental health program-*

ming, and improved access for students and families.

Each model contributes useful conceptual frameworks to examine interprofessional collaboration in ESMH, and have important strengths and limitations. One strength is they each attend to the interpersonal process that is central to interprofessional collaboration. Expanded school mental health programs operate in demanding school environments that can challenge interpersonal processes, such as limited time to meet, conflicts of professional territory, and marginalized agendas (Weist et al., 2012). Bronstein (2003) and Mellin and Weist (2011) also try to capture how context and structure impact collaboration, which is important for ESMH programs that are often challenged by limited resources and space to work (Schiele et al., 2014; Weist et al., 2012) or lack of administrator support (Mellin & Weist, 2011). Both models also incorporate important factors such as how administrator support or specific outreach to communities and families may influence collaboration (Bronstein, 2003; Mellin & Weist, 2011). A significant strength of Bronstein's (2003) model is the conceptualization of collaboration on a continuum of different levels of collaboration. Bronstein's related Index of Interdisciplinary Collaboration (IIC) measures collaboration by examining multiple practitioner perceptions of collaboration such as interdependence and shared decision-making (IIC; Bronstein, 2002).

A future model, however, should explicitly distinguish cooperation, coordination, and collaboration (Keast et al., 2007) in order to clarify the multiple ways in which shared practice occurs in ESMH. A program that mostly provides referrals, for example, may be acting on a cooperative level, whereas more highly structured programs are likely operating at coordination or collaboration levels (Lockhart, 2017a). By grouping the different versions of ESMH together as "collaboration" rather than differentiating them, it becomes difficult to determine what kinds of relationships are getting the job done. Further, the assumption is that collaboration is the appropriate relationship; however, it is possible that less resource-intensive relationships are enough.

Models that distinguish cooperation, coordination, and collaboration will help achieve this.

An important strength of these models is that they are each underpinned by theoretical frameworks. Mellin and Weist (2011) used social capital theory and Bronstein (2003) used a multidisciplinary theory of collaboration, services integration, role theory, and ecological systems theory. Anchoring interprofessional collaboration to a theory helps to clarify the concept in three ways. First, tying a complex concept to theory can help explain the phenomenon that is difficult to describe and provide a framework for interpretation (Reeves & Hean, 2013). Second, a well-articulated framework can help capture both the structural and process dimensions of interprofessional collaboration (D'Amour et al., 2005) that can be oversimplified in superficial models. And third, more data-driven theories that can be operationalized and tested will help to bridge the gap between theory and practice (Reeves & Hean, 2013).

An important limitation is that where both Bronstein's (2003) and Mellin and Weist's (2011) models emphasize the inclusion of family perspectives, which is a strength, they ultimately rely on practitioner perceptions to evaluate collaboration with families. Mellin and Weist's Expanded School Mental Health Collaboration Instrument (ESMHCI), for example, explores practitioner perceptions of how clients may benefit from collaboration (ESMHCI [SV], Mellin et al., 2014; ESMHCI [CV], Mellin et al., 2016). Likewise, the IIC explores practitioner perceptions of how information is shared with families and whether families participate in processes and planning (IIC; Bronstein, 2002). Future models and related measures need to incorporate direct measures of client (student and family) collaborative experiences (or linking social capital) in ESMH. Both models make important contributions for use in ESMH; however, their lack of precision in terms of defining and differentiating collaboration from related concepts, and exclusion of the objective experiences of youth and families, limits the scope of these models for use in practice and research in ESMH.

Proposed Model of Interprofessional Collaboration in ESMH

Developing a succinct yet simplified definition and companion model of interprofessional collaboration in ESMH presents a formidable challenge. When studied separately, the terms interprofessional and collaboration describe two concepts that are best understood on a continuum of their related terms. Though different in use and meaning, their respective definitions do overlap in terms of integration (Mellin, 2009; D'Amour et al., 2005), interdependence (Keast et al., 2007), blurred boundaries (Choi & Pak, 2006), synergism (Keast et al., 2007), shared decision-making (Mellin, 2009; D'Amour et al., 2005), and purposeful commitment (Keast et al., 2007). When joined, the conceptual complexity of interprofessional collaboration is evident, shedding light on why there are few definitions and models to guide practice and research.

Moving forward, ESMH scholars must be stronger in language and concept to define the key elements of collaboration. Grounding a definition and model in social capital theory adds vertical and horizontal dimensions that expand the meaning beyond interprofessional practice to include relationships with students and their families. Incorporating the components of network, norms, and trust augments existing models to include the interpersonal processes, structure, and school context while also attending to features like proximity and network density. Proximity, for example, describes closeness, which can be physical distance, such as whether ESMH professionals have offices near one another; or frequency, as in how often collaborators interact with one another (Daly & Finnigan, 2010). A limitation of social capital, however, is that although it describes many of the processes that occur in interprofessional collaboration, it does not differentiate between levels of commitment, as illustrated by Keast et al. (2007) continuum of cooperation, coordination, and collaboration.

Based on the available conceptual and research literature, interprofessional collaboration in

ESMH can be described as when *interdependent, committed individuals (with varying access to resources and power) share a common goal to create and implement strategies to promote mental health in schools.* This definition attempts to capture the multiple processes that occur in inter-professional collaboration in ESMH from a social capital perspective. By incorporating the power into the definition, a variety of relationships (as between middle and senior-level professionals or professionals and family members) are included.

The companion model to this definition presents interprofessional collaboration as social capital in ESMH (see Fig. 14.1). The model builds on the important interpersonal processes, structural components, and attention to context captured in Bronstein’s (2003) and Mellin and Weist’s (2011) models of interprofessional collaboration. Based on Forbes and McCartney’s (2010) conceptual map of meso-level (practice

level) interprofessional social capital and Halpern’s (2005) model of meso-level social capital, the proposed model also incorporates Keast et al.’s (2007) conceptualization of collaboration.

The model is organized first as a continuum of intensity of relationship, ranging from the cooperation (low commitment; low risk; most informal) to coordination (medium commitment; medium risk; more formalized), to collaboration (highest commitment; highest risk; most formal). In ESMH, professionals may operate anywhere along this continuum depending on points such as how long the program has been operating or how formalized the procedures are. Including the relationship intensity helps expand the assertion that time (or lack of time) is part of the structural characteristics (Bronstein, 2003) and school environment and practices (Mellin & Weist, 2011) that influence collaboration. Further, the continuum of cooperation, coordination, and col-

←-----→									
COOPERATION: Dialogue & sharing; develop support base			COORDINATION: Align resources to meet goals			COLLABORATION: Creation ; stimulate system change			
<ul style="list-style-type: none"> ● Low commitment ● Low risk/modelest reward ● Informal relationships ● Membership fluidity ● Short-term time to establish 			<ul style="list-style-type: none"> ● Medium commitment ● Increase in bene fits and rewards ● Informal/formal relationships ● Some membership stability ● Medium - term time to establish 			<ul style="list-style-type: none"> ● High commitment ● High risk/high reward ● Formalized relationships ● Stable membership ● Longer - term time to establish 			
BONDING	BRIDGING	LINKING	BONDING	BRIDGING	LINKING	BONDING	BRIDGING	LINKING	
TRUST	Autonomous	Autonomous	Autonomous	Intrdependent	Semi-autonomous	Semi-autonomous	Intrdependent	Intrdependent	Intrdependent
NORMS	Exclusive power, practices & processes; traditional roles; low within-group learning; loose support for within-group integration	Loosely organized power; rigid roles; “parallel; practice;” low grasp of other practices & processes; low co-learning; low buy-in	Loosely organized power; rigid roles;& identities; defined hierarchies; low grasp of other practices, processes & hierarchies; low co-learning; low buy-in	More formal, exclusive power; traditional roles; exclusive group practices, processes & learning; structure supports within-group links	More formal power sharing; “joint effort”; less rigid roles; more grasp of other practices & processes; some co-learning; more support for integration; more buy-in	Organized power sharing across hierarchies; less rigid roles & hierarchies; awareness of other practices & processes; some co-learning; support for integration; more buy-in	Integrated, within-group power; traditional roles; exclusive practices, processes & learning; within-group integration encouraged	Integrated power; role flexibility; integrated practices & processes; co-learning is fostered; blurred boundaries encouraged; strong buy-in	Integrated power across hieararchies; role & hierarchical flexibility; integrated practices, processes & learning; blurred boundaries encouraged; strong buy-in
NETWORK	Homogeneous, loosely-knit; low proximity	Heterogeneous loosely-knit; low proximity	Heterogeneous, loosely-knit; low proximity	Heterogeneous, loosely-knit; increased links & Proximity	Heterogeneous, increased links & proximity	Heterogeneous, increased links & proximity	Homogeneous, tightly-knit; close proximity	Heterogeneous, closer links proximity	Heterogeneous, closer links & proximity

Fig. 14.1 Interprofessional Collaboration in ESMH can be described as when interdependent, committed individuals (with varying access to resources and power) share a

common goal to create and implement strategies to promote mental health in schools

laboration expands Bronstein's (2002, 2003) conceptualization of levels of collaboration.

Each of these relationships can occur as different types: bonding, bridging, or linking, and are comprised of trust (or sanctions), norms, and network components. The bonding, bridging, and linking types describe how social capital can remain contained within a group, form between groups of similar standing and between groups from different hierarchical standing. This model builds on Mellin and Weist's (2011) use of bonding, bridging, and linking to describe the different types of collaboration in ESMH and applies it across the continuum of collaboration, and results in more accurate depictions of the ways social capital operates across hierarchies.

The trust, norms, and network levels expand on the interpersonal processes, context, and setting components of social capital in ESMH. This part of the model builds on Bronstein's (2003) components of interdependence and role flexibility and pulls in influences from Mellin and Weist (2011), such as buy-in among school professionals and administrator support. Trust, in this conceptualization, is described as autonomous, semi-autonomous, and interdependent, reflecting the different intensities of trust needed to maintain a relationship. This is related to the risk/reward component of cooperation, coordination, and collaboration; less trust is needed to support fragmented relationships, and likewise, more trust is needed to support integration. The network component of the model helps to bind social capital within a setting, by attribute—such as working at a school, professional training, or participation in an ESMH program. Likewise, the network component can bind a group by proximity, such as physical distance between offices or the amount of time per week spent working in ESMH. The network component also describes homogeneous and heterogeneous relationships, which can then be categorized as horizontal or vertical connections.

This model of interprofessional collaboration ESMH provides flexibility and conceptual clarity for exploring the multiple ways schools, communities, and families interact to promote mental health. Although interprofessional collaboration

is the foundation of ESMH, a lack of conceptual clarity and tools for evaluation and research have limited understanding of the associated impacts, especially whether and how it impacts student-level outcomes. In the following section, social network analysis is introduced as a useful method for evaluation and research of interprofessional collaboration in ESMH that may help support practice.

Social Network Analysis as a Tool for Measuring Interprofessional Social Capital

To bridge the gap between theory and practice, researchers are increasingly using social network analysis (SNA) to explore and measure interprofessional collaboration (Lockhart, 2017a, b, c). SNA and social capital theory share the notion that relationships, facilitated by reciprocal trust and cooperation, are a vector for the exchange of resources, knowledge, and expertise (Putnam, 1995; Coleman, 1988; Prell, 2012). These relationships can occur between people, groups, institutions, and even systems, and SNA can be utilized to examine the patterns of exchange between these entities (Lockhart, 2017a). In turn, patterns of exchange can be examined for similarity, such as demographic attributes; flow of information; beliefs; familial relationships; and nature of the relationship, such as helping, harming, or advising (Borgatti & Ofem, 2010).

In practice, identifying and understanding these patterns can inform the practice of ESMH. An interdisciplinary team, for example, may consist of an administrator, social worker, and school nurse—practitioners each with different training and expertise who share a common goal to support students and families. The potential for practitioners, researchers, and other professionals to achieve and accomplish more through sharing knowledge and resources rather than if they work in isolation is understood (Mellin, 2009). Yet, in practice, collaboration can be complicated and subject to human behavior. An interdisciplinary team may formally meet once per month to discuss students in need of services; however, team

members may also informally reach out to one another to discuss immediate needs or to intervene in a crisis, resulting in decision-making outside the formal team structure. These informal interactions may be driven by trust (or lack of trust) between team members; nearby location of offices that facilitate a quick conversation (Spillane et al., 2017); or familiarity with systems, such as shared knowledge between a school administrator and a teacher. The assumption may be that treatment planning for a student occurs during the formal meetings; however, it may be that informal communication occurring “around the water cooler” is driving real-time treatment planning. Yet, as discussed previously, the success of service delivery is dependent upon how well these teams of practitioners are integrated with one another (Weist et al., 2001).

SNA and its unique terminology can be utilized to describe and interpret patterns of interactions between members of an interprofessional team (Lockhart, 2017a, b, c). Density, for example, is the communication that actually occurs versus communication that could potentially occur (Prell, 2012). This can happen when, in the given example of a school-based interdisciplinary team, members routinely cancel meetings or fail to include all team members in treatment planning. Isolates, on the other hand, are individuals with no relationship to others and indicate opportunities for deeper connection (Daly, 2010). A community-based counselor, for example, might have an office space located off campus, resulting in fewer interactions with school-based practitioners, thus narrowing the opportunities to work together. Another term of analysis, betweenness centrality, describes individuals who are influential in a network and help to facilitate relationships (Prell, 2012). A person with high betweenness centrality, for example, could be a teacher who both collaborates on an ESMH team and leads weekly teacher–staff meetings. This high level of engagement in school activities opens multiple pathways for this person to share, co-learn, connect, and generate ideas.

Social network analysis and social capital theory can be used together to illustrate if interprofessional groups are building bridges or linking to other professions, or if they are remaining bonded within their own profession (Haines et al., 2011). Are school psychologists and school social workers, for example, authentically working across disciplines demonstrated by appropriate assessment, counseling, and coordination of services? Do teachers and other school-based professionals tend to work more closely with one another out of convenience and familiarity of processes and systems? Similarly, are there barriers to community-based professionals, such as mental health counselors, to become vested in an ESMH team due to lack of understanding and experience within school settings? When used together, SNA and social capital theory present a unique opportunity to measure the practice of interprofessional social capital in school settings.

Originally funded by the Robert Wood Johnson Foundation to evaluate cross-sector relationships in public health, The PARTNER (Program to Analyze, Record, and Track Networks to Enhance Relationships) Tool (www.partnertool.net) is one resource for mapping interprofessional collaborations (Varda & Sprong, 2020). This tool can be used to measure and visualize collaborations among professionals and organizations using a customizable 19-question validated survey, email templates for distributing the survey among partners, and the ability to analyze and map relationships with just a few simple selections from drop-down menus. In addition to communicating findings to key stakeholders (including funders), this tool can help support practice by developing specific actions and strategies to improve collaboration. Importantly, this tool can also be used to understand whether and how interprofessional collaboration is related to outcomes—in ESMH student-level academic, developmental, and mental health outcomes may be especially valuable to consider.

Conclusion

The challenge to provide mental health services to students in schools is often dependent upon collaboration between school and community professionals (Weist et al., 2006). Conceptual clarity and models may help shape the rationale for this practice strategy and guide implementation. In the context of ESMH, theory helps to describe the intersection of social problems, mental health, and school achievement and validates the argument for why interprofessional collaboration is a necessary way to promote mental health in schools. Social capital theory is especially suitable for framing collaboration because it places value on trust and interpersonal relationships. Further, it characterizes relationships in terms of civic engagement and social networks, which are useful concepts for viewing partnerships between schools, communities, and families.

This chapter suggests both a definition and model of interprofessional collaboration to guide research and practice in ESMH programs. This is important for three reasons. First, although seemingly the backbone of ESMH, there is limited research on interprofessional collaboration (Mellin, 2009; Mellin & Weist, 2011). What is available, however, uses inconsistent definitions and models making it difficult to compare findings and move toward understanding whether and how interprofessional collaboration impacts student-level outcomes. Theories that articulate pathways between collaboration and a variety of assumed outcomes (e.g., access to mental health services, teacher burnout, academic achievement) are largely missing. This is complicated by a growing body of research that reports mixed findings of outcomes in ESMH (Iachini et al., 2015; Ballard et al., 2014; Daly et al., 2014; Owens et al., 2008). Without conceptual clarity and models of collaboration, it is difficult to understand what the mechanisms of collaboration are and how they might ultimately impact student-level outcomes.

Second, models help researchers and practitioners communicate complex phenomena (Reeves & Hean, 2013), which in turn can help

scholars choose appropriate research designs. SNA and its conceptual partner, social capital theory, can be used together to examine and illustrate how interprofessional groups bridge and expand their knowledge across professions or remain bonded (siloes) within their own expertise (Haines et al., 2011). Increasingly available resources like the PARTNER tool (Varda & Sprong, 2020) can also help increase the accessibility and use of SNA for evaluation, research, and practice.

Lastly, interprofessional collaboration has been identified as a core competency for professions engaged in ESMH (Ball et al., 2010). This has prompted researchers to look at how pre-service training strategies prepare graduate students for practice (Lee et al., 2017; Iachini & Wolfer, 2015; Iachini et al., 2014; Anderson, 2013; Splett et al., 2011). At the same time, inconsistency of definitions and models of interprofessional collaboration in ESMH prompts the question of whether training programs are able to adequately capture and teach meaningful collaboration skills. A model is operationalized for use in ESMH and then applied to guide training and practice, helping to inform professional competencies and training across professions.

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Advancing School Mental Health Quality Through National Learning Communities

15

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Introduction

Comprehensive school mental health systems (CSMHS) build on family-school-community partnerships using a multi-tiered system of support framework to provide mental health services and supports (Hoover et al., 2019). There are several core components of CSMHS, including the provision of evidence-based mental health promotion, prevention, and intervention services; ensuring equitable access to services that address mental health needs in culturally

responsive ways; and training for school staff, students, families, and community members to engage as active participants to promote mental health, well-being, and access to supports (McCance-Katz & Lynch, 2019). As such, there are innumerable potential quality improvement targets for CSMHS, especially given the variability of school mental health staffing, comprehensiveness, access, and quality across the country. Interprofessional collaboration among schools, community partners, and other stakeholders is a cornerstone of achieving high-quality school mental health (Anderson-Butcher & Ashton, 2004; Splett et al., 2017). However, effective collaboration is difficult to achieve without clear frameworks or models for team structures and practices (Iachini et al., 2013; Mellin et al., 2011).

Learning communities (LCs) offer an ideal structure to capitalize on and further strengthen stakeholder collaboration to improve CSMHS quality. LC definitions vary, but usually include (1) facilitating knowledge exchange among participating individuals and/or teams and (2) improving practices and outcomes by creating new knowledge or innovation about how to apply relevant best practices in local systems (Kilpatrick et al., 2003). Professional LCs have a long history in education and have been used in schools to build capacity for sustainable edu-

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cation reform, instructional practices, and school system improvement (Servage, 2008; Stoll et al., 2006). Learning collaboratives or quality improvement collaboratives are a specific version of LCs designed to rapidly improve the quality of “usual care” services or structures by applying evidence-based practices to local settings with the support of expert guidance, data monitoring, quality improvement methods, and shared learning within and among teams participating from multiple organizations (Nadeem et al., 2013, 2014). Learning collaborative components typically include in-person and virtual learning sessions, data reporting, feedback, training in quality improvement methods, and multidisciplinary quality improvement teams (Nadeem et al., 2013). As such, learning collaboratives constitute a more structured version of a general LC that is focused broadly on knowledge exchange and capacity building to promote innovation and application of best practices to improve quality. The learning collaborative model has been extensively applied to improve health care outcomes with recent applications to behavioral health (Hoge et al., 2020). “Creating a learning collaborative” has also been identified within the implementation of science literature as a discrete strategy to promote implementation of evidence-based clinical practices, by fostering a collaborative environment among groups of providers and organizations (Powell et al., 2015).

This chapter describes two LCs that have been used to advance national CSMHS quality: Collaborative Improvement and Innovation Networks (CoIINs) and a Community of Practice (CoP). We highlight how these LCs were structured and feature how stakeholders learned together by “sharing seamlessly and stealing shamelessly” to accelerate school mental health quality improvement. Throughout the chapter, we use the acronym “LC” to describe both types of learning communities, including the CoIIN learning collaborative.

National Learning Communities to Advance School Mental Health Quality

The National Center for School Mental Health (NCSMH) and the School-Based Health Alliance (the Alliance) lead a National Quality Initiative on School-Based Health Services (NQI-SBHS) with funding from the Health Resources and Services Administration, Maternal and Child Health Bureau. The NQI-SBHS aims to improve the quality, sustainability, and growth of CSMHS and School-Based Health Centers (SBHCs)¹ across the nation in order to improve access to high-quality, comprehensive health care through school-based service delivery models.

Collaborative Improvement and Innovation Networks (CoIINs)

HRSA uses the CoIIN model to solve problems and accelerate strategic change through quality improvement (QI) and collaborative learning. HRSA administers several CoIINs that address a variety of topics, such as school health, adolescent and young adult health, and maternal health. CoIINs are comprised of multidisciplinary teams of federal, state, and local leaders who share a common goal and work towards collective

¹SBHCs are health centers based on primary and secondary school campuses that offer primary care services, at minimum, and often also provide behavioral health services, dental/oral healthcare, vision care, case management, health education and promotion, nutrition services, and substance use counseling. SBHCs usually reflect a partnership between schools and a community provider such as a community health center, hospital, or local health department. The Community Preventative Services Task Force recognizes SBHCs as an evidence-based intervention to promote health equity (Knopf et al., 2016). The School-Based Health Alliance (SBHA), founded in 1995, serves as the national advocacy and technical assistance non-profit organization supporting SBHCs nationally. See <https://www.hrsa.gov/our-stories/school-health-centers/index.html> and <https://www.sbh4all.org/about/>

impact. To achieve their goals, CoIIN team members engage in mutually reinforcing activities, use common measures, and support and regularly communicate with one another. The CoIIN team members learn from one another by sharing ideas, best practices, and lessons they learn in their QI efforts. CoIINs use technology to remove geographic barriers and enable meaningful communication (Maternal and Child Health Bureau, 2016). In short, “the CoIIN methodology permits the CoIIN teams to work together effectively in order to identify a common area for action, test opportunities for improvement, implement and scale-up strategies that work, and generate and accelerate improved outcomes” (Health Resources & Services Administration [HRSA], 2018, p. 14).

Goals and Stakeholder Engagement

Participants in the School-Based Health Services CoIIN (SBHS-CoIIN) work towards three major goals: (1) improve the quality and sustainability of health and mental health services delivered in schools, (2) expand access to school-based health and mental health services to a greater number of students and their families, and (3) advance policies and programs that promote continued improvements in quality, sustainability, and growth of school health services.

Stakeholder engagement and collaboration is an integral part of the CoIIN process. The CoIIN process forges relationships within states among state agency leaders, local districts, youth, and families by establishing regular feedback loops, communication, and support. In addition, the CoIIN encourages relationship building among stakeholders across states. The SBHS-CoIIN serves as a network of peers in which participants create partnerships through in-person meetings, group webinars, and online and phone call exchanges. Previous CoIIN participants have reported that engaging in the CoIIN process has improved connections with their colleagues and enabled development of new relationships (Connors et al., 2020).

Participants

The NCSMH and the Alliance currently conduct 10-month SBHS-CoIIN cohorts during the academic school year. Each cohort includes at least 10 state teams that applied to participate in one of two tracks, CSMHS or SBHCs. Each state team includes representatives from state agencies (e.g., education, State Title V Maternal and Child Health program, public health, Medicaid, mental health) and state organizations (e.g., a state assembly on school-based health care, National Alliance on Mental Illness), as well as other youth-serving system stakeholders. State teams that participate in the CSMHS track are led or co-led by a representative from the state Department of Education or from the state Department of Mental Health. The state teams that participate in the SBHC track are led by representatives from state health departments that fund SBHCs or the School-Based Health Alliance state affiliates. In addition to state-level agencies and organizations, the state teams in the CSMHS track include a youth and family leader.

Each SBHS-CoIIN state team also includes at least five local site teams (e.g., school district, region, parish, charter organization, tribal community, or SBHC and their sponsor or administrative organizations) that test quality improvement changes and best practice innovations in school buildings. Each site team includes a multidisciplinary team of stakeholders including personnel such as a director of student support, superintendent, school-based mental health professional (e.g., school psychologist, social worker, counselor), building administrator, SBHC clinical provider, practice manager, sponsor-administrator, and/or an electronic health record specialist or local evaluator or data manager.

The first CoIIN cohort included 10 states, five in the CSMHS track and five in the SBHC track; 60 sites participated, including 25 districts in the CSMHSs track and 32 SBHCs in the SBHC track. The second CoIIN cohort included 12 states, seven in the CSMHSs track and six in the

SBHC track with one state participating in both tracks; 35 districts participated in the CSMHS track and 33 SBHCs participated in the SBHC track. The sites across the two CoIIN tracks represented urban, suburban, and rural areas in all mainland United States regions.

Structure

The Institute for Healthcare Improvement Breakthrough Series Collaborative Model for Improvement (Kilo, 1998) was adapted for the SHBS-CoIIN (see Fig. 15.1). Each SBHS-CoIIN cohort began with a welcome webinar for all state and local site participants to provide an orientation to the CoIIN objectives, goals, activities, pre-work, and data submission requirements.

Next, state teams participated in a two-day learning session facilitated by the NCSMH and the Alliance. This state learning session featured interactive, experiential learning techniques, and

resources and tools to build foundational knowledge for success in the CoIIN, including core school health services competency domains, QI activities, and data collection efforts. The meeting also included guidance and strategic planning for state teams to support their sites through the CoIIN process and develop a network of peers among other state leads.

All CoIIN participants, including state and local teams, convened on a monthly basis through five 60-min Action Period Calls and three 90-min Virtual Learning Sessions. The CSMHS and SBHC tracks met separately for these monthly calls, but the goals and basic structure were consistent. Meetings were designed to promote shared learning and accountability among all participants, including state and site teams. Prior to the meetings, site teams submitted monthly progress data (see specific performance measures for each track

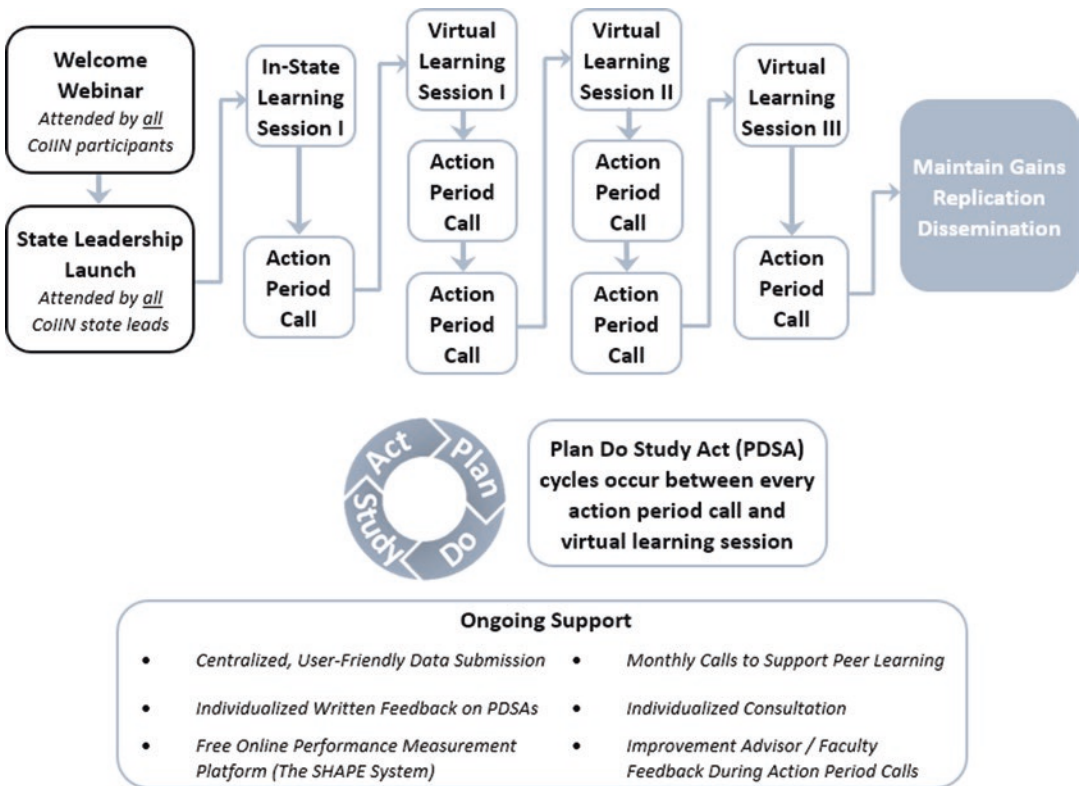


Fig. 15.1 Adapted Breakthrough Series Model for SBHS-CoIIN (adapted from the Institute for Healthcare Improvement (IHI), Breakthrough Series Model)

detailed in sections below) and at least one Plan-Do-Study-Act (PDSA) cycle. PDSA cycles are brief, targeted tests within an existing system to determine whether a planned change (Plan), when carried out (Do), results in the predicted improvement based on what is observed or learned (Study). Then, modifications should be made to the test (Act) to inform future changes in the system (Institute for Healthcare Improvement, 2020). PDSA cycles are new for most school health services teams participating in the CoIIN, and the CoIIN focuses on teaching teams to test changes on a small scale, evaluate, and refine them quickly, then use test data to inform how to scale up tested processes. PDSAs and monthly data submitted are featured on Action Period Calls to facilitate shared learning, prompt resource sharing, encourage networking, and spark innovation. The Action Period Calls cover a variety of topics, types of quality improvement changes, and measures. In contrast, the Virtual Learning Sessions (VLS) are focused on one quality improvement topic central to the content of the track. The VLS are more didactic in nature with expert faculty presenting best practices and resources; relevant PDSAs and data are featured to promote shared learning. Of note, the traditional Institute for Healthcare Improvement Breakthrough Series model includes several two-day, in-person learning sessions throughout the collaborative. However, time and resource constraints required the SBHS-CoIIN to abbreviate these learning sessions and hold them virtually. Initial feasibility and impact outcomes from the first two cohorts of SBHS-CoIINs with district teams indicate this adaptation was acceptable and LC targets were still met (Connors et al., 2020).

To sustain engagement between the Action Period Calls and the VLS, CoIIN members were invited to join a virtual communication and collaboration platform. CoIIN participants shared resources, communicated with smaller groups, organized their team materials, accessed content, and submitted data using the communication and collaboration platform.

The two school health services tracks, CSMHS and SBHCs, represent different frameworks to

improve access to multi-tiered systems of support in schools, which include health and behavioral health prevention, early intervention, and treatment services. Mental health services and supports can be offered in both frameworks. The unique mission, team structure, and measures of each track are described below. QI highlights that focus on stakeholder engagement to advance school mental health services are featured within each track description.

Comprehensive School Mental Health Systems Track

Mission The CSMHS track seeks to improve CSMHS so that all students receive appropriate evidence-based supports and services to maximize their social, emotional, behavioral, and academic functioning. This mission is ambitious for the field given the complexity associated with developing, operating, and sustaining a high-quality CSMHS. Although the CoIIN mission is intentionally broad, participating CoIIN teams focus on specific quality improvement areas based on their local goals. For example, teams might focus on improving the quality or consistency of their multidisciplinary teaming processes, promoting teacher wellness, refining student mental health identification practices through screening, or documenting the impact of services. Through the CoIIN process, teams develop and discover strategies for improving different aspects of their CSMHS.

Measures CSMHS track measures support participating teams' self-assessment and monitoring on key school mental health indicators. In addition to driving performance monitoring, these measures are designed to function as "assessment as intervention" to drive stakeholder collaboration and teaming (Hayes et al., 1987). That is, none of these measures can be collected or reported by any individual operating independently, and usually require team participation and engagement. Collecting and reporting data for the School Mental Health Quality Assessment (SMH-QA) and the five core monthly performance measures necessitate a coordinated multidisciplinary team. Indeed, even measure tracking

and reporting serves the purpose of driving stakeholder collaboration within the CoIIN.

The School Mental Health Quality Assessment—District Version (SMH-QA-D) is a team self-assessment designed for school or district teams to (1) assess the comprehensiveness and quality of their school mental health system and (2) identify priority areas for quality improvement. The SMH-QA covers seven domains of CSMHS: Teaming, Needs Assessment and Resource Mapping, Mental Health Promotion Services and Supports (Tier 1), Mental Health Early Intervention and Treatment Services and Supports (Tiers 2 and 3), Screening, Funding and Sustainability, and Impact. The SMH-QA is housed on the School Health Assessment and Performance Evaluation (SHAPE) System (www.theshapesystem.com), a free, web-based platform that supports school mental health quality improvement. After individuals or teams complete the SMH-QA, the system automatically generates a score and summary reports. SHAPE users have access to a resource library organized by domain; the resources can help guide individuals or teams through strategic planning and quality improvement. The library features the “School Mental Health Quality Guide Series;” the seven guides for each quality domain contain background information, best practices, recommended action steps, and examples from the field. Using the SHAPE system is a key component of the CoIIN process as a resource to support teamwork and stakeholder collaboration. It offers a web-based workspace that is neutral to participating schools and community partners, and it is accessible to all involved in the school mental health system.

Participating CoIIN sites complete the SMH-QA at the beginning, midpoint, and end of the CoIIN. Teams use the initial results from the SMH-QA to identify one to two domains to prioritize for quality improvement. CoIIN participants are encouraged to use the resources on SHAPE to help them design tests of change related to their quality improvement goals.

Five Core Performance Measures are also collected and reported monthly by sites. The five

measures are as follows: (1) mental health screening; (2) student functioning; (3) chronic absence; (4) students eligible for early intervention (Tier 2) or treatment (Tier 3) services; and (5) students enrolled in early intervention or treatment services. Measure definitions and CoIIN goals are shown in Table 15.1.

Table 15.1 CoIIN core performance measures: comprehensive school mental health systems track

Measure	Definition	CoIIN goal
Eligible Students	Number of students for whom Tier 2 or 3 services were indicated (by referral and screening) in the reporting month	100% of sites will document.
Enrolled Students	Number of students who started or received Tier 2 and 3 services & supports, through either school- or community-based providers, in the reporting month.	
Mental Health Screening	Numerator: Number of students screened in the reporting month Denominator: Number of students in the entire student body	100% of sites will screen students for mental health.
Student Functioning	Numerator: Number of students receiving Tier 2 or 3 services and supports with improvements in social, emotional, behavioral, or academic functioning since baseline Denominator: Number of students who received Tier 2 and 3 services & supports	80% students will have improvement in functioning.
Chronic Absence	Numerator: Number of students with chronic absence (10% or more missed days) Denominator: Number of students in the entire student body	Decrease by 20% from baseline.

Stakeholder Collaboration Multidisciplinary stakeholder collaboration is both a core feature required to achieve quality improvement outcomes in the CoIIN (as participants are always multidisciplinary teams) and an outcome associated with participation (e.g., improved coordination, collaboration and teaming quality among school, community, student and family stakeholders). This collaboration is reflected in the quality improvement efforts of participating teams. Selected quality improvement efforts based on one or more PDSAs that either focused on or resulted in stakeholder collaboration or engagement are highlighted below.

The first three spotlights reflect QI efforts that focused on improving stakeholder collaboration and/or engagement to improve CSMHS quality. The last two spotlights reflect QI efforts that required stakeholder collaboration and engagement to accomplish the stated goal. These examples highlight the importance of teamwork and included a diversity of expertise. This section concludes with evaluation feedback from CoIIN team members about how the CoIIN improved their stakeholder collaboration and engagement.

CSMHS Spotlight 1: Building a New Community-School Partnership A small, rural district in the Midwest built a new program that allowed the district, in collaboration with the local mental health center, to provide services for students in crisis that previously would have been suspended from school for their actions. Through this new collaboration, school and community mental health partners addressed their own communication barriers (by developing and using common terminology and definitions), developed and implemented memorandums of understanding, and identified a way to track student referrals and progress through the program. This team reported that CoIIN participation added value because it “increased collaboration and commitment between the school district and mental health.”

CSMHS Spotlight 2: Strengthening Working Relationships with the Data Department A large, urban school district in the Southeast formed new relationships with their data department to develop platforms to obtain relevant data, such as the number of students served, type of mental health referrals, and outcome data (e.g., grades, behavior, attendance). This process promoted data-driven decision-making and helped demonstrate impact of school mental health on student outcomes. This team also provided a foundation for other teams to consider how to best integrate school mental health datapoints of interest into student information systems. This team reported their success in collaboration:

We were able to bring together departments and individuals with an interest in school mental health that may have previously been working in parallel fashion towards common goals. [These improvements] also helped spark an existing interest in school mental health and clearer ideas for future improvements.

CSMHS Spotlight 3: Improving Student Support Teams by Developing a Model for Collaboration A team in a large, urban school district in the Mid-Atlantic aimed to improve district-wide consistency and effectiveness of Student Support Teams (SSTs); they focused on how school-employed providers and school-based community agency mental health providers can collaborate strategically. To develop a Model for Collaboration for their SSTs, this team started by developing relationships with clinicians and educators at five focus schools with existing effective SST processes. Next, they visited these schools and met with City Schools Related Service providers and school-based community agency mental health providers to assess current practices and receive input on what should be included in the Model for Collaboration for other schools. Through this iterative process, this team developed clear recommendations for how SSTs could be operated district-wide and planned for training and support for interested

schools. The team lead noted a key lesson learned from this work:

The simple act of collaborating can be an innovation in a professional landscape fraught with siloed work. We have brought principals, social workers, school psychologists, school counselors, and community-based mental health providers together in order to focus on improved school-based collaborations around mental health.

CSMHS Spotlight 4: Networking with Other Schools to Improve Social Emotional Learning A large high school in a suburban district in the Midwest wanted to develop and implement social-emotional learning (SEL) for 9th–12th-grade students. They engaged stakeholders for input. First, they held a panel discussion representing teachers, administrators, and counselors who were part of a Kindergarten through eighth grade SEL pilot to spark ideas, enthusiasm, and buy-in about the possibility of SEL at the high school. Panelist experiences were highly impactful and resulted in excitement about SEL among the high school staff. This activity “reinforced the importance of building-level people sharing their experiences with one another.” Next, this team sent teachers, administrators, and counselors on site visits to seven high schools in their state implementing SEL to observe lessons, talk to staff and students, and record their reflections. After the visits, observers presented what they learned to one another. Developing these connections and hearing from diverse stakeholders implementing SEL was critical to developing motivation, commitment, and concrete strategies to improve SEL for their students.

CSMHS Spotlight 5: Convening a Diverse Team to Deploy a District-Wide Needs Assessment A small, suburban school district in the Northeast wanted to conduct a district-wide mental health strengths and needs assessment. Their goal was to better understand the extent to which their current school mental health services and supports match student strengths and needs. This team convened a broad and diverse team by contacting parents/guardians and students to invite them to participate in two virtual needs assessment work-

ing groups. They invited 27 participants and meeting attendance showed a 92% response rate. Working group members provided invaluable input about content and length of the proposed needs assessment, as well as recommendations about the most promising dissemination strategy. The resulting needs assessment was piloted by working group members. Their feedback prompted the district to edit some question formatting and ensure its availability in multiple languages.

Experiences of Participating CoIIN Teams were collected at the end of each CoIIN cohort. Of note, several CoIIN participants reported two key experiences related to stakeholder collaboration and engagement. First, district and state teams referenced improved team collaboration as an outcome of participation. One team leader described the impact of collaboration: “Our state agencies (Department of Education and Division of Mental Health & Addiction) are working much more closely together.” Other teams referenced improvements in collaboration at the district or site level:

Now we have an engaged group of team members who are closely involved with the students and families served in the school-based mental health clinics. We have an agreement in place with the school district and pilot schools to implement universal screening at two grade levels next school year.

Communication was a common outcome reported by participating teams. One team noted:

We have learned the importance of communication and involving people on different levels and in different ways. We have learned that we can improve our process and methods for data collection by reaching out to our CoIIN sites and integrating best practices.

This within-team coordination was, in some cases, inclusive of youth and family stakeholders and leaders who “gave voice to their needs and the challenges they face.”

Participating teams also reported the overall value of the CoIIN network, highlighting a sense of community, support, and accountability by engaging with a national network of school men-

tal health stakeholders dedicated to school mental health quality. Teams noted that the CoIIN network provided the opportunity to “share ideas and knowledge,” “have a supportive network of people to provide encouragement and reassurance,” and “come together on a regular basis with common language and clear expectations.” Others appreciated “knowledge gained from experts and other participants” and the opportunity to “learn about what’s being done within the state and what’s being done in other states.” In fact, consistent with the multilevel CoIIN design to engage states, districts, and schools, participants in the CoIIN reported benefits from cross-level engagement in CoIIN activities. This multi-level engagement is perhaps best exemplified by the following comment:

The most valuable aspect has been the cultivation of *community*. We have experienced the benefits of community in forming and working as a CoIIN team [in our community], but have also profited from the sense that our CoIIN team is part of a larger, national effort in which teams around the country are rising to similar challenges. Our improvement goals and efforts have been shaped by the ongoing dialogue in [our community] and in our monthly opportunities to connect with our national CoIIN colleagues.

School-Based Health Centers Track

School mental health services can be provided within an SBHC. Provision of mental health services as part of an SBHC can help improve access to and reduce stigma of receiving mental health services (Love et al., 2019). SBHCs represent partnerships between schools and health care organizations that work together to improve students’ health, well-being, and academic success (Knopf et al., 2016). SBHCs do not replace existing school health services, including school nurses and school counselors, but rather work with them to coordinate, expand, and integrate efforts to advance students’ health and well-being. SBHCs often provide a combination of medical, behavioral health, oral health, vision services, and health promotion to students. Providing these services in schools reduces access barriers and improves care continuity (Love et al., 2019). SBHCs are an increasingly

popular model, doubling over the past 20 years to 2584 SBHCs in 48 of 50 states (Love et al., 2019). Federally-Qualified Health Centers (FQHCs), the fastest-growing SBHC sponsor type, accounted for 51% of SBHCs nationwide as of the 2016–17 school year. Other sponsors include hospitals and medical centers (20%), non-profits/community-based organizations (9%), and local health departments (6%). Integrating these varied community partners into the education sphere increases support for student academic success.

Mission The SBHC-CoIIN Track aims to improve student outcomes by increasing access to high-quality preventative health care. The SBHC-CoIIN focuses on identifying students who are due for preventative services, integrating services into existing visits or scheduling dedicated visits, and ensuring visit completion. The SBHC-CoIIN process allows sites to focus on a predetermined set of goals; ensures that data are collected and tracked; provides a reporting mechanism to facilitate internal and external data comparison; and encourages reflection on process and outcome improvements for reaching and providing services to students.

Measures As part of the National Quality Initiative, the Alliance developed the first set of standardized national performance measures for the SBHC field. Experts from the field identified the most important, sensitive, feasible, and usable measures. The measures include well-child visits, annual risk assessments, depression screenings, BMI screening, and chlamydia screening among sexually-active students each school year. Four of the five measures align with other national organizations’ measures, including data collected in the Healthcare Effectiveness Data and Information Set (HEDIS; National Committee for Quality Assurance, n.d.) and the Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA; Centers for Medicare & Medicaid Services, 2009). Reporting these measures allows for local, state, and national comparisons among other SBHCs and other health care settings to acknowledge strengths and

Table 15.2 CoIIN mental health performance measures: school-based health center track

Measure	Definition	CoIIN goal
Clients	Number of unduplicated clients who had at least one visit of any type to the SBHC	At least 15% improvement compared to last school year.
Visits	The total number of visits of any type provided to clients (drop-in or scheduled face-to-face or telemedicine visits for physical health, behavioral health, oral health, first aid or triage, group services, health education, etc.)	
Well-Child Visits	Numerator: Number of unduplicated SBHC clients who had at least one comprehensive well-care visit provided by the SBHC or non-SBHC provider Denominator: Number of unduplicated clients who had at least one visit to the SBHC	At least 80% of clients have a well-child visit.
Annual Risk Assessment	Numerator: Number of unduplicated SBHC clients with documentation of one or more age-appropriate annual risk assessment Denominator: Number of unduplicated clients who had at least one visit to the SBHC	At least 80% of clients will have an annual risk assessment.
Depression Screening	Numerator: Number of unduplicated clients aged 12 or older with documentation of screening for clinical depression using an age-appropriate standardized tool Denominator: Number of unduplicated clients aged 12 or older who had at least one visit to the SBHC	At least 80% of clients aged 12 or older have a depression screening.

address growth opportunities while demonstrating the value of SBHCs. Nationally, SBHCs report these measures voluntarily on an annual basis at www.sbh4all.org/current_initiatives/nqi.

SBHC performance measures related to mental health can align and integrate with the work done by CSMHS. As SBHCs provide more risk assessment and depression screening, either in conjunction with well-child visits or independent of them, providers can identify students with Tier II or III support needs. The SBHC may provide these additional services directly or facilitate connections to other school- or community-based providers to ensure that students receive the necessary mental health services and supports.

The Alliance’s National Performance Measures serve as the SBHC track’s key indicators for performance. These measures prompt SBHCs to consider how to record information these measures in their electronic health records (EHRs). For many sites, this process encourages broader conversations around quality improvement and tracking both with their sponsors to facilitate IT-related changes to EHR and with state leaders regarding policies and systems for tracking and reporting.

Participating SBHCs report pre- and post-CoIIN assessments and monthly performance measures through the Alliance’s National Quality Initiative CoIIN online portal. Pre- and post-assessments include school and SBHC characteristics, the number of SBHC best practices related to school and community partnerships, business sustainability and quality practices, financial information, and performance measures. The initial assessment allows SBHCs to reflect on their performance over the previous school year, identify one or two target measures they will focus on for the CoIIN, and set goals. The online portal enables SBHCs to chart and track progress throughout the CoIIN for each measure (see Table 15.2).

Stakeholder Collaboration While the SBHC track’s formal objective is to improve the number of clients and preventative services delivered, regularly working on a team with diverse backgrounds has an indirect but positive effect of strengthening relationships. The quality improvement efforts often require collaboration among formal CoIIN team members on the front lines, including those in management roles with the sponsor or state agency. One SBHC team lead

from the New England region noted the importance of collaboration:

At the start of the NQI, we brought the supervisor of our state program office onto our team. State-funded SBHCs in our state were required to submit data on a few measures, so the work of the NQI was already aligned with accountability and data reporting. As our first year progressed, and the five teams and the state affiliate dove deeper into the work, we included the state program staff in our trainings and our progress. It paid off—by year 2 the state adopted the five NQI measures as a requirement for all their SBHC programs.

An SBHC pediatrician from the Mid-Atlantic region also highlighted the value of collaboration in the CoIIN: “It united our staff at all three of our schools to work together, created a bond between our office clinic representatives, our patient care technicians, and our NPs solidified their very positive relationships as well.”

The work of the CoIIN sites also serves as a resource and guide for state-level implementation of quality improvement efforts. Serving as an exemplar aligns with the goal of the SBHS-CoIIN to position participating teams as catalysts for quality improvement initiatives in the broader SBHC field. One state leader in the Southeast region said, “This gave us the blueprint to improve school-based services in the clinics around our state”.

The information sites track during the CoIIN process can be used to build relationships with those not formally involved in the CoIIN process, as illustrated in the following quotation from an SBHC Executive Director in the Southeast Region: “I just downloaded the reports for our sites, and they are amazing. They will be great to share with stakeholders. In fact, I am presenting the reports to the State School Board next month!”

The innovations by SBHC teams to improve system quality do not occur in a vacuum. The work done by CoIIN teams often engages multidisciplinary teams and stakeholders including, school administrators, school psychologists, social workers, and other partners. Below are examples of CoIIN participant efforts that highlight the collaborative nature of this work.

SBHC Spotlight 1: Expanding Depression Screening One SBHC used a series of PDSAs to increase depression screenings. Their first approach was to standardize the administration of a depression screening tool among pregnant students receiving care at the SBHC. Working through the administration with this population allowed the team to adjust their processes that engaged multiple staff members to identify those who required a test, administer the screening, and capture the screening in the electronic health record. Next, the site expanded to provide a baseline annual depression screening for all clients over 12 receiving clinical care and to increase the percentage of clients with at least one risk assessment. Implementing risk assessments required collaboration and training between SBHC clinical and behavioral health providers.

SBHC Spotlight 2: Multidisciplinary Collaboration to Conduct Risk Assessments Another state also worked to increase the risk assessments conducted by providers, including nurse practitioners and social workers, in the school. SBHC providers began administering health risk assessments to patients during acute and follow-up appointments rather than being limited to just during well-child visits. Social workers reported shared behavioral health assessments completed for each client. The team found that administering the risk assessments were not overly time-consuming and enabled them to identify more students’ needs.

SBHC Spotlight 3: Health Outreach Calls During Coronavirus Disease 2019 (COVID-19) During the COVID-19 pandemic, one team collaborated with SBHC staff, school social workers, and administrators to identify students who had been chronically absent and in need of targeted outreach. Collaboration and using collective resources broadened this intervention’s reach. The SBHC’s access to translation services ensured better communication with families. These outreach calls provided an opportunity for SBHCs to ensure that students are up-to-date on their needed care, including well-child visits,

screen for depression, and complete risk assessments. The team anticipated that this practice would prove particularly important as schools operate remotely.

Community of Practice

In addition to the CoIIN, the National Quality Initiative includes another learning community, the SBHS Community of Practice. A Community of Practice (CoP) refers to a “group of people that share a concern or passion for something they do and learn how to do it better as they interact regularly” (Wenger-Trayner & Wenger-Trayner, 2015, p. 1). A CoP offers a mechanism to engage diverse state stakeholders, such as educators, mental health providers, youth, families, and child-serving organizations to work together to solve complex challenges or problems. CoPs involve “interacting, sharing knowledge, and determining action steps in the course of solving complex problems” (Cashman et al., 2007, p. 3). Central to an effective CoP are its members and how they interact, build trust, and find mechanisms to work together to advance ideas and actions related to a topic. Defining characteristics of a CoP include a *domain*, the *community*, and *practice*. The domain is the core area of interest that brings the community, a group of people with interest, knowledge, and expertise related to the domain, as well as access and connections to a broader network of relevant stakeholders. Together these members will plan and act, using lessons learned to advance the domain. Being a part of the group requires interest, commitment, competence, and/or influence related to the domain (Wenger-Trayner & Wenger-Trayner, 2015).

The NCSMH’s previous experience using the CoP model enhanced the development and implementation of the SBHS-CoP. In 2004, in collaboration with the IDEA Partnership, housed at the National Association of State Directors of Special Education (NASDSE), the NCSMH co-facilitated the development and ongoing support for the National Community of Practice on Collaborative School Behavioral Health. This CoP engaged

thousands of diverse stakeholders invested in school mental health from the state and local levels. The model demonstrated success in breaking down silos to advance awareness, access, quality, and sustainability of school mental health (Cashman et al., 2007).

Mission, Goals, and Values

The mission of the SBHS-CoP is to accelerate and spread practices and policies to support school health services and to further foster state support for SBHCs and CSMHSs. CoP members include state-level CoIIN participants. The CoP focuses on actions that can be undertaken at the state level to advance quality, sustainability, and growth of school health services. Learning from each other, while appropriately recognizing developers of innovation, is a central tenet of the CoP. Values of the SBHS-CoP include open communication, inclusion, respect for and diversity of perspectives, evidence-supported practices, strategic dissemination, and being responsive to the needs of students, families, and communities.

The *shared domain* of interest of the SBHS-CoP is school health and, more specifically, comprehensive school mental health systems and school-based health centers. The *community* includes state team representatives who are leading and/or have influence related to school health advancement. The *shared practice* for the SBHS-CoP involves a commitment to sharing new knowledge, skills, and resources, and engaging in discussion and reflection to drive action within each of the states related to advancing effective school health services policies and practices.

The SBHS-CoP allows for numerous opportunities for communication and collaboration within and across states. Participants share innovations, outcomes, guidance, and resources related to core school health topics that can advance knowledge, policy, and best practices. This information is integrated into discussions, brainstorming, action planning, resource development, and ongoing communications through a listserv and connections that develop through the CoP.

Structure and Topic Selection

Prior to the first CoP meeting, the NCSMH and the Alliance met with state CoIIN leaders to share the definition, core values, and practices of the CoP. State CoIIN leaders committed to participating in quarterly CoP meetings over a 10-month period and to identifying and engaging other leaders from state-level agencies and organizations who could meaningfully contribute to advancing school health services as part of the CoP. The first cohort of states selected topics for the CoP using a nominal group technique (NGT) (Van de Ven & Delbecq, 1972). The nominal group process is a fast-paced, systematic process for obtaining qualitative information from a small group of individuals. In small groups, state leaders were asked to answer aloud: What policies and practices at the state, regional, or local level have the potential for driving innovation, improvement, and/or sustainability in school health services? Once a list of topics was generated, the groups voted for their top selections and indicated topics for which they felt their state could serve as an exemplar. The final topics selected were financing, interagency collaboration, legislative efforts, and accountability and data collection practices at the state level.

In the second CoIIN-SBHS Cohort, CoIIN state leaders were provided with a list of potential CoP topics; they ranked preferences using an online polling tool and indicated topics for which they felt their state was an exemplar. The list included topics generated by the first cohort and additional topics suggested by CoIIN faculty. Final topics selected for the CoP meetings included professional development, funding and sustainability, trauma-informed systems and care, tracking the impact of school health/mental health in education outcomes, social determinants of health, and mental health and health screening.

The NCSMH and the Alliance planned, hosted, and facilitated the quarterly CoP one-hour meetings. CoP agendas followed a consistent structure. The meetings started with a “roll call” to track attendance and welcome participants. Following the “roll call,” the NCSMH and

the Alliance shared relevant resources. Then, four states presented their innovation related to the topic of the meeting; they also provided advice to other states and offered resources. Following presentations, participants engaged in discussions aloud or using the chat box function. CoP participants joined a virtual communication and collaboration platform to share resources and communicate between CoP meetings.

Community of Practice Spotlight

The first cohort of the SBHS-CoP cohort focused on funding and data sharing. During quarterly calls, each state highlighted an innovation and described outcomes of a policy or practice that they developed or were working on. As part of these calls, Wisconsin shared their experience expanding Medicaid coverage to include mental health clinical consultation for students under the outpatient mental health policy; they also provided information about their data sharing agreement with their state Medicaid Agency.

As a direct result of these discussions about data sharing, the Arizona CoIIN team, noted that “from the moment [we] heard the Wisconsin team mention a data sharing agreement with their state Medicaid Agency, it has been a high priority for our team.” This team continued state-level discussions and now their Medicaid agency is ready to consider a formal data sharing agreement to fund a statewide universal referral system for schools. This example demonstrates the value of cross-state sharing of policy and practice innovations to inspire actions and the advancement of school health services in other states.

Experiences of CoP Participants

As part of the first state SBHS-CoIIN, state CoP participants provided feedback on the relevance of discussions, the helpfulness of connecting with other state teams, and the likelihood of applying information and ideas from the CoP. They were asked about innovations or advancements and which part of the CoP was the most helpful. Overall, participants found the content relevant or very relevant (89%), found it helpful or very helpful to connect with other state

teams (100%), and reported that they would be very likely (89%) to apply ideas from the CoP. Components that were identified as the most helpful included “group brainstorming,” “sharing innovations,” “having CoP meetings as a safe space to share and ask for feedback,” “information on data collection and student information systems,” “learning from and connecting with mental health folks from different states,” and “learning about funding and sustainability in other states.”

Qualitative feedback revealed specific innovations or advancements that were attributed to participation in the SBHS-CoP. For example, one team member wrote, “We applied for a Project AWARE grant as a result of [another state’s] AWARE grant participation. We are also more connected to the SBHCs and CSMHSs as a result of participating in the CoP.” Another mentioned, “The community of practice was a great learning experience....We will promote the adoption of performance measures, state funding, and the expansion of mental and dental health services for SBHCs.” There was also consistent commentary about the value of having a mechanism for stakeholder connection and having a collaborative workspace for sharing resources, exemplars, and best practice. For example, one team member noted, “We are strengthening partner collaborations and working to improve data collection and CSMHS policies.” And another said, “Participation in the CoP helped us broaden our thinking around partnerships needed to build our state’s capacity to support schools and districts and provide guidance, tools and resources in new ways during this period of distance learning/pandemic response.” These quotations demonstrate the CoP within the SBHS-CoIIN offered participants opportunities to learn about funding opportunities, partnerships needed for school health services, strategies for improving data collection, and ideas for state-level policy and practices related to school health. Through CoPs, members can learn more than they could alone and can speed the rate of innovation, policy, and practice advancement in school health services.

Conclusion

Learning communities offer tremendous potential to the field of school mental health by providing a structured, focused approach for stakeholders within and across school, district, and state teams to engage in shared learning, innovate within the support and accountability of a professional network, and drive their quality improvement priorities forward. The CoIIN and national CoP described in this chapter are each examples of national learning communities in which stakeholders across a broad array of disciplines (health, behavioral health, education) and levels (local, regional, state, national) have committed to exchange knowledge, track performance, and test innovative change ideas in their school mental health systems.

Learning communities are highly consistent with stakeholder engagement in school mental health for two reasons. First, broad and diverse stakeholder engagement is requisite to the process of quality improvement. Learning community participants join within a team, and all quality improvement methods including data collection and application of best practices cannot be accomplished by one or two individuals working alone. Second, broad and diverse stakeholder engagement is also an outcome of learning communities, whether it is an intentional or unintentional goal at the outset. In addition to feedback reported by participants of our LCs, this finding is consistent in extant literature about other LCs (Hoge et al., 2020). Therefore, quality improvement processes cannot occur without a team, and by engaging in the CoIIN, teams report improved partnership and engagement that expands the strengths and breadth of the networks.

There are at least three specific ways that our LCs improved stakeholder collaboration, based on lessons learned and feedback received from participants. First, LCs strengthen state relationships to enhance school mental health. The CoIIN and CoP were specifically designed to create or strengthen relationships within states among the department of education, department of behavioral health, Title V, Medicaid, and other state-level partners. They are also designed to create or

strengthen the relationship among state-level leadership, local districts, and youth and families to ensure regular feedback loops, communication, and support.

Second, teams join a network of peers and create partnerships to drive quality and improve the visibility of their work. In-person meetings, group webinars, and online exchanges provide opportunities to exchange ideas with other leaders from different states and districts that are passionate about improving school mental health. Disseminating successes and lessons learned within the CoIIN brings visibility to school mental health in any participating state. One team specifically noted cross-team collaboration as value added in the CoIIN, reporting, “We benefited from the support and collaboration with others participating teams.” Third, these LCs improve personal and team satisfaction. Our LC teams reported that participation improved their job satisfaction by increasing connections with colleagues doing similar work. The CoIIN offers a supportive accountability structure to stay on track with improvement goals and experience successes and challenges in a positive learning environment.

In closing, the values prioritized in the learning communities as part of the National Quality Initiative can be applied to any stakeholder engagement strategy to improve quality of services, promote implementation of evidence-based practices, or speed the research-to-practice gap. We recommend several key considerations learned from our LCs that apply to other stakeholder engagement strategies. First, we recommend ensuring meaningful partnership from planning stages to implementation to evaluation. For example, the CoP topics were selected by participants based on a nominal group decision-making process. We believe that this process optimized buy-in and active participation on the quarterly calls. Second, we suggest engaging stakeholders at multiple levels of influence and expertise. Some of our prior LCs were at the district and school level only. While this LC model was successful in terms of feasibility, stakeholder engagement, and school mental health quality improvements (Connors et al., 2020), we realized

the added value of ensuring additional participation from state leaders, family advocates, and payors such as Medicaid. Third, we recommend engaging in bi-directional learning. That is, virtual calls and learning sessions should have more input from participants, and opportunities for peer feedback than didactic content or “expert” guidance. Finally, disseminating the process and measurable impact of your stakeholder engagement strategy, as well as the practical innovations or improvements discovered by the stakeholders involved, is paramount to contribute to the continued advancement of comprehensive school mental health system quality. Learning communities result in a rich set of practical strategies, innovations, and improvements that should not only profit those who participate but also the field as a whole. For this reason, many longstanding learning communities compile their best practices and tips from the field into “playbooks” and other products for wider dissemination (NCSMH, 2020; NICHQ, 2020; SBHA, 2020).

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Leveraging Community-University Partnerships to Build Capacity for Effective School Mental Health

16

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Introduction and Background

Comprehensive school mental health (SMH) programs comprise multiple interventions that span several levels or tiers of intensity (e.g., tier 1 universal intervention for all students, tier 2 selected interventions for high-risk groups and those presenting early problems, and tier 3 targeted interventions to individuals with identified need) across dimensions of social, emotional, behavioral, and academic functioning (Barrett et al., 2013; Sugai & Horner, 2009). The implementation of SMH programs requires schools to use processes such as standardized problem-solving, data-based decision-making, ongoing training and technical assistance, and continued evaluation. In high-quality research-driven settings, schools are more likely to incorporate these processes as a result of the implementation support and technical assistance they receive from the research team. This support allows schools to maintain the components needed for high-quality SMH implementation (Wandersman & Florin, 2003). This focus on implementation quality is critical for interventions to be successful in SMH (Fixsen et al., 2009).

Without support from collaborating universities, however, schools typically lack the capacity needed to support high-quality implementation of SMH interventions (Flaspohler et al., 2008; Spoth & Greenberg, 2005). The resulting poor implementation costs schools time and resources without providing significant benefit for faculty, staff, or students (Eiraldi et al., 2015; Langley et al., 2010). When schools attempt to implement SMH programs without sufficient capacity, they also risk increasing burnout among faculty and staff (Doll et al., 2005; Mellin & Weist, 2011). The discrepancy between positive outcomes achieved in high-quality research settings and lack of progress toward goals in local settings illustrates the research-to-practice gap that exists in SMH. The presence of this gap signals that schools may benefit from receiving outside support that increases their capacity to deliver high-quality SMH interventions.

Universities are in a unique position to provide this support to schools through translating research findings and providing strategic and technical assistance (Domitrovich et al., 2008). Because of this, partnerships between schools and universities can help bridge the SMH research-to-practice gap, leading to improved mental health services provided to students (Bradshaw et al., 2012; Domitrovich et al., 2008; Dulmus & Cristalli, 2012; Kreuter & Bernhardt, 2009;

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Case Example 1: Partners' Unique Needs and Goals

Well-executed community-university partnerships can lead to benefits for all involved parties. However, in order to ensure a successful relationship, the needs of community and school partners should be put at the forefront. Miriam and Douglas work for a non-profit organization focused on enhancing student mental health and have partnered with a number of local schools and universities. Their reflection on the successes and challenges within these partnerships demonstrates some of the benefits and potential pitfalls that individuals considering CU partnerships should be aware of.

Miriam and Douglas valued access to evidence-based literature, feedback from a neutral party, and added credibility with funders afforded them by their relationships with universities. However, they also expressed feeling that members of academic institutions can be out of touch with the nature and limitations of work being done in schools. When planning program evaluations, they perceived that some university partners were focused on obtaining data that could be used for research, overlooking the burden that collecting additional data may place on individuals participating in the evaluation. Douglas and Miriam's experiences highlight the need for a shared vision, open communication, and acknowledgement of differences in organizational culture and capacity among community, school, and university partners.

Fig. 16.1 Case example of potential challenges

Redmond et al., 2009; Spoth et al., 2007). The creation of successful partnerships requires careful consideration of each partners' needs and context. It is critical to explore and promote successful models of community-university (CU) partnerships for SMH in order to promote the best outcomes for students. Case Example 1 (Fig. 16.1) introduces potential challenges that arise in CU partnerships that will be addressed in detail throughout this chapter.

The remainder of this chapter summarizes relevant literature and highlights key characteristics of CU partnerships through case examples illustrating experiences of individuals working within these partnerships. These case examples were gathered by conducting brief interviews with professionals working in universities, school districts, and community non-profit organizations who shared successes, challenges, and key learnings from their experiences in CU partnerships. Each narrative was approved by the interviewee prior to inclusion in the chapter and all names have been changed to maintain confidentiality. Through these stories and findings from the literature, this chapter will provide definitions for CU partnerships, describe their potential benefits and challenges, provide practical recommendations about forming partnerships,

and identify future directions for continued research on this topic.

Definitions

CU partnerships for SMH take many forms, from informal consulting relationships to ongoing practicum opportunities for university students to explicit written agreements for SMH program delivery, such as memoranda of agreement (MOAs). CU partnerships are interpersonal and professional relationships among community and/or school stakeholders (e.g., parents, principals) and university-affiliated stakeholders (e.g., faculty, students) involving shared goals and aims for mutually beneficial outcomes (Bringe & Hatcher, 2002; Suarez-Balcazar et al., 2005). Degrees of formalization, expected responsibilities, goals, and pathways to formation can differ widely across partnerships.

Several formal models of CU partnerships have been proposed. The Collaborative Leadership Structure for Community Schools (Coalition for Community Schools, 2020), Community Partnerships Schools™ Model (University of Central Florida, n.d.), and PROMoting School-community-university Partnerships to Enhance

Resilience (PROSPER; Spoth et al., 2004; Spoth & Greenberg, 2005) models provide specific guidance to university members partnering with local schools. Alternative models guide partnerships between universities and community organizations that may or may not directly involve a school. These include Community-Based Participatory Research (Israel et al., 2005), Interactive and Contextual Model of Community-University Collaborations for Research and Action (Suarez-Balcazar et al., 2005), Synergy Model of Developing Community-Academic Partnerships (Brush et al., 2011), and University-Community Collaboration Model (Thompson et al., 2003). While each model maintains a different focus (such as PROSPER specifically guiding land-grant universities) or requirements (the Community Partnerships Schools™ Model, for example, requires certification to enter), all emphasize collaborative leadership, evaluation, and communication. This chapter pulls insights from these models to propose a concise set of guidelines for forming CU partnerships. Case Examples 2 and 3 (Fig. 16.2) describe two partnerships that followed different models or paths to formation, with both leading to successful outcomes.

Potential Benefits of Community-University Partnerships

Successful CU partnerships allow for all parties to leverage each other's strengths and resources to access opportunities difficult for individual partners to secure on their own (Williamson et al., 2016). Community and school partners provide expertise on the needs, resources, and culture of the local community, while university partners provide guidance on theory-driven frameworks, implementation, and evaluation. The processes of CU partnerships lead to benefits for each prospective partner related to (1) data collection and application, (2) training, technical assistance, and professional development, and (3) funding opportunities.

Data Collection and Application

CU partners use data to choose and implement evidence-based interventions that leverage available resources and community strengths to meet students' mental health needs.

Case Example 2: University-Initiated Partnership

Jordan, a psychology professor at a mid-sized Midwestern university, described how she initiated a partnership with a local school district while applying for a research grant. Based on the state of the science, she and her research team developed a proposal to conduct a randomized-controlled trial examining methods for supporting teachers' use of Tier 1 and Tier 2 classroom management strategies. During the grant planning process, Jordan reached out to school personnel in a particular district to discuss how this opportunity might merge with the needs of the district. After listening to the needs of the district and discussing how each party may benefit from the project, Jordan modified and submitted the grant application. After the grant was received, she reached out to the district again to move forward with the partnership and planning for the project.

Case Example 3: District-Initiated Partnership

Sara, a faculty member in psychiatry, was contacted by members of a school district looking for mental health resources to assist students with anxiety and depression. While this partnership was relatively informal at first, it quickly became clear to Sara that the district had a great need for SMH services. Sara developed an interest in working with the district in a more long-term, formalized partnership in order to help implement and evaluate evidence-based SMH programming. Over five years later, Sara and her team have received multiple research and programmatic grants that have allowed them to provide coaching and technical assistance to school mental health staff running skills-groups based in mindfulness and principles of cognitive behavioral science. In addition to these skills-groups, the partnership has expanded to help teachers deliver a social-emotional learning curriculum in their classrooms.

Fig. 16.2 Case examples of forming partnerships

Community and School Perspective

Universities provide access to available research, synthesize this evidence-base and aid in developing an evaluation plan that allows schools and community partners to make data-informed decisions (Spoth & Greenberg, 2005; Williamson et al., 2016). Universities may provide this information in the context of helping schools adopt an SMH theory or framework that will guide their strategic approach and evaluation process.

University Perspective A CU partnership may provide faculty members and university graduate students with opportunities to conduct research in applied settings. Evaluations conducted within partnerships can yield large amounts of data. University members may be able to leverage these data and make contributions to the field by publishing relevant findings in academic journals, allowing others to learn from the partners' experience.

Case Example 4 (Fig. 16.3) illustrates the mutual benefits two partners received in collecting data to evaluate a non-profit organization's clinical mental health services provided in school settings.

Training, Technical Assistance, and Professional Development

As CU partners work together, they increase the capacity of students, faculty, and staff at all partner sites by creating training and professional development opportunities. Partners work

together to build the community's capacity to sustain effective SMH interventions.

Community and School Perspective Students at a university affiliated with a CU partnership may serve school or community partners via practica, internships, or assistantships. Through these positions university students provide services as they receive training, often related to social work, education and tutoring, psychology, nursing, and early childhood development. University students can relieve overburdened staff members of existing tasks or complete new tasks, extending schools' ability to provide mental and behavioral health-related services to students while adding minimal additional costs. Additionally, partners can work to identify the resources and skills school faculty and staff need for successful implementation of SMH interventions (Spoth & Greenberg, 2005; Wandersman & Florin, 2003). Universities can help connect partners with the training and assistance needed to develop the specific professional and organizational capacities required by selected SMH interventions.

University Perspective University students working in school-based training roles receive applied experience that extends beyond the classroom (Williamson et al., 2016). These opportunities may attract applicants to the university as they allow students to gain clinical hours, refine work-related skills, and begin to develop their

Case Example 4: Data Collection and Application

Corrine works for a non-profit organization providing clinical mental health services to families in schools. Several years ago, the organization partnered with Terrance, an assistant professor of social work, to obtain assistance evaluating their efforts. Corrine expressed that though they went in knowing what they hoped to demonstrate through the evaluation, Terrance's familiarity with the published literature and assessment tools was helpful in choosing what data to collect to measure the targeted outcomes. Terrance provided several options for assessment measures and described the pros and cons of each. Corrine emphasized how valuable this was, as it allowed her to make an informed choice on which measures were most appropriate, feasible, and cost-effective. Terrance helped analyze and interpret the evaluation data, and the two worked together to determine how to most effectively present the results to funders and other stakeholders to demonstrate the program's strengths. The success of this initial collaboration led to an on-going partnership where the organization continued to benefit from Terrance's expertise, and he was able to use data collected through the organization for published research.

Fig. 16.3 Case example of data applications

professional network. Faculty and staff members also benefit from practicing communication skills, expanding their professional network, and increasing their knowledge of local SMH issues (Williamson et al., 2016). Case Example 5 (Fig. 16.4) depicts a partnership that expanded training opportunities for school faculty and staff.

Funding Opportunities

Another benefit of a successful CU partnership includes potential access to external funding. Funding opportunities best serve each partner when pursued with transparency and explicit mutual benefits within the partnership (Dulmus & Cristalli, 2012; Williamson et al., 2016). Case Example 6 (Fig. 16.5) and the following points summarize these benefits.

Community and School Perspective School and community partners may be able to leverage university partners' knowledge and experience to apply for their own additional funding via grants (Blank et al., 2012). In some cases, the evidence of a partnership with an academic university on a grant application may increase a school or dis-

trict's credibility when applying for grants (Williamson et al., 2016).

University Perspective Involvement in a school- or community-based project often demonstrates a university member's ability to apply research in a local setting (Dulmus & Cristalli, 2012). This application may be beneficial in university members' own pursuit of grants and external funding to support applied research, graduate student traineeships, and potential project managers.

Challenges in Pursuing Community-University Partnerships

While successful CU partnerships yield positive outcomes for the organizations involved, certain challenges can impede progress, as alluded to in Case Example 1. In extreme situations, challenges within partnerships can elicit negative outcomes, such as damaged relationships between partners or drained resources from spending staff time and organizational funds on partnership efforts that do not lead to progress towards schools' mental health goals (Hunter,

Case Example 5: "Train-the-Trainer"

After receiving many referrals from a local school district, staff at a university-based school-mental health center aimed to partner with the district to support students' wellness and mental health. A team of stakeholders, including nursing and education faculty, teachers, and district administrators, conducted an assessment to determine the needs of students and teachers. Based on the results of this assessment, the team identified that teachers would benefit from training in trauma-informed care. After a small pilot project, it was decided that all district staff (administrators, support staff, janitorial staff, and others) may benefit from this training.

Several challenges arose in planning this large-scale training effort. The team wanted to be considerate of the many demands on teachers' time at the beginning of the school year and the emotional toll of talking about trauma. It was determined that training may be most effective if conducted in small groups and adapted for different roles (e.g., teachers, janitorial staff), though it was important that all groups received consistent information. The team decided to run a half-day training plus booster sessions throughout the school year for smaller groups of staff. A "train-the-trainer" model was implemented to ensure that information would be consistent across schools. University partners trained school counselors and psychologists to deliver the training and provided support to them as needed. These trainings resulted in increased knowledge of trauma-informed care among teachers and other district staff, allowing them to better respond to the needs of students. This training program provided a clear benefit to the school district and would have been difficult to implement without support from their university partners.

Fig. 16.4 Case example of building capacity through technical assistance

Case Example 6: Collaborative Grant Writing

Mutual pursuit of grant funding for school mental health initiatives can be valuable to both parties. Alex works for a university and has partnered for several years with a local non-profit providing school mental health services. The partnership began when a local funder started requiring evaluation of programming as a condition of funding. The organization reached out to Alex, who was able to provide assistance with planning and conducting the evaluation and reporting the results. Following a successful working relationship, Alex continued partnering with this organization, collaboratively writing grants for new initiatives. She again helped the organization plan for evaluation of their new efforts, and her expertise added credibility to the funding request. This collaboration benefited Alex as well. In addition to obtaining data for use in research, her involvement at the grant writing stage allowed for the organization to incorporate financial compensation for Alex into the request for funding, so she could be paid for her time and expertise. This can be important for university partners, as career advancement and performance ratings may be partially contingent on the funding they bring into the university.

Fig. 16.5 Case example of leveraging partnerships for funding

2014). These challenges might occur between university and community partners due to (1) imbalances between partners' access to resources, (2) differences in workplace operations and cultures, and (3) logistic barriers. This section defines and explores these challenges. The rest of the chapter then provides a method of forming CU partnerships that aims to address or prevent these issues to maximize positive outcomes for all partners.

Imbalances Between Partners' Access to Resources

Universities, community organizations, and schools are often positioned differently in communities, resulting in differences in their abilities to access resources and information and exert influence in the community. When disregarded, these differences may lead to mistrust or imbalanced pursuit of one organization's goals over others. Increasing partners' multicultural competence (Sullivan et al., 2001), using participatory research strategies that emphasize community members' perspectives (Jordan & Kapoor, 2009), and adhering closely to all partners' ethical guidelines (Perkins & Wandersman, 1990; Suarez-Balcazar et al., 2005) may help mitigate or prevent mistrust between organizations or an organization's misuse of power.

In the United States, there have been historical instances of academic institutions collecting data or interacting with community members to pursue their own priorities instead of (or at the detriment to) community benefit (Sullivan et al., 2001). Because of these occurrences and the perception of universities operating within an "ivory tower," schools or communities may harbor mistrust of academic institutions (Dockery, 1996; Williamson et al., 2016). Universities maintain responsibility to understand community viewpoints and use rigorous and transparent ethical guidelines to guide community-based work and research (Perkins & Wandersman, 1990; Suarez-Balcazar et al., 2005). These standards help ensure that community organizations and members with less power (i.e., access to ability to influence community resources) maintain an active voice and role within a CU partnership. Attending to, discussing, and offering transparency on these historic and current contextual issues are vital for a successful CU partnership. This can be approached through use of participatory research methods and development of partners' cultural humility (especially for the partner in a position of more power). Incorporating these practices and following a guided approach to building the partnership (such as that offered in the third section of this chapter) can allow for a more balanced partnership to develop.

Differences in Workplace Operations and Expectations

Arising from their unique contexts, university and community partners often have different working cultures and expectations for how work is conducted (Thompson et al., 2003). Partnerships benefit when members are honest about their preferred working styles and goals from the onset. Members of successful partnerships can avoid conflicts arising from these differences by demonstrating open communication and flexibility. If ignored, these differences in working styles and expectations can lead to miscommunication, harmed relationships, and slowed progress toward goals. The next paragraphs and Case Example 7 (Fig. 16.6) explore this challenge in detail, while the following section offers a strategy for forming a partnership while addressing this potential challenge.

Demands within a university setting often encourage faculty members to prioritize data collection that leads to publications and external funding (Metzler et al., 2003). This requires a deliberate and lengthy needs assessment, planning, and research protocol approval process (Dulmus & Cristalli, 2012). To obtain high-quality data, university partners may prefer to use

rigorous methodologies such as randomized controlled trials, measures of high reliability and validity, pre-post data collection, and multiple sources of data. These methodologies require substantial time from participants (often students and teachers) and may delay delivery of an intervention to groups of students.

University-driven approaches may conflict with priorities within the school and community. Schools may have more strict standards for student confidentiality, creating challenges in collecting program evaluation data (Weist et al., 2012). Pressures within the school setting require a more succinct timeline for implementing interventions and collecting feedback. State and federal policies for schools require frequent progress reports on measures related to standardized achievement tests and state mental health, special education, and wellness standards (Dulmus & Cristalli, 2012). Schools may be motivated to collect sufficient data that meet these needs, promote intervention access for all students, and offer an evaluative perspective, while protecting teachers' time for other tasks (Metzler et al., 2003). Additionally, parents, teachers, and school district administrators may crave quick timelines to interventions that provide more immediate relief to students and teachers (Dulmus & Cristalli, 2012).

Case Example 7: Adapting within the Partnership

University members engaged in CU partnerships must be willing to adapt and compromise in order to create and sustain successful partnerships. Being flexible with timing and scheduling can be especially important, as organizational processes often differ among universities, schools, and other organizations. Sofia, a psychology professor, partnered with a local school district to evaluate school mental health programming. After collaboratively developing a plan to move forward with a new initiative, district stakeholders were eager to begin implementation. However, Sofia and her team were also hoping to use the evaluation data for research purposes and were still waiting for the university's Institutional Review Board (IRB) to approve the use of some measures for this purpose. As the IRB review process can be slow at times, a compromise was needed – either forego the use of those measures and move forward or delay the implementation of the program until the measures were approved for research use. As the district was ready to proceed, Sofia and her team decided to move forward without the measures that were not yet approved. This commitment to prioritize the needs of the school and students demonstrated Sofia's investment in promoting positive outcomes for students. This compromise strengthened the partnership, ultimately facilitating more opportunities for Sofia to obtain future research data.

Fig. 16.6 Case example of flexible collaboration

CU partners often reflect that they must adjust or merge their problem-solving styles, pace of progress, working schedules, and expectations for research or program implementation in order for the partners to pursue meaningful work that fits both institutions. Failure to acknowledge these differences may lead to miscommunications, errant expectations, and lack of progress in CU partnerships. As displayed in Case Example 7 (Fig. 16.6), a flexible approach to navigating differences can lead to long-term benefits for both partners.

Logistic Barriers

Schools, community organizations, and universities have different academic calendars, operating hours, and scheduling flexibility creating potential barriers that make regular meetings and communication difficult to maintain (Williamson et al., 2016). Difficulty in aligning schedules and communication practices and dedicating time towards the project can stop a partnership from gathering momentum or sustaining progress towards goals. Partners may need to collect data or provide training to school staff to reach their goals. In order for teachers to participate in workshops, training, surveys, focus groups, or interviews, schools may need to hire substitute teachers or require teachers to spend time outside of their typical working hours to participate in these projects (Suarez-Balcazar et al., 2005). The physical distance between partners may also vary, requiring partners to account for transportation time when planning for regular meetings or to host trainings in-person.

The challenges of imbalanced access to community resources, differences in workplace operations, and logistic difficulties threaten partners' ability to gain the benefits previously summarized or progress toward goals. The following section describes practical strategies that address or help partners to navigate these challenges and promote success in CU partnerships.

Building a Community-University Partnership: Developmental Phases

Most models of CU partnerships emphasize key components that fall into three phases of partnership development. These three phases include (1) pre-entry contemplation, (2) initial contact and engagement, and (3) development of mutual collaboration.

Phase 1: Pre-entry Contemplation

University and school employees should consider several issues (time commitment, social context, and strengths) before engaging in a partnership. Reflecting on these issues allows parties to better understand their own readiness to form a successful CU partnership. This protects all parties, as partnerships formed without sufficient readiness can lead to the challenges discussed in the previous section versus contribute to progress toward joint goals (Hunter, 2014).

Time Commitment

Successful CU partnerships develop over a period of time that requires patience and persistence from both partners (Dulmus & Cristalli, 2012; Thompson et al., 2003). In many cases, university partners have more available time to dedicate to the partnership, reflecting their advantage in scheduling flexibility, access to resources, as well as motivation to begin a partnership (Thompson et al., 2003). This dedicated time includes processes such as learning school personnel and culture, writing grants, collecting and analyzing needs assessment data, and synthesizing that data and relevant literature for the school's decision-making process (Williamson et al., 2016). When a university commits to support an SMH project without being able to commit adequate faculty and student time to the project, they risk causing more harm (coordination costs, damaged relationships) than benefit to the school (Suarez-Balcazar et al., 2005). The foundation of strong, trusting relationships that sustain partnerships sometimes takes months or years to form. To

commit to the demands of a partnership, partners need time available for regular meetings, email correspondence, planning, and review of data and literature.

Potential partners should also consider their capacity to support a long-term commitment to each other (Dulmus & Cristalli, 2012; Thompson et al., 2003). As these partnerships can be slow to develop and projects often span months, ideal partnerships persist over a series of years. Both universities and schools should consider potential turnover of stakeholders, other projects or timelines within their organization, and methods for sustaining the partnership past the current academic school year before engaging.

Social Context

Professionals wishing to enter a partnership should consider macro- and micro-aspects of their social identity within the context of a potential partnership (Suarez-Balcazar et al., 2005). At a macro-level, university personnel should be aware of the past relationship between their institution and the surrounding community. For example, they should consider whether the educational resources the university provides are accessible to the average community member, whether the university's campus culture complements or clashes with local values, and how others at the university interact or conduct research within the community. This reflection can help individuals acknowledge concerns that community members may have about working with them. To help develop a relationship of mutual trust, partners should be transparent with their goals, motivation, and resources (Roche et al., 2019).

At a micro-level, potential partners should consider their own age, ethnicity, geographic location, ability status (whether or not a person has a physical or mental disability), and educational backgrounds, as these factors impact relationships within the partnership. In this reflection, individuals consider their how identities and life experiences compare and contrast with stakeholders of the partnership such as families and students in the community. Successful partner-

ships include voices and feedback that represent the identities of students, community members, and teachers within the school (Suarez-Balcazar et al., 2005).

Strength-Focused Approach Mindset

CU partnerships can easily become focused on deficits, resource constraints, and barriers as they work to increase students' access to mental health support. Continued focus on and conversation around deficits or barriers drains motivation and momentum from a partnership (Butcher et al., 2010). Instead, a positive change-oriented view promotes progress by identifying a community or organization's strengths and leveraging these existing strengths to find creative solutions toward the partnership's goals. This emphasis on strengths versus deficits helps a team sustain motivation, creativity, and progress toward goals (Butcher et al., 2010). A strength-based approach leads to a positive, open environment where conversations focus on creative solutions (Hudson et al., 2006; Thompson et al., 2003). Each partner should enter a partnership open to dialogue about challenges and solutions using change-focused language (Blank et al., 2012). Before engaging in a partnership, each potential partner should spend time considering their own organizational, community, and personal strengths and how those strengths can contribute to each other (Butcher et al., 2010). A focus on strength-based speech and solutions helps partners build positive rapport that motivates the partnership through challenges that arise.

Phase 2: Initial Contact and Engagement

Following pre-entry contemplation, potential partners are ready to make initial contact and establish the foundation for their work. While this phase will look different in every partnership, the following section describes key tasks that allow partners to learn about each other and establish foundational relationships from which they can pursue their mutual goals.

Make Contact and Get to Know Each Other

Successful CU partnerships can be initiated by school, university, or community personnel. Motivation to pursue a partnership may differ between parties. University personnel, for example, may be more likely to have strategic vision, available resources, and motivation to approach a CU partnership (Thompson et al., 2003). However, CU partnerships initiated by school or community personnel tend to develop more trusting work relationships and long-term commitment than partnerships initiated by researchers (Evans et al., 2001). Either direction of initiation can lead to success, but it is important to consider these differences when making initial contact.

Instead of approaching a venture with a fixed agenda, successful CU collaborators set aside their personal agendas and spend time “getting to know” each other (Bradshaw et al., 2012; Suarez-Balcazar et al., 2005). To facilitate this process, university personnel attend school events, tour school facilities, volunteer, have informal (and transparent) conversations with students, faculty, staff, and families, and review public documents from the school. School personnel may request to review publications or prior work of the university collaborators or tour their work and lab spaces. As potential partners learn more about each other, they look for opportunities to understand their differences, behaviors, values, opinions, and worldviews (Butcher et al., 2010; Suarez-Balcazar et al., 2005). In spending this time together and learning about each other, partners form initial understandings that will allow them to make progress as partners. Case Example 8 (Fig. 16.7) illustrates the measures one university partner took to become familiar with the district he was working with.

Establish Shared Leadership

As potential partners learn more about each other’s work and goals, they may officially decide to pursue a specific project or general work together. Partners begin defining the processes that will allow them to work together, such as shared leadership and decision-making processes, common goals, and shared accountability (Blank et al.,

2012; Roche et al., 2019). To establish shared leadership, each partner designates a main contact to lead coordination. Successful lead contacts improve implementation quality by motivating and including key stakeholders, promoting collaboration across partners, distributing leadership, using open and direct communication, and articulating a clear, shared vision (Hudson et al., 2006; Spoth et al., 2007). As the lead contacts begin promoting this collaborative environment, they facilitate meetings that allow for shared goal-setting between partners.

In successful CU partnerships, partners buy into shared goals and visions. As exemplified in Case Examples 9 and 10 (Fig. 16.8), shared goals emerge through different processes. Within shared goals, each partner may have distinct priorities but overall share genuine interest and passion towards shared outcomes. Without the desire to pursue similar outcomes, motivation for the partnership may falter over time (Dulmus & Cristalli, 2012). To continue solidifying the partnership, the leading contacts select a model of shared decision-making that they can use to keep partners involved in needs assessment, implementation, and evaluation processes (Dulmus & Cristalli, 2012). Using a defined model allows all partners to be more equally involved in decision-making, sustaining buy-in for the partnership and helping to ensure that decisions will reflect the needs of the community, stakeholders, and all partners (Dulmus & Cristalli, 2012). Consider how shared visions were formed and pursued in Case Examples 9 and 10.

Establish Clear Expectations and Common Understandings

As the partners become more involved with each other and begin to approach a project, they need to establish clear expectations for work processes (Roche et al., 2019). To do this, partners collaboratively determine and document their mission, goals, roles, and expectations (for communicating, meeting, and completing work) in writing (Blank et al., 2012; Dulmus & Cristalli, 2012; Suarez-Balcazar et al., 2005). Depending on the nature of the partnership, it may be appropriate to

Case Example 8: Getting to Know the Community

Developing strong relationships between universities, schools, and communities takes significant time and commitment. Kevin, a university professor in counseling and school psychology, engaged in a long-term partnership with a large urban school district. To begin building trust with the district and local community, Kevin spent several years providing services and support, such as training and technical assistance, to schools and their stakeholders. He also engaged with the community by attending district events and speaking with families. The time and effort that Kevin put in was unpaid and conducted outside of work hours but was important in forming a trusting and collaborative relationship. Kevin also gained necessary knowledge of the community, its strengths, and its areas for growth. By being responsive to needs of the schools and community, Kevin was able to establish a successful partnership which benefited the district and local community and allowed him to obtain data for large scale research projects.

Fig. 16.7 Case example of developing relationships*Case Example 9: Building the Shared Vision*

Matt and Michelle serve as School-Family-Community Coordinators at a large university. Together, they coordinated a partnership between the university, local schools, and a variety of community partners. The partnership was one branch of a larger initiative to revitalize an economically depressed neighborhood. Partners in this collaboration included therapists from a local children's hospital, school, district, and university staff, individuals from local youth advocacy organizations, and more. Collaboration with many stakeholders can provide great benefit to schools through expanded resources and support, but can also present challenges. While all parties became involved in the partnership to help students in the local community, stakeholders in each area had different visions and priorities. Regular leadership meetings where all stakeholders come together were key in cultivating a shared vision and goals. Michelle, Matt, and school administrators served as advocates for student needs in these meetings, in order to ensure that measures taken prioritized the needs and well-being of students and families, while also accommodating the specific goals of various partners. Communication, trust, and flexibility from all parties were key in formation of shared goals and a successful partnership.

Case Example 10: Partnering because of a Shared Vision

While Matt and Michelle's story illustrates how shared goals may need to be cultivated, some partnerships form specifically because of shared goals. Jason is a professor of social work at a large university who supervises social work trainees completing practicum experiences in local schools. In this context he also developed a targeted, school-based intervention for high school students repeating a grade, which was implemented by graduate student trainees. One of the school administrators was impressed with the existing intervention and wanted to adapt the program for implementation with students at-risk for grade retention. The shared goal of providing support to students who were retained or at-risk for retention, was the catalyst for forming a research partnership between Jason and the school. Jason and his supervisees adapted the intervention and worked with the school administrator and a small group of teachers to pilot the new version of the program and evaluate the outcomes. Based on feedback and evaluation data from the first year of the pilot, the intervention was revised and implemented for a second year. This long-term partnership evolved naturally from shared goals between Jason and the school administrator. Their continued collaboration was successful due to the close alignment between Jason's research interests and the needs of the district.

Fig. 16.8 Case examples of establishing shared visions

include a signed memorandum of agreement (MOA) that outlines expectations for each partner, particularly if there will be compensation or exchange of resources (Pivik & Goelman, 2011). MOAs and guiding documents detail the com-

mon work and expectations from all partners and include specific considerations for each partner.

This collection of documented expectations serves as an "encyclopedia" for members of the partnership. It provides an outline of expected

behaviors and can help partners prevent conflicts that arise from mismanaged expectations. Preemptive planning for meetings and communication practices may also help partners mitigate logistical challenges of finding time to collaborate. Finally, the shared documentation can serve as training documents as new members join the partnership or if there is turnover among personnel involved in the partnership. Case Example 11 (Fig. 16.9) describes the journey of two partners forming clear expectations for their work.

Phase 3: Development of Ongoing Mutual Collaboration

Once the partners establish an initial foundation, they begin to explore the needs of their community, develop action plans to meet these needs, and conduct ongoing evaluation of program outcomes, implementation, and the partnership.

Conduct Needs Assessment

Partners sometimes join to pursue a specific goal or to more broadly provide ongoing support to one another. During the goal establishment phase, partners may realize that their goals align or span multiple topics. A community needs assessment provides partners with information about the pri-

orities, resources, capacities, and needs of the community. In exploring these facets, CU partners can identify the true needs of the community and align their resources toward meeting these needs. This process allows the partnership to provide authentic support to the community without pushing an arbitrary agenda that may cost resources while failing to meet the needs of students and families. Case Example 12 (Fig. 16.10) shows how conducting a needs assessment allowed partners to pursue the root causes of a local issue.

Develop Action Agenda

Based on findings from the needs assessment, partners develop a joint action agenda (Suarez-Balcazar et al., 2005). The action agenda includes goals and objectives that match community needs and allow partners to forward their own growth and development. Partners may benefit from using PAR principles of mutual respect, critical reflection, and full group participation (Jordan & Kapoor, 2009) to determine joint goals. The action plan should include a long-term goal and vision, broken down into multiple endpoints (Roche et al., 2019). Endpoints mark phases or multiple steps within a long-term process that includes timelines for training and planning, implementation, and evaluation. Goals should

Case Example 11: Clear Expectations

Blaire and Amanda work for a school district as the research and evaluation officer and mental health lead, respectively. They were approached by members of a university center school mental health center, who were interested in partnering with them to implement and evaluate a social emotional learning curriculum for early elementary students. Blaire and Amanda had partnered with this center on previous projects, and their district's strategic plan was aligned with the research that members of the center wanted to conduct. Both parties realized the importance of setting clear expectations from the start of the partnership, so they collaboratively created a written set of expectations and guidelines for the partnership. This document outlined the goals and mission of the group, decision-making processes to be used, and expectations for communication.

At the end of the first evaluation year, Amanda and Blaire met with members from the university center to evaluate the partnership. Considering the guidelines they had created, the group reviewed documentation from the year (e.g., meetings agendas and minutes) and engaged in discussion to identify what was working well in the partnership and where adaptations were needed. The formal documentation of guidelines for the partnership ensured that members from both teams were in agreement on the goals and expectations for working together and facilitated evaluation of the relationship. This clarity contributed to the positive working relationship between the district and the university, helping promote positive outcomes for students.

Fig. 16.9 Case example of building common ground

Case Example 12: Needs Assessment

Staff working in a university center for school-based mental health became aware of a local school district that had been deeply impacted by the opioid crisis. They reached out to district administrators to assess their interest in forming a partnership to help support impacted students and teachers. Upon entering the partnership, university stakeholders brainstormed ways to help address the effects of the opioid crisis for local students. Concurrently, a needs assessment was conducted to determine the most pressing needs. District teachers and staff completed surveys and participated in focus groups. The results of the assessment indicated that the primary issue was a high incidence of adverse childhood experiences in the student population and a lack of training in trauma-informed care for teachers and staff.

As these results were not directly aligned with stakeholders' original plans, the team adjusted their focus and began to plan for how they could provide trauma-informed care training for teachers and school staff. Without conducting a needs assessment, the university stakeholders may have moved forward with a plan that was less aligned with district needs, resulting in lesser benefit for students. The university team's responsiveness to the true needs of the district helped strengthen the partnership, provide direct benefit to students, and led to a continuation of the partnership to focus on new goals related to mental health and wellness.

Fig. 16.10 Case example of assessing community needs

Case Example 13: Shifting Action Agenda

Reggie was part of a committee of healthcare practitioners and university stakeholders that was formed to promote student health in local schools. In the first year after the committee formed, a needs assessment was conducted to learn about the needs of targeted local schools and their students. The results of the assessment indicated that the primary needs centered around trauma, social emotional learning, and mental health. Though the committee had formed with the intention to address the physical health needs of students, they recognized that taking a flexible approach would be more beneficial to students. As such, the leadership team collected further data on how the community's needs could be best addressed and identified priorities for action. They wanted to first learn more about how they might best help educators to help students, then begin to provide support to teachers, and finally implement programs to support students directly. Mental health experts were consulted so that the committee could learn more about trauma informed approaches that may be beneficial to teachers and students. After learning about evidence-based practices to support teachers and students, the committee identified two areas for action - supporting teachers and supporting students. The team first facilitated the delivery of a mindfulness program for teachers, to help address their needs. Programming was then implemented to provide more support for students' social emotional learning. This phased approach and attention to the needs of various members of the school system allowed for better understanding of existing problems, greater trust, and a more productive path forward.

Fig. 16.11 Case example of developing a flexible action agenda

reflect external priorities (the needs of students and the community) as well as the internal growth needed to facilitate goals (such as ongoing professional development for all partners; Blank, 2015). The action agenda listing partners' goals and objectives should be maintained as a critical partnership document. While this serves as a roadmap for the partners, long-term plans may change as a result of ongoing evaluation of outcomes, impact, and new community needs. In Case Example 13 (Fig. 16.11), partners demonstrated a flexible approach to an action agenda as they responded to community needs.

Conduct Ongoing Evaluation

Successful partnerships measure progress through ongoing evaluation of implementation strategies, program outcomes, and the partnership itself (Blank, 2015; Brush et al., 2011; Roche et al., 2019). These processes require a shared data platform, collection methods, and plans for synthesizing and distributing collected data. Partners collaboratively decide who has access to the data for decision-making purposes and how they share findings and progress with the wider community via announcements, technical reports, or other methods of disseminating

information. The evaluation process should collect feedback from all key stakeholders such as students, parents, community members, school personnel, and university faculty members. Continued evaluation allows partners to measure impact and delivery of services and make adjustments as indicated by the data.

In addition to evaluating the implementation process and intervention outcomes, successful partners evaluate the partnership itself to identify areas of strength and improvement. Strong and effective team processes have been associated with positive team outcomes (Brannick et al., 1995). Tools such as the Team Functioning Scale (Erickson et al., 2015) allow partners to measure team processes such as partnership structure, focus, meaningful communication, and shared decision-making. The regular use and review of such tools allows partners to see early signs of conflict or ineffective processes and correct them in an effort to sustain a partnership that fosters positive outcomes. Case Example 14 (Fig. 16.12) shows how a partnership allowed for a community organization to assess their internal strengths and weaknesses through third-party evaluation and use that data to make changes that benefit both their employees and clients.

Sustaining the Partnership

The three stages described above illustrate the beginning steps of establishing a CU partnership. In order for the work to be sustained beyond its initial establishment, partners should find ways to support each other and the goals of their work. This includes offering opportunities for continuous professional development (Blank, 2015; Roche et al., 2019), exploring options to receive external funding from multiple community resources (Blank et al., 2012), and recognizing the benefits and outcomes achieved by the partnership (Suarez-Balcazar et al., 2005). Attending to these processes helps the partnership weather challenges such as budget cuts, setbacks, and personnel turnover (Bradshaw et al., 2012). Annually, partners should spend time reflecting on their initial goals, progress, and outcomes. This allows the partners to realize gains, celebrate wins, find opportunities to adjust their approach, and consolidate learnings from their work. Through these processes, partners may avoid allowing the partnership to become stagnant and sustain motivation and effective processes that move the partnership beyond its goals to achieve outcomes for the community.

Case Example 14: Evaluation

Evaluation is crucial for identifying the strengths and areas for improvement of programs and initiatives implemented within CU partnerships. Colby, a social work professor at a large university, was approached by a non-profit organization planning to implement a clinical mental health program in local schools. The non-profit knew it needed to evaluate the program's impact but knew it needed support and additional expertise to do so effectively. Colby worked with the organization to design an evaluation plan for the program, provided options for measuring outcomes, and listened to feedback from SMH workers on what would be feasible to implement. Together, Colby and organizational stakeholders decided on a three-pronged approach. Included in this approach was a screening measure to be completed for all students, a goal attainment scale to be used by school mental health clinicians with students on their caseload, and a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis that was conducted at the end of each school year, using interviews with mental health clinicians to identify barriers to success.

After evaluation data was collected, Colby conducted data analysis and generated a draft report based on the results. She then shared the draft with her partners so they could provide their input and finalize the report. After the report was disseminated to funders and other stakeholders, Colby and other members of the partnership engaged in collaborative planning to determine how to adapt programming based on the results of the report. This evaluation process, which includes multiple data sources and perspectives, allows for an accurate assessment of program impact and identification of improvements in order to achieve the best student outcomes.

Fig. 16.12 Case example of collaborative evaluation

Community-University Partnerships: Key Takeaways

In summary, this chapter highlights key components of community-university partnerships that have emerged through research and practice experience. These highlights lead to the following key takeaways.

1. CU partnerships, when formed and operating well, increase schools' capacity to implement quality SMH interventions that lead to positive outcomes for students.
2. In addition to positive outcomes for students, CU partnerships benefit the partners involved by providing opportunities for robust data collection; training, technical assistance, and professional development; and additional funding.
3. Common challenges such as differences in access to resources, variations in workplace practices and culture, and logistic barriers may impede the progress of CU partnerships, if not addressed through the phases of partnership development.
4. CU partnerships are developed through a series of tasks across three key phases: pre-entry contemplation, initial contact and engagement, and development of mutual collaboration.

Future Research Directions

Moving forward, additional research in several areas could further guide practitioners' development of successful CU partnerships for SMH. First, many models of community-university collaborations exist and range in specificity to school-university partnerships, partnerships with or without community organization partners, a certain type of university or school, or to certain community contexts such as rural or urban areas. While these different models provide a range of suggestions that might meet unique community needs, they also may provide confusing, conflicting, or duplicated information to practitioners. Perhaps an exercise in cross-walking these models to pull out consis-

tent findings specific to community-university collaborations for school mental health may provide more concise and specific information to stakeholders. Second, much of the research in this area comes from case studies and examples. These studies provide detailed information but may be augmented through randomized trials or more mixed-methods designs that can provide more comparative evidence of strategies that do or do not lead to positive outcomes. Finally, much of the research in this area focuses on the initial start-up of a CU partnership. Continued evaluation of the full process with consideration to how trust and relationships change throughout the partnership may provide more insight that potential partners could use to pursue further work.

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Leading Systems Change to Support Autistic Students

17

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Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by core deficits in social communication and interaction and the presence of restricted and repetitive patterns of behavior and interest (American Psychiatric Association, 2013). Prevalence estimates of ASD have been rising over the past decade, and ASD currently is estimated to occur in 1 in 54 children (Maenner et al., 2020). As a result, schools are challenged to support an increasing number of students with diverse educational needs. Unfortunately, educators often report being inadequately trained and ill-prepared to support autistic students (Iovannone et al., 2019).

Beyond core deficits, many autistic¹ individuals also exhibit associated features such as challenging behavior, cognitive and academic challenges, and symptoms associated with other comorbid mental and physical health conditions.

¹We adopt the term *autistic* rather than using person-first language (i.e., “student with ASD”) reflecting recent research on community preferences (Bottema-Beutel et al., 2020). That said, opinions vary widely within and beyond the autism community and the preferences of each student and family should be assessed and followed.

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Inherent in the name, ASD is characterized by a diverse range of both abilities and challenges, and there is considerable heterogeneity among autistic individuals. For example, some students may communicate fluently but struggle to understand the nuances of nonverbal communication (e.g., eye glances), whereas others cannot express even the most basic wants and needs. One student may exhibit anxiety when unable to finish an assignment prior to the end of class, but otherwise function very well, while another may not be able to complete even basic self-help such as using the bathroom, independently. Given the heterogeneity among autistic individuals, the supports that autistic students require in school settings can also vary, with some students requiring minimal or no supports and others requiring near-constant and individualized support.

In this chapter, we provide a roadmap for supporting autistic students, with an emphasis on building capacity to support all students on the autism spectrum. Although myriad interventions exist to address core and associated features of ASD, many are entirely without evidence and some can be harmful (McDonald et al., 2012). We thus begin by describing strategies for searching for and identifying evidence-based interventions and then detail strategies for building capacity in implementation of interventions. We conclude with a brief review of critical areas for future research and development.

Evidence-Based Practices for Autism Spectrum Disorder

Interventions that are evidence-based are those that have been shown to result in significant positive changes in the intervention targets. Although there is some variation in opinion about what is required to be considered evidence-based (e.g., the number of randomized controlled trials documenting an effect; see Slocum et al. (2014) for discussion), an intervention generally can be considered evidence-based if a positive effect has been found across multiple, well-designed quantitative (either randomized controlled trials or single-case designs) studies. Systematic literature reviews are the gold standard for evaluating the evidence supporting an assessment, intervention, or set of interventions. A systematic review of the literature focuses on a specific research question (e.g., What interventions for core and associated features of autism are supported by sufficient evidence?; Does peer-mediated intervention work?), and then uses a predetermined process to (a) select studies to include, (b) evaluate the quality of each study (e.g., internal and external validity), and (c) synthesize information across studies to answer the research question posed. In many cases, statistical methods are used to combine results from included studies and use those pooled results to evaluate efficacy. Meta-analytic methods are well developed for randomized controlled trials; however, the vast majority of research on interventions for core and associated features of autism has been conducted using single-subject research designs for which there is little consensus regarding the appropriateness of meta-analytic methods (Gage & Lewis, 2013). As a result, most systematic literature reviews report the number of studies meeting quality standards, but not a pooled effect size.

The most comprehensive systematic reviews of the literature to date used descriptive, rather than statistical methods to evaluate results, due in large part to the wide range of experimental methods used in the extant literature. These reviews were independently conducted by research teams at the National Professional Development Center at the University of North

Carolina, and the National Autism Center (NAC) at May Institute. Working independently, these groups developed similar criteria for determining whether an intervention was evidence-based and recruited large pools of external reviewers to code included studies along the criteria they developed. Their initial reviews spanned 1950–2011 (see NAC, 2015; Wong et al., 2015), and a recent update (Steinbrenner et al., 2020) incorporated publications through 2020. These reviews are freely available online and are excellent starting points for identifying interventions.

A next step in identifying evidence-based interventions is to determine whether the intervention's efficacy was documented in contexts similar to the school context. Systematic reviews of the literature for a specific intervention target or intervention are useful to better understand variables that may affect implementation (or to learn more about why a practice is not considered evidence-based). Most systematic reviews are not focused on schools, which are problematic because public schools tend to differ in important ways from the settings in which most research was conducted. Much of the research on interventions addressing core and associated features of ASD has been conducted in clinical settings or schools specifically for autistic individuals, using highly trained and skilled implementers (Martin et al., 2020). Many interventions are intensive in nature, requiring multiple hours of implementation per week by someone working 1 on 1 with the participant. In contrast, public schools must serve a diverse body of students, often with limited resources. Few educational professionals have received training in addressing core features of ASD or in implementing any given intervention and are unable to dedicate extensive hours of one person's time to implement an intensive intervention for a single student.

There have been only eight systematic reviews focused specifically on public schools (we exclude preschools here because much of the research in preschools was conducted in private programs specific for young children with autism). Four of these reviews focus on interventions addressing social communication and interaction (Bellini et al., 2007; Muharib & Lang,

2020; Sutton et al., 2019; Whalon et al., 2015). Although reviews identified specific interventions that were effective, authors also noted important factors that could affect implementation in schools including the intensity of intervention, and the need for an intervention agent to deliver the intervention outside the classroom. Two reviews targeted transitions; the transition into school (Fontil et al., 2020) or into secondary school (Richter et al., 2019), each identifying factors key to successful transitions and factors that impeded such transitions. McKeithan and Sabornie (2020) evaluated several social behavioral interventions but focused on secondary students with an IQ of 75 or higher. Finally, Martinez et al. (2016) reviewed interventions for challenging behavior in schools. They identified interventions that were effective and others that produced minimal to no effect, which may be useful for educators struggling to help students engaging in behaviors such as aggression or self-injury.

Of course, identifying evidence-based interventions is but the first (and perhaps easiest) step involved in implementing such interventions in a manner that is both effective and sustainable. The following sections provide a blueprint for educators to initiate and sustain evidence-based supports for autistic students at scale.

Establishing Quality Autism Programs in Schools

The first step of establishing EBPs in schools or initiating any systemic change should be working with key stakeholders. Stakeholders are individuals who are invested in the success of students. In schools, stakeholders may include administrators, paraprofessionals, teachers, and other related service providers. They are also those closest to students, including parents and caregivers, grandparents, and group-home staff. In the community, stakeholders may include members of religious communities, professionals from service agencies, medical providers, and psychologists, among others. Autistic adults may in some cases be considered stakeholders given that they can offer unique insight into the experience of

being autistic and what kind of school-based supports are necessary or desired. To illustrate, some autistic individuals have reported that engaging in repetitive motor movements may sometimes serve as a self-regulation strategy but is often not socially acceptable (Kapp et al., 2019). To promote respect and autonomy of autistic students, such behaviors should be the target of intervention only when they interfere with learning. This is just one example of areas where autistic individuals may help educators and other professionals better understand behaviors associated with autism.

Collaborative Partnerships Forming partnerships with stakeholders is a critical component to comprehensively address students' educational, behavioral, and mental health needs. As described by Sheridan and Kratochwill (2008), a partnership is comprised of a collaborative relationship and shared responsibility. Specifically, it involves equality (i.e., a willingness to learn from each other) and parity (i.e., incorporating everyone's skills and strengths into the partnership) (Sheridan & Kratochwill, 2008). Collaboration and partnership amongst stakeholders are key components to providing consistent supports for students. Specifically, collaboration can be enhanced by both identifying stakeholders from the home, school, and community environments and ensuring efficient and effective communication between them. These components involve maintaining open-mindedness and respect toward each member's ideas and opinions and a mutual understanding that each stakeholder contributes unique and knowledge and skills.

Family partnerships in particular are associated with many benefits including satisfaction with services and treatment effectiveness (Garbacz et al., 2016). Family involvement can be achieved both at the systems level and the level of individual students. At the systems level, administrators should make every effort to understand parents and families in terms of demographic factors, priorities, and the local resources available. At the student level, teams should encourage parents and the autistic student to

express their priorities for education and goal attainment. Participation should not just be limited to an annual IEP meeting, but rather a continuing dialogue in which the family is invited by the team in the decision-making, consenting or assenting to intervention, and participating in extensions of these services in the home environment.

Christenson and Sheridan (2001) discuss several factors that help strengthen partnerships and enhance collaboration between schools and stakeholders. First is to approach the partnership with a joint vision of sharing responsibility for students' educational outcomes. Specifically, ensure that home, community, and school-based stakeholders acknowledge that they are each impactful in the student's educational outcomes. Second, facilitate a "we is better than me" perspective. Rather than focusing on only one subset of stakeholders (i.e., just family, community, or school), foster a belief that all stakeholders working together can make a stronger impact on student outcomes. Third, ensure that the school as a whole has a welcoming climate or atmosphere toward caregivers and community partners (Christenson & Sheridan, 2001). Translating more technical terms into caregiver-friendly language when discussing students is one way to facilitate partnerships (e.g., Critchfield et al., 2017; Kelly et al., 2019) and to foster a more welcoming climate. Other examples of how to foster a welcoming school atmosphere include school newspapers that incorporate caregivers' ideas and feedback, fostering school-caregiver relationships with "family nights" or similar events, and establishing easily accessible communication networks between caregivers and school staff (e.g., synchronous and asynchronous communication options).

Program Evaluation Program evaluation can play an important role in providing stakeholders with useful information regarding features of services and supports and the implementation and effectiveness of interventions provided to meet the needs of autistic students. Stakeholders may prioritize a set of guiding questions for the program evaluation to address which may serve as

the focus of the evaluation (NAC, 2009). Areas of focus for program evaluations may include (a) compliance with state and federal quality initiatives (Soukakou et al., 2015), (b) overall program quality and effectiveness (Odom et al., 2018), and (c) needs assessment to inform planning to establish, improve, and sustain implementation of evidenced-based practice (NAC, 2009). Common indicators of individual program outcomes may include student improvement on standardized assessment measures and targeted skill mastery (Dixon et al., 2017). It is also important, however, to evaluate the quality of program components such as the learning environment, systems in place to support staff training and professional development, implementation and monitoring of evidenced-based practices, data-based decision-making, and development and implementation of programming that addresses the core and associated features of ASD (Odom et al., 2018, Crimmins et al., 2001).

Several program evaluation tools have been developed and used to evaluate aspects of quality of educational programs serving students with disabilities including the Inclusive Classroom Profile (ICP, Soukakou et al., 2012), Environmental Rating Scale (Van Bourgondien et al., 1998), Autism Program Quality Indicators (Crimmins et al., 2001), and the Autism Program Environmental Rating Scale (APERS; Odom et al., 2018). For example, the APERS can be used to evaluate program quality in several areas such as learning environment, assessment, curriculum, communication interventions, social interaction interventions, personal independence, functional behavior, family involvement, and teams (see Odom et al., 2018 for a comprehensive description and psychometric properties). Program evaluation tools can be useful to assess current status of implementation efforts, and to identify areas that would benefit from development. Conducting focus groups with stakeholders has been shown to be an effective approach. Focus groups involve hosting a discussion with a small group of individuals and posing questions to the group, often with the use of open-ended or semi-structured interviews or facilitating group activities like

word-mapping or “think-aloud” sessions. While individual interviews are less prone to reactivity effects among those being interviewed, conducting focus groups is a much more time and resource-efficient method for collecting important qualitative data, and participants can respond not only to the facilitator’s questions but also engage in dialogue with other participants (McLeod, 2011). Iovannone et al. (2019) recently used focus groups to assess the perspectives of teachers, administrators, and parents regarding implementation of evidence-based interventions (EBIs) for autistic students. After analyzing themes from the qualitative data generated by individual interviews and focus groups, the authors confirmed previous research indicating teachers receive insufficient training and resources to implement EBIs, and intervention efforts tend to focus on immediate student needs rather than systemic changes and capacity-building. Educators also indicated coaching models may be conducive to long-term implementation by providing an opportunity to receive much-needed training, as well as guidance and support throughout the process of identifying and implementing interventions.

Implementing Evidence-Based Practices

Even when partnerships with stakeholders are established, school systems may encounter several barriers with respect to establishing and maintaining implementation of evidenced-based practices (EBPs) to effectively meet the educational needs of autistic students. It is therefore critical for school systems to establish effective and durable systems to support initial and sustained implementation of specific comprehensive and focused interventions (Anderson et al., 2020). Educators must be aware of possible EBPs to employ and when and how to use them correctly with students, as well as ongoing support while doing so. This begins first with effective training, but sustained implementation will likely require ongoing coaching.

Evidence-Based Training

Most special education teachers receive very little training that is specific to autistic students (Hsiao & Sorensen Petersen, 2019), and even less training on how to promote prosocial behaviors and respond to challenging behaviors of autistic students. The bulk of educators’ training on supporting autistic students often comes in the form of professional development (PD) training. Unfortunately, relying solely upon PD is likely to be insufficient. Educators receive PD for a wide variety of topics and they will require significantly greater levels of training and support than any one PD can provide. Further, typical PDs often fail to include instructional strategies that are known to promote behavior changes. That is, most PDs rely upon didactic instruction without including opportunities for learners to practice new skills and receive feedback on their performance (Kirkpatrick et al., 2019). Finally, few educators receive additional training and support after PD. Research has demonstrated the folly of this “train and hope” approach; fidelity of implementation tends to be low following didactic training when it is not followed by additional support (Joyce & Showers, 2002).

A promising method for training educators on EBPs is behavioral skills training (BST; Miltenberger, 2008). BST is a flexible model for teaching new skills that is based on empirical research. The model includes four primary steps: (1) didactic instruction; (2) modeling of the skill; (3) rehearsal, or opportunities for the trainee to practice; and (4) feedback from the trainer. BST is systematic but also flexible. For instance, the modeling component may be done in vivo by the trainer, or the trainee can be provided with video models or other exemplars, and opportunities to practice often include role-play between the trainer and trainee. It is also beneficial for trainees to practice the skill and receive feedback until a criterion for success is met (e.g., demonstrating the skill with at least 90% fidelity). Research demonstrates that BST is an effective strategy for teaching an array of skills related to supporting autistic students. For example, BST has been used to train pre-service teachers to implement

EBPs (Sawyer et al., 2017) and improve implementation of behavior plans (Hogan et al., 2015), among others (interested readers should refer to Kirkpatrick et al. (2019) for a more comprehensive review). It is important to note—especially from a systems-level perspective—that BST can be used to train not only individual educators, but it is also easily adapted to group settings for increased efficiency.

Ongoing Coaching

After educators have been introduced to and trained on a new skill or strategy, sustained implementation becomes the next important milestone. Sustained implementation can be achieved through ongoing coaching. While coaching may take many forms, behavioral consultation (Kratochwill & Bergan, 1990) is most conducive to school settings (Erchul & Martens, 2010). Like other consultation models, behavioral consultation involves a coach (i.e., consultant) working with an educator to improve student outcomes. Coaches in such cases may be professionals from within the school district like school psychologists, board-certified behavior analysts (BCBAs), social workers, or others with specialized training; or professionals from the community such as psychologists or mental health counselors, social workers, and BCBAs (many BCBAs are employed by private organizations that contract with schools). Behavioral consultation utilizes elements of applied behavior analysis to improve outcomes for students through changing the behavior of the adults that support them. As such, consultees (e.g., teachers) are active participants in the process and primarily responsible for implementation. Rather than working in a supervisor/supervisee relationship, a consultative or coaching relationship is more egalitarian. One overarching goal of consultation is to build the consultee's capacity (Ysseldyke et al., 2012) and to ultimately “work themselves out of a job” by fading their support over time. It involves a systematic, problem-solving approach that consists of four broad steps: (1) identification of the problem, (2) problem analysis, (3)

plan implementation, and (4) problem evaluation (Erchul & Martens, 2010). The following paragraphs outline each of these steps in the behavioral consultation process as they apply to supporting autistic students.

Problem Identification The first stage of coaching begins with identifying a problem faced by the stakeholder that needs to be solved. These may involve problems that are identified through needs assessments or they may arise organically from within classrooms. An educator may face a challenge supporting a particular student or require follow-up support after a professional development training. In either case, the coach and educator must meet to operationally define the problem. This allows the coach and educator to elucidate the problem at hand and in some cases prioritize between multiple problems, as well as set tentative goals for change. It also allows the coach and educator to determine how to collect data that will be used to establish a baseline and later to monitor progress toward goals (e.g., how to quantify indicators of the problem). Perhaps most critically, this first phase is an opportunity for the coach and educator to establish rapport and a working alliance, which facilitates positive outcomes (Coffee & Kratochwill, 2013). The coach also has an opportunity to set expectations with the educator, such as by providing psychoeducation about autism spectrum disorder or previewing the intervention process.

At this stage, the coach may consider incorporating the readiness of the learner to engage in the desired change of behavior (i.e., implementing EBPs). Part of this includes strategies listed previously, such as forming partnerships with stakeholders and conducting needs assessments. Through these processes, change agents may discover that educators are in different positions in terms of their readiness or willingness to adopt new practices. For example, some educators may be eager to learn about new strategies and ready to try applying them in the classroom, whereas other educators may be skeptical of new strategies or insistent upon using those they already employ. To the extent possible, training should be tailored

to meet the needs of educators in different stages of the process of change to maximize its effectiveness. Elements of motivational interviewing, such as developing a working alliance between coaches and teachers and exploration of teachers' goals and values as they relate to initiating change, have shown to be promising (Frey et al., 2017).

Problem Analysis In this second phase, the coach and educator meet to develop a plan to address the problem. Typically, this involves first reviewing baseline data that has been collected and setting more specific goals for change. Next, the coach and educator develop a plan to address the problem. Ideally, plans should be based on or incorporate EBPs. Due to limited training or prior experience, some educators may be unfamiliar with EBPs that are available to them, or they may need assistance identifying the most appropriate EBP to match the needs of their students and the school context. Coaches should use their clinical expertise to help guide the selection of EBPs, while also being sensitive to the preferences of educators and constraints imposed them in typical school settings. For example, an intervention like response-interruption and redirection (RIRD; Martinez & Betz, 2013) may be an evidence-based practice for reducing vocal stereotypy, but it is also can be time and resource-intensive and therefore may not be feasible for a teacher who is responsible for multiple students. Implementing EBP is a process that involves not only identifying interventions that are supported by research evidence but also making decisions based on clinical expertise, the values, and preferences of the educator (and students, when possible), and the school context (Slocum et al., 2014). Coaches are encouraged to consider not only the research evidence behind a given intervention but also its contextual fit (Monzalve & Horner, 2020). Contextual fit is defined as the extent to which there is a match between an intervention and the values, knowledge, skills, and resources available to those responsible for implementation (Monzalve & Horner, 2020). This can go a long way in the planning process for improving program quality and occurs in initial selection of intervention or curricula through

adoption and then adaptation as the environment changes over time. For instance, the resources element considered the willingness of the system to devote resources needed for curricular materials, training, and technical support. Further, assuming there is an empirical base, the cost of the intervention (time, energy, material cost, etc.) is also important. Contextual fit is a determining factor in bridging the research-to-practice gap that often exists in schools.

In addition to choosing an intervention, the coach and educator should also develop a system for collecting data on both the problem (e.g., a student outcome, like the frequency of a target behavior) and the extent to which the educator implements the intervention as intended, known as procedural fidelity (DiGennaro Reed & Coddling, 2014). Assessing procedural fidelity not only allows educators to determine whether an intervention is implemented properly but these data can also be used for providing targeted feedback to the implementor. The intervention should also be centered on the generalization of student skills to ensure that the skill will occur across contexts (e.g., other school routines, home, community settings) rather than just the immediate context (e.g., Kazdin, 2005; Stokes & Baer, 1977). If generalization is not systematically trained, the skill may not "cross" contexts automatically. For example, an individual learning to request access to items by saying "I want" should be instructed in such a way that they use "I want" beyond the school-based setting or across people other than the educator (e.g., different teachers, parents, peers). Specifically, teaching skills to a pre-determined criterion and teaching within the natural setting are strategies that may increase the likelihood of skill generalization and may also increase the likelihood of skills maintaining across time (Neely et al., 2016), another critical feature of successful interventions. In summary, when implementing interventions, the ultimate goal should be for the student to independently use the skill across contexts (i.e., generalized use of the skill) and across time (i.e., maintaining the skill).

At this stage, it is also important for the coach to provide foundational training to the educator so they can implement the intervention effectively. As mentioned above, behavioral skills training (BST) is an effective strategy for ensuring educators have mastered the intervention and will be able to implement it with minimal errors. In many cases, the same tools used to monitor procedural fidelity can be used during role-play to determine whether the educator can demonstrate the intervention with a minimum level of fidelity before implementation. This initial training is critical for two important reasons. First, interventions that are implemented with low procedural fidelity are less likely to be effective (Sanetti & Kratochwill, 2009). In turn, if interventions are less effective, educators may experience burnout, and it can be more difficult to re-initiate an intervention or implement other interventions in the future. Ensuring educators are adequately trained before implementing interventions is better for students and can also help establish trust and rapport between the coach and educator. In addition to training, implementation planning (Fallon et al., 2016) has also shown promise as a strategy for increasing the likelihood that educators will be successful. Procedures such as anticipating logistical and other barriers to implementation ahead of time and developing an action plan for addressing them can reduce the likelihood of inadequate procedural fidelity.

Ideally, interventions should be phased out (i.e., “faded”) as quickly as possible once students can demonstrate components of the targeted skills independently. When an intervention is developed, a plan to fade the intervention should also be developed to emphasize the focus on fading supports and increasing independence. A fading plan may include specific goals focused on independently emitting a component of the skill that the client must achieve before moving forward to the next goal. As the client reliably emits responses independently, the coach and educator use these data to strategically fade supports.

Plan Implementation Under coaching models, the educator is primarily responsible for implementing the intervention, though it may be beneficial for the coach to take a more proactive approach in some situations. For example, depending on the educator’s experience and comfort level with the intervention, it may be preferable for the coach to model the procedures in the classroom while the educator observes or be present with the educator when first implementing to provide verbal or gestural prompts to the educator as needed (Anderson et al., 2020). Similarly, a strategy known as bug-in-ear coaching, where prompts and corrective feedback are provided to consultees in real-time through an earbud, has also been shown to be effective in promoting procedural fidelity of interventions for autistic students (Rosenberg et al., 2020). These supports can be faded as the educator becomes more comfortable with the procedures.

One of the most difficult aspects of supporting autistic students is sustaining consistent implementation across time. To this end, it is important during this stage to continually monitor procedural fidelity, especially when an educator is implementing a plan independently. When implementation is going well, EBPs are implemented with consistency and the student is demonstrating progress. It is important for stakeholders to continue to “check in” and ensure implementation continues to go smoothly and, ultimately, completely fade the intervention. When implementation is *not* going well (e.g., inconsistent implementation or lack of student progress), this may signal to the stakeholders that additional support is warranted. Some examples of additional support include providing a booster training, increasing support, or implementing a different intervention. When booster trainings are warranted, elements of BST may be used (Miller et al., 2014). If initial training was sufficient but procedural fidelity is below the expected criterion, providing the educator with performance feedback is an empirically supported strategy for improving fidelity (Fallon et al., 2015). The tools used to assess procedural fidelity can be used to provide targeted feedback

about specific components of the intervention and reinforce components that are being implemented well. Research also indicates that using graphical data can enhance the efficacy of performance feedback (Hagermoser Sanetti et al., 2007), and that follow-up emails from coaches can be sufficient in some cases (Fallon et al., 2018). Collier-Meek et al. (2013) provide a useful heuristic for making decisions about what supports to provide and when, based on factors related to educators' procedural fidelity and student progress.

Just as interventions and supports for autistic students should be faded over time as they become more independent, so too should the coaching provided to educators as *they* become more independent. That is, as the educator demonstrates greater levels of sustained procedural fidelity, the coach may reduce the type or intensity of coaching provided. For example, if a behavioral consultant is coaching a school-based team on conducting functional behavior assessments (FBAs) within the school setting, over time the team should become more independent and rely progressively less on the support of the coach. As the team increases their independence with conducting FBAs, the consultant progressively fades their support (e.g., fading from 4 hours of coaching per month to 1 hour per month, and later brief 15-min check-ins each month).

Problem Evaluation Although implementation involves formative evaluation of student progress and procedural fidelity for decision-making purposes (e.g., modifying the intervention or providing additional coaching), behavioral consultation also involves periodic summative evaluation to determine the effectiveness of interventions and supports and assess whether goals are being met more globally (Erchul and Martens, 2010). To help facilitate ongoing buy-in, it is critical that all stakeholders are actively involved in this process. Stakeholders should convene to review student data as well as data related to implementation of the intervention in order to make decisions such as whether or how to fade an intervention or coaching, how to address barriers to implementa-

tion if they arise, or to set new goals and identify new interventions when necessary.

Building Capacity for Sustained Implementation

To further sustain implementation and to build and maintain skills within a school system, adopting and implementing a systems-level training model may also be valuable. The train-the-trainers model (also referred to as pyramidal training) involves providing training to staff to be trainers and coaches of additional staff (Page et al., 1982). Training individuals who will become trainers themselves ultimately builds internal capacity and increases the likelihood of sustaining implementation of interventions and practice. To illustrate, Erath et al. (2020) recently explored the pyramidal training model within a non-profit organization providing residential services for individuals with disabilities. The authors used pyramidal BST to teach staff how to train other staff members on the same BST procedures. Their results indicated that staff could effectively train each other to use BST through a combination of group training and performance feedback and that the procedural fidelity of the trainees implementing BST was maintained for up to 4–6 weeks following the initial training. The pyramidal training model has also been used to train educators to conduct functional analyses (Kunnavatana et al., 2013) and conduct preference assessments (Pence et al., 2014).

School systems can adopt such a training model to ensure staff are properly supported and can generalize new knowledge in skills to novel situations, such as challenges they may face with other students in different contexts. Additionally, staff turnover in school settings is a problematic barrier to sustained implementation of EBPs over time and across contexts (Ghere & York-Barr, 2007). Educators who receive training may end up taking their new knowledge and skillsets with them when they leave school systems, in some cases restarting a costly cycle of re-training for the educators that take their place. School systems can proactively address this problem by

establishing internal systems that ensure resources for training are available when needed and other educators have the requisite skills to serve as coaches for new or less-experienced staff. In fact, implementation of EBPs along with monitoring of treatment fidelity has been shown to reduce staff turnover (Aarons et al., 2009), though it is unclear the extent to which this is true in schools.

Future Directions for Research and Practice

This chapter has provided an outline for professionals working in schools who wish to bridge the research-to-practice gap regarding EBPs for autistic students. Implementing EBPs at scale—and sustaining implementation over time—requires the adoption of a systems-level perspective. Educators must ensure that the many stakeholders involved in the education of autistic students are involved throughout this process and that systems are in place to ensure EBPs are identified, educators have the resources necessary to implement them, and practices and outcomes are evaluated to inform decision-making. However, there is a critical need for additional research on evidence-based practices for autistic students.

Although the systematic reviews summarized earlier in this chapter represent the best available evidence to date, they are not without their limitations. First, many focused intervention approaches are difficult to assign a singular label and many behavioral interventions in practice involve a combination of multiple approaches (e.g., pairing visual cues with reinforcement strategies and extinction). Current reviews do not sufficiently account for such variation and the degree to which such combinations may impact the effectiveness of EBPs is unknown. Second, the reports are systematic reviews of existing *positive* evidence for interventions, but they do not include research that is high-quality but features null or negative effects of interventions. As such, these reviews do not provide true estimates of the effectiveness of the featured interventions, nor do they provide estimates of their relative

effectiveness for autistic children; only meta-analyses, which involve pooling effect sizes across multiple studies, accomplish this. Although numerous meta-analyses examining the effects of focused interventions exist, they tend to be limited in scope to a singular intervention or outcome. To date, only de Bruin et al. (2013) have conducted a meta-analysis of multiple school-based interventions, though their research was limited to autistic adolescents and only four interventions: antecedent interventions, contingency manipulations, self-management, and video-based interventions. Finally, much of the research supporting EBPs has been conducted in clinical settings, as opposed to schools, and of the research that has been conducted in schools, most of it was implemented under highly controlled conditions that do not reflect typical school environments where EBPs are needed (Martin et al., 2020). It is also apparent that many student populations are under-represented—or at least under-reported—in this research, such as children who are marginalized along lines of race and ethnicity (Pierce et al., 2014) and likely socioeconomic status as well. Such variables may significantly impact the viability of EBPs in schools. Given these limitations, educators are urged to be cautious when identifying and implementing EBPs (though this is good advice regardless of the status of the literature base).

Another critical area of need is research on feasible and effective methods for bringing EBPs into school systems. While many strategies are reviewed within this chapter, research is needed on how to overcome common barriers to implementing EBPs in typical school settings. Recent research has shown the promise of bringing comprehensive models for EBP into schools. The National Professional Development Center on Autism Spectrum Disorder (NPDC) has developed a four-component model that involves (1) improving program quality of classrooms, (2) using measurable and observable goals for individual students, (3) matching goals to EBP, and (4) implementing EBPs supported by coaching (Odom et al., 2013). A recent randomized controlled trial (RCT) demonstrated that the NPDC model led to greater implementation of EBPs and

greater progress toward student goals (Sam et al., 2020). Similarly, Anderson et al. (2018) developed a comprehensive model composed of intervention modules that educators select and implement while receiving training and support from a coach. A recent pilot RCT of this modular approach, though underpowered, also showed promise for improving student outcomes, and educators found the approach to be socially valid (Anderson et al., 2020). Although these results are promising, questions remain regarding the intensity of coaching that is needed to encourage sustained implementation (i.e., once coaching is faded) and how best to transfer coaching and other systemic supports to educators as opposed to highly experienced research teams. Research that focuses on bringing these programs to marginalized populations that may face unique barriers to implementation and adoption is also warranted. Only through additional, high-quality research will educators and other professionals be able to ensure EBPs are accessible for all autistic students.

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Cultural Competence and Cultural Humility as Foundations for Meaningful Engagement Among an Educational System of Care for School Stakeholders

Caroline S. Clauss-Ehlers and Erica R. Garagiola

Introduction

The Centers for Disease Control and Prevention (CDC) defines cultural competence as “a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations” (CDC, 2020). The CDC adapts the definitions provided by Cross et al. (1989) where culture is defined as an “integrated pattern of human behavior that includes thoughts, communications, actions, customs, beliefs, values, and institutions of a racial, ethnic, religious, or social group” and competence is defined as “having the capacity to function effectively” (p. 13). Others have defined cultural competence as “the knowledge, attitudes and skills needed to communicate and interact with culturally diverse populations” (Schmid, 2020, p.7) to “respond respectfully and effectively to people of all cultures, languages, classes, races, ethnic backgrounds, religions, spiritual traditions, immigration status, and other diversity factors in a manner that recognizes, affirms, values, and preserves their dignity” (Danso, 2016, pp. 412–414).

As the United States became increasingly demographically diverse, the need to respond to diversity in clinical practice and training was critical (Tervalon & Murray-García, 1998). In 1981, for instance, Dr. Derald W. Sue published *Counseling the Culturally Different: Theory and Practice*, which presented key considerations in cross-cultural counseling. In 1994, the Institute of Medicine (IOM) provided a new definition of primary care that incorporated the importance of family and community as critical contextual factors for intervention. The report defined primary care as “the provision of *integrated, accessible health care services* by clinicians who are *accountable* for addressing a large majority of *personal health care needs*, developing a *sustained partnership with patients*, and practicing in the *context of family and community*” (Donaldson et al., 1994, p. 16). In 1995, the Pew Health Professions Commission addressed the importance of cultural competence in training.

Subsequently in 2001, the groundbreaking Surgeon General’s report, titled *Mental Health: Culture, Race, and Ethnicity* (US Department of Health and Human Services [USDHHS], 2001), provided a review of the evidence-base on mental health intervention across diverse communities, addressed the issue of stigma, and highlighted critical mental health disparities in the access and use of mental health services among diverse racial/ethnic communities. In 2003, the American Psychological Association (APA) published the

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Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (APA, 2002). The 2002 Guidelines made a significant contribution to the cross-cultural psychology literature and “[reflected] knowledge and skills needed for the profession in the midst of dramatic historic socio-political changes in U.S. society, as well as needs from new constituencies, markets, and clients” (p. 1).

Cultural Competence vs. Cultural Humility

As the concept of cultural competence took hold across disciplines, critics began to find fault in the binary construct implied by the semantics of cultural competence, such that if one is not culturally competent, they are incompetent, or ill-suited (Danso, 2016; Green-Moton & Minkler, 2019). Additional critiques revolved around debates of whether someone could ever be truly competent in another’s culture, as well as questions about whether cultural competence could ever reach a static endpoint or goal (Danso, 2016; Kumagai & Lyson, 2009). Nonetheless, the application of the cultural competence framework remains a useful accountability and introspective tool in guiding authentic and effective interaction.

Melanie Tervalon and Jann Murray-García introduced the term cultural humility in 1998. A multidimensional concept, cultural humility embodies three factors that emphasize lifelong commitment and constant learning. These include: (1) self-evaluation and critique, (2) mitigating and correcting power imbalances, and (3) developing partnerships with communities who will advocate for others while holding institutions accountable (Tervalon & Murray-García, 1998). A lifelong aspect of cultural humility is emphasized, along with the acknowledgment (or humility), that one will continually have much to learn (Goforth, 2016). In this sense, and in contrast to cultural competence, there is no finality, goal, or endpoint (Haynes-Mendez & Engelsmeier, 2020). Rather,

individuals are encouraged to be flexible and humble as they continuously reevaluate themselves and their abilities (Water & Asbill, 2013).

Cultural humility has two dimensions: intrapersonal and interpersonal. The intrapersonal dimension refers to developing an awareness of one’s abilities and limitations with regard to knowledge of another’s culture (Danso, 2016). This dimension involves being humble and engaging in constant self-evaluation, highlighting the need for cultural self-awareness and examination of one’s personal biases, stereotypes, prejudices, norms, attitudes, beliefs, and behaviors. The interpersonal dimension refers to having an “other-oriented” stance (Danso, 2016; Haynes-Mendez & Engelsmeier, 2020; Waters & Asbill, 2013). This dimension focuses on the importance of being open and curious to learning rather than assuming one already has the knowledge and skills needed to address any given situation.

The American Psychological Association’s *Multicultural Guidelines: An Ecological Approach to Context, Identity, and Intersectionality, 2017* discusses how cultural competence and cultural humility are not competing conceptions, but rather complementary concepts (APA, 2017; Clauss-Ehlers et al., 2019). The *Multicultural Guidelines* discuss how interactions can involve a combination of both cultural competence and cultural humility in a cross-cultural context. Cultural competence is enhanced by the lifelong and critical self-reflection aspect of cultural humility, thus negating any implication of an endpoint to competency and self-awareness (APA, 2017; Clauss-Ehlers et al., 2019).

Both conceptions have played important roles in building understanding and awareness about “ability/disability, sexual orientation and gender identity, and numerous other dimensions too often characterized by inequitable power, privilege, and injustice that affect health and well-being” (Greene-Moton & Minkler, 2019, p. 145). The work driven by cultural competence and cultural humility challenges individuals to confront inequitable institutions and systems that have proliferated injustices (Greene-Moton & Minkler, 2019).

By way of example, a mental health professional may be competent working with Spanish-speaking clients and share a linguistic history, as well as have training in psychological interventions in Spanish. This all suggests that the psychologist is culturally competent in working with Spanish-speaking clients. However, the mental health professional may be working with a client with a very different immigration experience. For instance, the mental health professional may have immigrated to the United States on an airplane due to having family in the country, while the client may have had a traumatic migration experience leaving one's country of origin. In this context, a cultural humility perspective encourages mental health professionals to self-evaluate and be aware of the limits of understanding in work with the client. From here, as presented in this example, the mental health professional can seek to be open to learning about differences in immigration experiences, fostering deeper cultural humility, yet building from established cultural competencies.

Cultural Competence and Humility (CCH) as an Operational Term

Given the complementary aspects of cultural competence and cultural humility, this chapter proposes a term that combines both. The cultural competence and humility (CCH) model reflects the value of putting these two concepts together. The CCH model reflects trends in the debate between cultural competence and cultural humility that view the value of both concepts. Several authors have expressed that cultural competence and cultural humility are concepts that can occur alongside one another (Yancu & Farmer, 2017). Others have suggested that cultural competence be re-defined to include an intersectional focus and consideration of power inequities (Chiarenza, 2012).

The term CCH provides a related, but somewhat different perspective. CCH states that cultural competence and cultural humility are connected as a construct, rather than having one aspect of the construct being permeated into

another. The rationale for this approach is that, in keeping the constructs wholly unchanged, the integrity behind each individual construct remains intact. In other words, combining the two concepts into one overarching system does not detract from either, but opens a lens to view the complementary strengths and influences of the two constructs (cultural competence and cultural humility) between and within one another. With this in mind, systems of care (SOCs) can better evaluate how aspects of each concept (e.g., cultural competence and cultural humility) are being operationalized within them.

A CCH ESOC Framework of Multiple Stakeholder Involvement

In this chapter, the first author introduces the concept of an educational system of care (ESOC). Her rationale for introducing the ESOC concept is due to the tendency to exclude educational systems in our understanding of systems of care (SOCs). In 1999, Woodruff and colleagues explored the important role of education in SOCs. The terms they used at the time included "school-based systems of care" and "education in a system of care" (Woodruff et al., 1999, pp. 13 and 10, respectively). According to a review of the literature, it appears that no new concepts have been introduced since 1999 that integrate the important role of education and educational systems in SOCs for youth with mental health issues.

Georgetown University's National Technical Assistance Center for Children's Mental Health defines a system of care (SOC) as "A spectrum of effective, community-based services and supports for children and youth with or at risk for mental health or other challenges and their families, that is organized into a coordinated network, builds meaningful partnerships with families and youth, and addresses their cultural and linguistic needs, in order to help them to function better at home, in school, in the community, and throughout life" (p. 6) (see Stroul et al., 2010). The ESOC concept builds upon this framework by locating the important role of the SOC within the educational context. Given that the school mental

health (SMH) movement has led to many states supporting the emotional needs of youth by providing mental health/counseling services within the school context, a logical next step is that educational systems take a lead in the SOC philosophy. On the other hand, putting educational systems at the forefront of systems of care seeks to address the reality that schools, a place where youth may receive counseling, are often overwhelmed and understaffed. For instance, research has demonstrated an average of one school psychologist for every 1381 students and one school counselor for every 482 students (Strauss, 2018).

Despite the importance of incorporating educational systems as part of systems of care for child and adolescent mental health, they have been overlooked in the literature. In their 1999 groundbreaking work, *The Role of Education in a System of Care: Effectively Serving Children with Emotional or Behavioral Disorders*, Woodruff and colleagues describe how schools are often left out of the SOC process, despite the many ways in which school systems can support positive mental health outcomes among youth. In fact, as early as the late 1990s, Woodruff (1999) and colleagues shared that “Much more needs to be learned about how to involve schools in a system of care” (p. 10). Their research identified six practices that support the role of education in SOCs: (1) having clinicians in the schools to work with students and families; (2) using school-based wraparound services to support student learning; (3) using case managers to better understand student needs; (4) having school-wide prevention and intervention programs; (5) having centers in schools that support youth behavioral and emotional needs; and (6) using family advocates to support the role of family in youth education and mental health care.

Applying CCH to educational systems of care (ESOC) is critical given the demographic diversity of our schools nationwide. For instance, recent demographic data indicates that US public school students are 47.6% White/White American, 26.7% Latinx, 15.2% Black/African American, 5.2% Asian/Asian Americans, 3.9% students identifying as more than one race, 1.0% American Indian/Alaska Native, and 0.4% Pacific Islander (Riser-Kositsky, 2019).

Schools are also increasingly linguistically diverse. Approximately five million English Language Learners (ELLs) attend public schools, with the majority, around 67%, in grades K-5, and an estimated 800,000 in high school (Bialik et al., 2018; National Center for Education Statistics, 2019). ELLs are considered one of the fastest-growing groups in US public schools (Thompson, 2019), composing approximately 14% of students enrolled in urban districts, 6% in towns, and 4% in rural districts (Bialik et al., 2018; National Center for Education Statistics, 2019).

ESOCs provide an ecological context for the provision of mental health supports for students. As described by Atkins et al. (2010) “Education and mental health integration will be advanced when the goal of mental health includes effective schooling, and the goal of effective schools includes the healthy functioning of students” (p. 40). This is particularly important given data that indicate, although currently one in five youth in the United States has a diagnosable mental health disorder, 85% of those needing treatment do not receive it (Brenner, 2019). Additionally, 4.4 million young people have been diagnosed with anxiety, 1.9 million with depression (aged 3–17 years), and 7.4% of youth (grades 9–12) reported a minimum of one suicide attempt during the year (CDC, 2017).

Data indicates that these prevalence rates are increasing, a reality that is exacerbated by the onset of the COVID-19 pandemic. For instance, recent findings reported by the CDC found that “in 2021, more than a third (37%) of high school students reported they experienced poor mental health during the COVID-19 pandemic” (CDC Newsroom, 2022). The importance of SMH is critical as we consider the impact of COVID-19 and the global pandemic on children and adolescents (Garagiola et al., 2022; Singh et al., 2020). Because schools are in ongoing contact with young people, whether via remote or in-person learning systems, they provide a natural environment to support SMH services (Lyon et al., 2014). In fact, prior to COVID-19, the Surgeon General’s *National Action Agenda* called for the implementation of evidence-based interventions

in community-based settings, like schools, to increase access and reduce mental health disparity among children (USDHHS, 2001). Among children who receive mental health services, an estimated 75% obtain them through educational settings (Farmer et al., 2003).

CCH can be applied to ESOCs to maximize engagement among multiple stakeholders, which can ultimately support better academic and mental health outcomes for students. In their foundational monograph on culturally competent systems of care, Cross et al. (1989) talk about culturally competent systems of care as involving “culturally competent institutions, agencies, and professionals” (p. 19). The five factors that Tervalon and Murray-García, (1998) describe as necessary for a culturally competent system of care include a system that “values diversity, has the capacity for cultural self-assessment, is conscious of the dynamics inherent when cultures interact, has institutionalized cultural knowledge, and has developed adaptations to diversity” (p. 19).

To be truly systemic, these factors need to be operating at each level of the ESOC. Hence, central to the application of CCH to ESOC is that educational institutions are tasked with designing educational and mental health programming that tailors to the needs of the student at a systems level. Cultural adaptation of evidence-based interventions has been described in the literature as interventions that include elements of the initial intervention and also incorporate cultural aspects that reflect the experiences of the population being served, such as student experiences (Bernal et al., 2009).

In their review of meta-analyses in the literature focused on cultural adaptations of mental health interventions, Rathod et al. (2018) found support for the hypothesis that cultural adaptation of interventions was effective. They found adaptations were made in “dimensions of language, context, concepts, family, communication, content, cultural norms and practices, context and delivery, therapeutic alliance, and treatment goals” (p 176). Further, there were statistically significant moderating factors in some of the studies (although not all of these were sig-

nificant in all studies) that included “age, language, ethnicity, use of homogenous groups instead of mixed race groups, and a focus on illness myths and cultural values and beliefs” (p. 176).

Rathod et al. (2018) understood the “moderate to large effect for culturally adapted interventions”(p. 176) with caution, however, given that many studies did not have controls and “nonadapted treatment arms.” Further, many of the meta-analytic studies presented methodological issues. Rathod et al. (2018) also discuss the issue of many meta-analytic studies looking at Western vs. non-Western cultures rather than recognizing the vast amount of diversity within non-Western cultures. Hence, in their review of the meta-analytic literature, Rathod et al. (2018) state that: “Current evidence does not offer a solution to the issue of which components of cultural adaptation are effective, for what population, and whether cultural adaptation works better than noncultural adaption” (p. 177). They state that, despite the need for a framework on adaptation, currently none exists. The framework presented in this chapter identifies the role of multiple stakeholder engagement as facilitating CCH in ESOCs.

The following paragraphs discuss how CCH in ESOCs can incorporate various stakeholder groups in support of a comprehensive, school-wide SMH approach. Stakeholder groups presented below include: teachers, school mental health staff, administrators, parents, other caregivers and family members, students, and communities. Figure 18.1 presents a CCH ESOC framework for multiple stakeholder involvement.

The framework presented in Fig. 18.1 is labeled *A Cultural Competence and Cultural Humility (CCH) Educational System of Care (ESOC) Framework of Multiple Stakeholder Involvement*. As demonstrated in Fig. 18.1, the starting point of the CCH ESOC model is a commitment to CCH (e.g., see the first box in the framework in Fig. 18.1). From this commitment, the next part of the framework is to address how CCH informs the ESOC (e.g., see the arrow from CCH that points to the second box labeled CCH

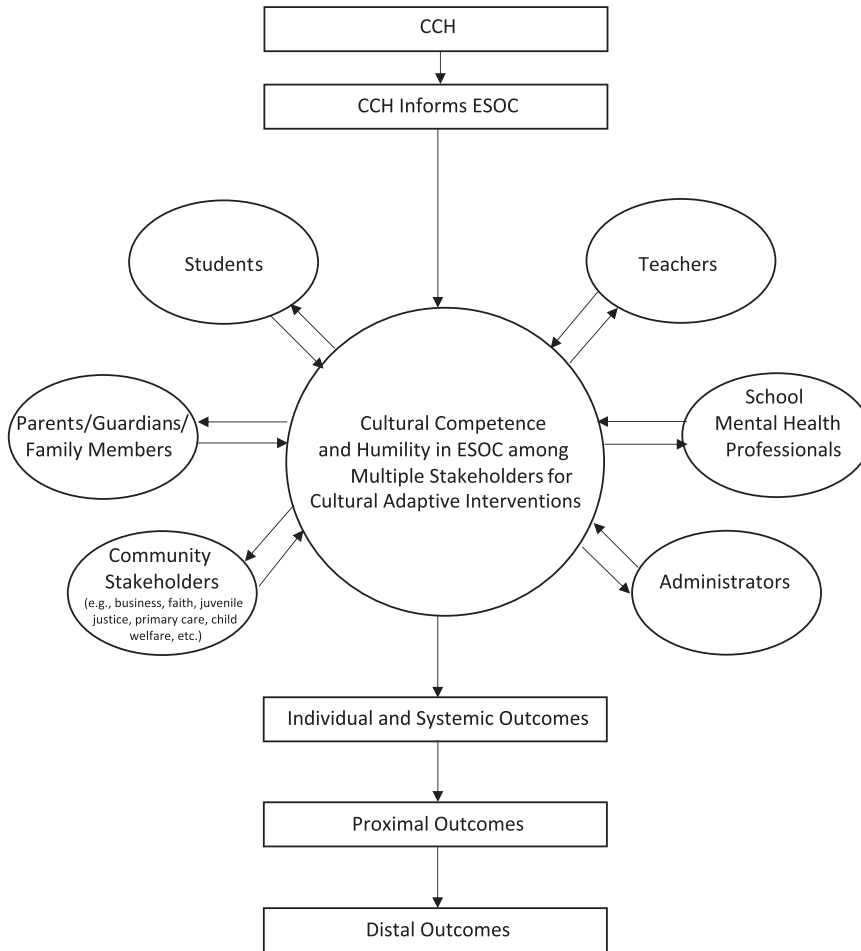


Fig. 18.1 A Cultural Competence and Cultural Humility (CCH) Educational System of Care (ESOC) framework of multiple stakeholder involvement

informs ESOC). This refers to how CCH plays out in the school setting as well as within district policies that influence that setting. As applied to ESOCs, and as indicated in the upper rectangle in the graphic, the ESOC involves school mental health services and supports for students and their families that are coordinated throughout the school to promote positive mental health and academic outcomes. The ESOC is informed by CCH in terms of practices that are aware of cultural differences, incorporate cultural values, are linguistically responsive, and actively engage multiple stakeholder perspectives (again see the second rectangle in Fig. 18.1). Further, an ongoing commitment and self-reflective process among ESOC stakeholders acknowledges that

CCH is an ongoing process that involves continued re-assessment. This conceptual framework was developed specifically for this chapter as the authors thought through the process of how CCH can inform ESOC, and how these processes are influenced by multiple stakeholder involvement in the ESOC.

CCH ESOCs promote cultural adaptive interventions as operationalized by the involvement of multiple stakeholders (see the circle at the center of Fig. 18.1). The six circles that surround cultural adaptive interventions in Fig. 18.1, each represent a stakeholder group. Hence, we see circles for students, parents/guardians/family members, and communities on the left-hand side and teachers, SMH professionals, and

administrators on the right-hand side of the Cultural Adaptive Intervention circle. The bidirectional arrows between each stakeholder circle and the Cultural Adaptive Intervention circle represent how each stakeholder group both informs Cultural Adaptive Interventions that influence CCH ESOC and are subsequently informed by Cultural Adaptive Interventions.

The CCH ESOC' focus on multiple stakeholder groups influencing individual and systemic outcomes corresponds with the ecological validity framework of cultural adaptation (Bernal et al., 1995). This model includes eight types of interventions that provide a framework to develop culturally adaptive interventions “(language, persons, metaphors, content, concepts, goals, methods, and context) that can serve as a guide for developing culturally sensitive treatments and adapting existing psychotherapies to specific minority groups” (Bernal et al., 2009, p. 364). Each stakeholder group is described below.

With regard to the first circle on the left-hand side of the Cultural Adaptive Interventions component of Fig. 18.1, there is a growing literature about the importance of *student* voices in SMH (Weist et al., 2018; Fazel & Hoagwood, 2021). Sprague Martinez et al. (2018) define youth participation as “the process through which young people engage in and influence the issues and institutions that affect their lives” (p. 136). Youth participation in SMH involves stakeholder groups actively collaborating with youth so that their voices are amplified and heard. Engaging the youth voice has been found to promote resilience and well-being (Sprague Martinez et al., 2018), influence policies and decrease mental health stigma (Weist et al., 2018), lead to the delivery of innovative mental health interventions (Burns & Birrell, 2014), encourage community-based participatory research (Clauss-Ehlers, 2020), and promote positive health outcomes (Wallerstein et al., 2011).

Despite the positive influence of the youth voice in SMH as documented in the aforementioned literature, youth participation is often not incorporated within mental health efforts (Sprague Martinez et al., 2018). The lack of

youth inclusion implies a dearth of CCH in relation to SMH within the ESOC. By including youth, we hear their perspectives and can organize services and supports in relation to what they describe as their experience. A failure to incorporate youth voice in SMH means that we “rely on adult interpretations of their realities, [with the] risk that their needs and priorities will be misinterpreted. Meanwhile, opportunities may be overlooked” (Sprague Martinez et al., 2018, p. 135).

It is this generation of students, for instance, that went through the global pandemic, experiencing the impact, isolation, and adjustments to online schooling that adults likely never experienced during their schooling. Because students in 2020–2021 are the generation that went through the schooling situation during and after COVID-19, they have a unique perspective to share. Including the youth perspective aligns with CCH ESOC as it enables the system to reflect upon the services it offers to determine if they correspond with youth needs. Incorporating the youth voice in SMH efforts also aligns with building better youth/adult relationships across stakeholder groups. For instance, research has indicated that youth involvement has led to more positive intergenerational relationships (Augsberger et al., 2017). We now move to the next circle in the CCH ESOC framework that focuses on *parents/guardians/family members* as stakeholders.

Extensive research has shown that parent/guardian involvement in a child's education leads to positive academic outcomes (Boonk et al., 2018). State Singh et al. (2020): “In the times of paramount stress and uncertainty, a secure family environment which the parents can provide is a strong protective factor” (p. 5). Engaging the parent/guardian/family member perspective in SMH services is an important source of information that promotes CCH ESOC. Garbacz and colleagues (Garbacz et al., 2020) present a “developmental cascade model” that helps explain how behavioral issues during childhood can translate into risky behaviors during the adolescent years (p. 110). They state that such behavioral issues in

childhood might be reinforced through various dynamics, including poor family management.

Home-school connections and support provide a positive way to intervene to support positive mental health outcomes among youth (Garbacz et al., 2020). Family engagement has been defined in the literature as “active, interactive, and dynamic ... processes and practices that family members use to engage as equal partners ... with educators and other key stakeholders to support their children’s development” (Weist et al., 2017a, p. 9). The Positive Behavioral Interventions and Supports (PBIS) model encourages educators and school personnel to form partnerships with families that together work toward positive youth behavioral outcomes. What are described as Tier 1 systems are ways to connect school and home communities in support of students (Garbacz et al., 2017; Weist et al., 2017b). Such partnerships provide a foundation for a relationship whereby the school and the family can work together to address behavioral issues that may arise for the student.

Garbacz et al. (2020) identify several aspects of support for families: promoting strengths through praise, collaborating with school personnel regarding the status of their child’s mental health, and working with “interconnected home-school-community teams” to promote positive mental health outcomes (p. 112). CCH in ESOC with parents/guardians/family members involves strategies that can build upon this concept of home-school-community teams. For instance, parents reported that taking a strength-based approach to describing SMH services was an integral aspect of their engagement (Langley et al., 2013). Parents shared it was important to “work on a child’s strengths” (p. 5) and encourage coping and resilience. A strength-based approach invites involvement from parents/guardians/family members, rather than risk their being avoidant if the news from school personnel is always negative. For instance, rather than just calling home when a child has engaged in a negative behavior, the SMH team can call home to share when the child has engaged in something positive at school. Critical to the effectiveness of this level of family

engagement is the ESOC having the perspective that it is better to have parents/guardians/family members and teachers working together rather than working on their own (Weist et al., 2017a, b).

Language can present barriers to parent engagement. Language barriers arise when there are dearth of ESOC professionals who speak the languages of the students and families they are present to serve. Providing linguistically responsive teaching and services is a central aspect of CCH ESOC. Research has shown, for instance, that limited English proficiency (LEP) contributes to having untreated mental health disorders for a longer time period and disparities in access to mental health care among Latinx and Asian American communities (Bauer et al., 2010). For parents/guardians/family members to be fully participating ESOC stakeholders, services, providers, documentation, and communication need to be linguistically responsive and representative of family cultural backgrounds (Breiseth et al., 2011).

The next circle in the CCH ESOC framework of multiple stakeholder involvement involves the role of the larger *community*. The American Psychological Association (APA) revised multicultural guidelines take an ecological approach to the counseling relationship that views the client/clinician relationship within the context of larger, macro-level communities (APA, 2017; Clauss-Ehlers et al., 2019). To this end, stakeholder groups can: be actively involved in connecting students and families with the surrounding community; explore community resources; consider ways that they can support children, families, and the school; and reach out to community organizations to explore strategies to collaborate and support one another.

This ecological approach is similar to Bronfenbrenner’s (1977, 1979) ecological framework that incorporates the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Bronfenbrenner’s (1977, 1979) framework was also incorporated in the revised APA multicultural guidelines document, *Multicultural Guidelines: An Ecological Approach to Context, Identity, and Intersectionality*, 2017 (APA, 2017; Clauss-Ehlers et al., 2019). Specifically, the Layered Ecological

Model of the *Multicultural Guidelines* is the framework that incorporates Bronfenbrenner's ecological context (Bronfenbrenner, 1977, 1979; APA, 2017; Clauss-Ehlers et al., 2019).

The CCH ESOC can identify community resources that provide clinical care for children such as assessment, psychiatric consultation, and psychotherapy. Cultivating these relationships is a way to have referral sources ready should a crisis arise with a child in need of services. Hence, for some schools during the COVID-19 crisis, engagement with community resources involved connecting with Internet providers to determine which students lacked access to a home broadband connection and subsequently working to connect students with Internet services. These community partnerships were critical to helping students have the Internet access needed to participate in online teletherapy and remote schooling (National Cable & Telecommunications Association [NCTA], 2020).

As we move to the right of the Cultural Adaptive Interventions Circle within the CCH ESOC framework, the focus is on specific school personnel stakeholders. The first circle on the right-hand side identifies *teachers* as key stakeholders. Teachers are important CCH ESOC stakeholders who interact with students in an ongoing, daily way. This ongoing classroom time puts teachers in an important position to impart CCH in the ESOC. As CCH educators, teachers are thoughtful about the students before them in the classroom. Students are likely to represent different racial/ethnic backgrounds and immigration histories, and teachers can engage in CCH to be open to learning about their student's experiences (Clauss-Ehlers et al., 2019). Through this self-reflexive process, classrooms can become a place of greater understanding and inclusion.

Teachers as CCH ESOC ambassadors further support classroom inclusion by incorporating lesson plans and curricula that reflect the experiences and racial/ethnic diversity of their students. Culturally Sustaining Pedagogy fosters an understanding of cultural pluralism as it "pushes us to consider the global identities that are emerging in the arts, literature, music, athletics, and film" (Ladson-Billings, 2014, p. 82). One

way to further this work is by building partnerships with parents/guardians/family members to forge home-school connections. In this way, the teacher can learn directly from the family about their culture and cultural experiences. This promotes greater empathy that can subsequently be implemented in classroom lessons. For instance, it is often the case that a teacher will call home when a student has been "acting out" in class or "not paying attention." The parent/guardian/family member may see the number of the school on their phone and dread answering it. By shifting this practice to include calling home when a child has had a good day or has engaged in the classroom in interesting ways that the teacher wants to share with the parent/guardian/family member, the relationship immediately changes to one that is positive and supportive. Now the parent/guardian/family member wants to hear from the teacher to learn more about how their child is doing (Garbacz et al., 2017).

The vantage point that teachers have at being able to observe changes and possible symptoms among their students leads to a natural relationship with SMH professionals. Because teachers observe their students in both in-person and remote learning environments, they can share such changes with them. However, barriers to shared communication may occur when teachers and SMH do not understand one another's roles (Clauss-Ehlers, 2008). For instance, teachers may feel strongly that a student should not be pulled out of class for counseling, while SMH professionals may feel that mental health support is needed to function well in the classroom. To circumvent the possibility of siloed communication, the CCH ESOC approach encourages teachers and SMH professionals to engage in ongoing, collaborative communication with one another.

The circle that follows teachers in Fig. 18.1 is labeled *school mental health professionals*. SMH professionals can support CCH ESOC on many levels. School mental health professionals are encouraged to be aware of their own biases and how these biases may play out in work with students and families. For instance, an SMH professional may assume that families will automatically be on board with and supportive of

counseling, without understanding the potential impact of mental health stigma. By employing a CCH ESOC framework, SMH professionals can encourage parental involvement by seeking to understand parental feelings and attitudes in relation to mental health stigma. In their study, for instance, Langley et al. (2013) surveyed parents about SMH services and found that parents might demonstrate “more resistance to participate if the language feels too threatening or stigmatizing” (p. 5). School mental health professionals can actively seek to understand the cultural and linguistic backgrounds of the students and families they are working with and incorporate this awareness into a cultural adaptation of services.

Just as the literature talks about the importance of home–school–community connections (Grant & Ray, 2018; Epstein et al., 2002; Sanders, 2001), so too it is important to foster interdisciplinary connections between school personnel stakeholders to support PBIS outcomes for students. While intuitively it makes sense that school personnel working in collaboration would promote better outcomes for youth and families, there is a dearth of literature about the importance of within school–school connections among school professionals despite their being critical to provide comprehensive, supportive services for students (Clauss-Ehlers, 2008).

It may be the case, for instance, that SMH professionals and teachers each have their own professional cultures and identities. “The therapy culture, for instance, focuses on the individual or group in contrast to an educational culture that focuses on the class or school” (Clauss-Ehlers, 2008, p. 517). The education culture may not understand the role of the SMH, may prevent the SMH professional from taking the student out of class for counseling, and may question the effectiveness of counseling, or even what the counselor does in individual sessions as opposed to full teaching days (Wengrower, 2001). In contrast, the therapy culture may view the education culture as not incorporating a social–emotional approach, providing too many academic stressors on students, and focusing more on the classroom

rather than the individual child (Clauss-Ehlers, 2008).

CCH ESOC can be furthered for both teacher and SMH stakeholder groups through interdisciplinary training whereby each professional culture learns about the other. It is hoped that effective teacher–SMH collaboration (Suldo et al., 2014; Brown et al., 2017) that incorporates CCH in the ESOC results in positive individual and systemic outcomes (see Fig. 18.1). In consideration of how math teachers and counselors can work together to address math anxiety, for instance, Furner (2017) discusses systemic desensitization as a way to reduce this issue. In systemic desensitization, students gradually learn math concepts and talk about their math fears. In partnership with the SMH professionals, students learn to cope with math fears as they talk through fears associated with math assignments.

The third circle on the right-hand side of the Cultural Adaptation Interventions circle includes *administrators* as CCH ESOC stakeholders. Administrators can provide an overarching framework of support that convenes the work of SMH professionals. Administrators (e.g., principals, assistant principals, directors of special education services) have influence in setting the tone for the provision of SMH services. Varied sectors of educational and mental health professions can collaborate with one another—sharing ideas and seeking feedback in ways that promote a sense of support and thus reduce burnout. The literature indicates that collaboration between principals and school counselors with an awareness of appropriate roles and responsibilities that align with the American School Counselor Association (ASCA) National Model (see <https://schoolcounselor.org/About-School-Counseling/ASCA-National-Model-for-School-Counseling-Programs>) results in positive school counseling program outcomes (McConnell et al., 2020).

Administrators who make up school leadership reflect an aspect of a Multi-Tiered System of Support (MTSS) that “focuses on implementing the key features of school systems needed for effective and sustainable implementation of evidence-based practices and a proactive

approach to supporting behavior to ensure all students are successful” (Weist et al., 2017a, pp. 43–44). Administrators can collaborate across multiple stakeholder groups to ensure CCH ESOC. While the literature is very sparse with regard to ways to support CCH among school administrators within the ESOC, one strategy is to apply Cultural Adaptation Interventions to existing practices within the school setting (Bernal et al., 2009).

Hence, through an application of Bernal’s et al. (1995) ecological validity model to school practices, administrators can be self-reflective and aware of how school practices may create power differentials (a key issue addressed by cultural humility; Tervalon & Murray-García, 1998) that lead to systemic inequities among students. For instance, admission to selective high schools in New York City was claimed to be open to all students throughout the five boroughs, and thus hailed as an equitable system given this “open choice” (Teens Take Charge, 2020). However, what the Teens Take Charge program has described as “academic screening” refers to practices whereby schools have academic parameters that in fact exclude students from being considered for these selective schools (see <https://www.teenstakecharge.com/enrollment>).

Administrators can demonstrate CCH in ESOCs by being aware of inequities and their potentially negative impact on a student’s academic future. One such example involves when a student’s bus regularly arrives late to school. As a result, the student is consistently marked as being tardy to school. The selective high school the student wants to attend has a cut-off that states students cannot be late to school more than ten times in a given academic year. Because the bus is consistently late, the student has 25 late arrivals on his academic record. As a result of this record, the selective high school no longer considers the student.

By incorporating CCH in ESOCs, there is an intentional focus on examining and re-examining school practices and policies to ensure that they promote equity. For instance, administrators who understand that such lateness is beyond the control of the student can work with the transportation company to advocate for an on-time bus

arrival rather than penalize the student. In addition, the ESOC itself can reflect upon how stated benchmarks contribute to an inequitable process and change policy so that youth do not miss out on high school choices due to systemic issues beyond their control.

CCH in ESOC as Operationalized by Multiple Stakeholders: Julieta* (Claus-Ehlers, 2020).

Note: This case was first presented by Claus-Ehlers as part of a webinar presented for the Behavioral Alliance of South Carolina on July 21, 2020 (see Claus-Ehlers, 2021; <https://www.youtube.com/watch?v=Th397RPCRWI&t=1s>).

In March 2020, “within the span of a weekend, children and adolescents across the United States went from attending school to staying home under shelter-in-place orders given the COVID-19 virus. Added to the sudden shift from attending school to being at home, was the immense change school systems experienced as they shifted from the classroom to an online, remote learning environment (Claus-Ehlers & Tummala-Narra, 2022).

Julieta* was a 12-year-old Latina who struggled with the sudden shift from classroom to online learning. She missed her teachers and could not keep up with the online math class. Julieta also missed her classmates who provided a sense of support. She lived with her grandmother, her legal guardian, and was understandably terrified that her grandmother would get sick, and she would be left alone, once again. Julieta’s fears increased as information about the virus changed daily. She felt overwhelmed at the thought of having to stay at home in a small apartment, with no idea about when the quarantine would be lifted.

Julieta received counseling at school as part of her Individualized Education Plan (IEP). Within a short time after sheltering-in-place, Julieta’s school system approved the use of teletherapy so that students receiving supports could continue to do so. This was a historic shift given concerns with teletherapy such as compliance with the

Health Insurance Portability and Accountability Act (HIPAA; USDHHS, 2021).

In counseling, Julieta shared her fear about the possibility of her grandma getting sick. With her therapist, she was able to process the way in which this fear connected with other losses she had experienced" (Clauss-Ehlers, 2021). The therapist explored with Julieta the possibility of including her grandmother in some of the sessions. Given the sessions were now online, the therapist was able to, with Julieta's approval, have sessions with Julieta and her grandmother present. This provided a time that Julieta and her grandmother could talk about their fears and the uncertainty that lay before them. Julieta could share with her grandma that she cared for her and was afraid of losing her, while her grandmother reassured Julieta that by wearing a mask, keeping distance from others, and quarantining, she was doing everything she could to stay safe.

This conversation was particularly important given the surrounding community context. Despite her grandmother's assurances, for instance, life in their urban apartment was marked by the ongoing presence of ambulance sirens. With each ambulance that passed by their window, Julieta and her grandmother knew that another life was at risk due to COVID-19. They also knew that African American and Latinx communities were more profoundly affected, and reportedly more than twice as likely to die from COVID-19 and 4.5 and 3.5 times, respectively, more likely to be hospitalized due to COVID-19 in comparison to White communities (Selden & Berdahl, 2020). Julieta's grandmother was also worried about becoming unemployed given stay-at-home orders for all but essential workers. These financial stressors added to the day-to-day anxiety Julieta and her grandmother experienced.

Julieta also talked about academic concerns like wondering how she could complete her math homework. The school therapist was able to advocate on Julieta's behalf, reaching out to the school to connect her with remote tutoring and encouraging teachers to hold virtual office hours (Clauss-Ehlers, 2021). The school administration organized both virtual office hours and individual

advisement sessions for students. They developed a check-in hour for students where Julieta and her peers could share their concerns about schoolwork and make plans to address them.

Julieta's math teacher began to hold virtual office hour sessions that she could attend as often as needed. This extra time soon resulted in Julieta having a greater understanding of math concepts. Eventually, this led to a higher grade in math."

The CCH in ESOC framework is applicable to this case example. Starting with Julieta as the *student stakeholders group*, it was critical for her to share her perspectives and concerns related to her family, safety, and school. Actively hearing and demonstrating empathy for youth experiences is an example of CCH. For instance, the therapist, the math teacher, and school administrators were understandably initially unaware of Julieta's concerns. The COVID-19 crisis was a pandemic not experienced before. CCH was evident in Julieta's ability to voice her concerns with multiple stakeholders, including her grandmother, and have them be heard (Matarese et al., 2005).

CCH in the ESOC was further demonstrated by the integration of the *parent/guardian/family member stakeholders group* in work with Julieta. Through the conversation between Julieta and her grandmother, Julieta felt reassured and validated. Her grandmother could also let Julieta know what she was doing to advocate for herself and their family as they faced the quarantine. Being able to share feelings with her grandmother meant Julieta didn't have to hide them out of a sense of protecting her grandmother. In addition, it was important for Julieta's grandmother to share her concerns and reactions with the therapist and her granddaughter. This fits with research that indicates grandparents parenting their grandchildren had a more positive view of their own mental health after participating in a SOC case management framework (Campbell et al., 2012).

Figure 18.1 includes the *community stakeholders group* as represented by the third circle to the left of the Cultural Adaptive Interventions circle. The community stakeholders group refers to the impact of the larger surrounding community on the promotion of the CCH ESOC framework and positive outcomes for youth and their

families. For Julieta, larger community supports were found in community efforts by Internet services companies to ensure that there was wireless access in her neighborhood. This community support was critical to Julieta being able to participate in school and receive online counseling services. Her ability to do engage in remote learning through community support occurred within a context of millions of school-aged children across the United States not having access to the Internet (Camera, 2020). This context is further defined by a digital divide that indicates students of color have disproportional access to the Internet. For instance, research indicates that one in three African American, Latinx, and American Indian/Alaska Native students lack high-speed access to the Internet (National Urban League, 2021).

With regard to the *teacher stakeholders group*, Julieta's teacher demonstrated CCH within the ESOC framework by hearing her concerns about participating in a math class online. In response to Julieta's concern, her teacher organized online office hours to be available for Julieta as needed. Part of CCH involves being able to tailor services and supports for youth. An ability to be flexible in the offering of student supports indicates a reflexive process whereby teachers can acknowledge that the current status of services might not fully reflect student needs, such as Julieta's teacher hearing about the need for more supports related to online learning. This recognition is preceded by teacher actions to address the need with scaffolding support, such as the online office hours provided by Julieta's teacher.

Learning science suggests that scaffolding, varying support based on a student's current level of understanding and current needs (van de Pol et al., 2015), promotes academic success (Darling-Hammond et al., 2020). The "zone of proximal development" indicates that children learn when they have the help of an adult who can assist them in their zone (Vygotsky, 1978). Julieta's teacher demonstrated CCH by providing a zone of proximal development to address the disequilibrium she felt during the sudden shift to shelter-in-place remote learning (Vygotsky, 1978).

Julieta's case illustration also demonstrates CCH among the *SMH professional stakeholders group*. For instance, the therapist demonstrated CCH in understanding the importance of family for Julieta. This awareness translated into an application of CCH in the sense that the therapist shifted her approach with Julieta to incorporate her grandmother, thus demonstrating her reflexivity about treatment changes that might provide further support. Through CCH in the ESOC, Julieta and her grandmother were able to share their fears and concerns, as well as share how much they care for one another. The reassurance that Julieta's grandmother was able to offer due to the shift in treatment from an individual to a family modality helped Julieta experience a greater sense of safety.

The role of CCH in ESOC with regard to the *administrator stakeholders group* was also evident in Julieta's case illustration. In hearing teachers, students, and families' state, that additional supports were needed for a remote learning environment, the administration was open and responsive to incorporating changes (see Weist et al., 2017b). Providing additional office hours, individual advisement, and a check-in resource were all strategies that supported Julieta's academic concerns. In building cultural humility, Weist et al. (2017b) talk about the importance of school personnel first building relationships with parents/guardians/family members. By providing these additional resources, the administration was providing additional resources and supports to address academic concerns among students and their families.

In sum, we see these multiple stakeholder contributions leading to *individual and systemic outcomes* as indicated in Fig. 18.1. The first of these, *youth-focused outcomes*, is evident in Julieta experiencing a greater sense of emotional and academic support through multiple stakeholder group involvement. Through the CCH approach of multiple ESOC stakeholder groups, Julieta felt a greater sense of safety and security amid the global pandemic; had greater communication with her grandmother, including issues that were hard to talk about; and had multiple resources to support her in completing her math class.

At the systemic level, *CCH ESOC practices* contributed to Julieta's outcomes. They included responding to the need for the provision of online therapy; collaboration with teachers to provide additional office hours to support student needs; working with school personnel to provide an enhanced advisement process to address understandable concerns emerging from the COVID-19 crisis; and a check-in resource where students could share concerns with their peers and mentors.

Conclusion

This chapter presents the literature on cultural competence and cultural humility. A rationale for the connections between the two terms is presented and subsequently framed as cultural competence and humility (CCH). This chapter explores how CCH can operate at every level of an educational system of care (ESOC). The CCH ESOC framework for multiple stakeholder engagement has cultural adaptation at its center. Cultural adaptation (Bernal et al., 2009) is defined as "the systematic modification of an evidence-based treatment (EBT) or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (p. 362).

The CCH ESOC framework presents multiple stakeholders that both inform cultural adaptive interventions and are influenced by them. These stakeholders include: students, parents/guardians/family members, community members, teachers, SMH professionals, and administrators. Through this systemic framework that examines the school as an educational system of care, all participants are encouraged to engage in self-reflective practices that support positive youth behavioral and academic outcomes. The application of the CCH ESOC framework is illustrated through Julieta's case presentation.

More research is needed on the concept of CCH in ESOCs. To date, there is much literature that presents theoretical frameworks that describe cultural competence and cultural humility (Greene-Morton & Minkler, 2019). However, there are few studies that examine the concepts of

cultural competence and cultural humility jointly. Tormala et al. (2018) conducted one of the few studies that examine both cultural competence and cultural humility. These researchers tested cultural competence and cultural humility through cultural formulation assignments for doctoral students (Tormala et al., 2018). Their research indicated that cultural formulation assignments furthered cultural competence and cultural humility (Tormala et al., 2018). Similarly, when considering CCH within a systemic framework, such as an ESOC, few empirical studies exist (Jernigan et al., 2016). More research is needed that examines how CCH in ESOCs encourages multiple stakeholder involvement and how this involvement mediates the use of cultural adaptive interventions. Similarly, examining how an active use of CCH in ESOCs improves both the delivery and school- and student-level outcomes in school mental health is an important avenue of future research, with high practice and policy implications.

* This is a composite case that is de-identified to protect confidentiality.

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Part III

Training, Coaching and Workforce Development



Helping School-Based Professionals Make a Difference

19

Julie Sarno Owens and Freddie A. Pastrana Rivera

Introduction

In schools, there are a multitude of professionals who promote and support children's social, emotional, and behavioral growth. These include (a) general education and special education teachers who facilitate a safe, welcoming, and predictable environment for learning and growing, and (b) trained school mental health professionals (SMHPs; e.g., school social workers, school counselors, school psychologists, other school-based clinicians) who provide direct services to students to address mental health challenges, as well as coaching supports to teachers to facilitate their use of high-quality behavioral supports. For each of these professionals, evidenced-based practices have been identified to facilitate their work with students; however, there remains a gap between what we know and what we do (Atkins et al., 2016; Ringeisen et al., 2003). This gap persists for several reasons, including inadequate training during pre-service (i.e., training prior to earning a professional degree), inadequate training during in-service (i.e., training while working

in the profession), inadequate implementation supports (i.e., strategies that facilitate high-quality implementation) following training, and inadequate consideration of contextual factors affecting training and implementation supports (Collier-Meek et al., 2019; Eiraldi et al., 2015; Reinke et al., 2011).

The chapters in this section of the Handbook provide a thorough description of challenges in workforce development for SMHPs and teachers, as well as a vision for narrowing the gap between the science and practice by improving workforce development. The goals of our chapter are to supplement the others in this section by highlighting three themes that bridge all chapters and discussing action steps that can be taken by those who train SMHPs and teachers at pre-service and in-service levels. The three themes are: (1) prioritizing the use of performance feedback, (2) preparing the workforce for cross-disciplinary collaboration, and (3) enhancing school professionals' commitment to equity in behavioral and mental health supports.

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Performance Feedback

Whenever we develop a new skill (e.g., in sports, music, theater, surgery), learning is enhanced when we practice the skill and receive feedback that reinforces the successful aspects of our performance and highlights aspects that could be

improved. There is a wealth of evidence documenting the effectiveness of observation and performance feedback across the fields of mental health (Beidas et al., 2014; Edmunds et al., 2013; Herschell, et al., 2010) and education (Ericsson, 2002; Grossman et al., 2009; Solomon et al., 2012). Thus, it is imperative that this element of training and competency development is better integrated into pre-service learning experiences, in-service training experiences, and follow-up implementation supports. However, it is important to note that SMHP trainees, SMHPs, teacher candidates, and teachers are as heterogeneous as their students. Therefore, training outcomes will be maximized to the extent that performance feedback is differentiated to match the learner's developmental level, experiences, and competencies (Ottley et al., 2023; Owens, et al., 2021; Simonsen, et al., 2014).

Pre-service Training

During pre-service training, SMHP trainees and teacher candidates have the opportunity to experience performance feedback within the university classroom setting and practice placements. Thus, we encourage university faculty to include in their courses (a) video demonstrations and/or models of the desired skills and competencies, (b) opportunities for skills practice, (c) opportunities for learners to receive performance feedback from faculty and peers, and (d) opportunities for self-evaluation. Most faculty evaluate class participation as a portion of students' grades. Thus, we recommended that faculty evaluate some or all of these activities as part of students' participation grade: in-class practice of techniques (including preparation for the skills practice; effort toward implementation; adherence to procedures; in the role plays), video submissions of role plays by trainees in class, and peer critique of video submissions. Models for such training are being developed and evaluated (Kerns et al., 2016; Michael et al., 2023; Ottley et al., 2023).

To facilitate these experiences, faculty can use flipped classroom approaches, wherein, during some weeks, students watch video segments of an evidence-based technique that is described or modeled, then come to class prepared to role-play the modeled techniques. This process allows students to spend more time engaged in skill development and obtain more guidance and feedback about their developing skills. For SMHP trainees, there are several module-based approaches to evidence-based therapy services that lend themselves well to graduate student courses (see Prinstein et al., 2019; Weisz & Beerman, 2020; see https://en.wikiversity.org/wiki/Evidence_based_treatment; www.practicewise.com). These resources can facilitate class role plays and include adherence checklists useful for providing performance feedback. Including feedback from a peer (Coogle et al., 2022) and self-evaluation of one's performance expands opportunities for self-reflection. In addition, role plays allow learners to observe diverse approaches to achieving high adherence (i.e., flexibility within fidelity; Kendall et al., 2008). Observing others can enhance one's confidence, normalize the growth through the feedback process, and ultimately help these processes become engrained in the professional development of SMHPs and teachers.

Lastly, those serving as supervisors of a practicum or traineeship, or as mentors to teacher candidates, should include opportunities for trainee self-evaluation and mentor performance feedback in their supervision meetings. If technology is available, supervisors can provide immediate feedback via bug-in-ear technology in real-time (e.g., Barton et al., 2019; Coogle et al., 2015). Alternatively, with audio and video capture technology, supervisors can have mentees select portions to watch together or supervisors can pre-select portions and provide performance feedback using the selections, as such procedures are considered best practices in clinical supervision (Herschell et al., 2010) and teacher candidate preparation (Grossman et al., 2009).

In-Service Training

Due to time and personnel constraints, finding ways to engage in performance feedback during in-service training may be more challenging than during pre-service training. However, given the evidence for the benefits of performance feedback, we can no longer consider this a luxury or bonus feature. There are at least three ways to integrate performance feedback at the in-service level. First, school administrators who schedule workshops and trainings on evidence-based practices for SMHPs or teachers should no longer schedule or pay for trainings that do not include some aspect of practice and performance feedback either during or following the training. We have ample evidence that one-time didactic approaches are insufficient to change adult behavior (e.g., Beidas & Kendall, 2010; Blank et al., 2008). Thus, relying solely on didactic trainings to improve SMHPs' or teachers' use of evidence-based practices designed to support the development of children's social, emotional, and behavioral development is unlikely to lead to desired outcomes.

A second way to incorporate performance feedback is to develop programs for inter-professional supports within schools (e.g., coaching or consultation; Nisar et al. 2022). Coaching is a professional development activity in which a coach (someone with specialized knowledge) works collaboratively with an SMHP or educator to change their current practices (Denton & Hasbrouck, 2009). Multiple studies document that ongoing coaching improves implementation of evidence-based instructional and classroom management practices among teachers (e.g., Bradshaw et al., 2018; Fabiano et al., 2017; Sutherland et al., 2018). Pas et al. (2023) review the evidence for coaching with performance feedback on teachers' use of classroom interventions and provide a vision for the next steps in this line of work in research and practice. Similarly, coaching can be applied to SMHPs.

Crocker et al. (2023) provide a model, resources, and description of how one school district created learning communities, supervision teams, and professional supports for performance feedback among SMHPs.

Lastly, over the past decade, researchers have proposed applying a multi-tiered framework to address professional development needs (e.g., Sanetti & Collier-Meek, 2015; Simonsen et al., 2014) similar to multi-tiered frameworks for student interventions (Benner et al., 2013; Morrison et al., 2021). For teachers, this would involve universal training in general classroom management and teaching social-emotional skills, a screening procedure (e.g., observations conducted by coaches or principles) to assess teacher competencies and identify needs for support, and the provision of coaching or consultation at a level that matches teacher needs. At a minimum, in most states, teachers are observed by principles once or twice per year. These observations could be leveraged to (a) assess teachers' skills in both instruction and classroom management and positive behavioral supports, (b) provide teachers with performance feedback on strengths and areas for growth, and (c) assign teachers to a given tier of professional development to match their need for support. Models for enhancing principal observations of teachers' instructional and behavioral support practices are emerging and demonstrating promising utility (e.g., Dudek et al., 2019); however, additional research is needed with larger and more diverse samples and with attention to the scalability of the training for principles and other school personnel (e.g., school psychologists). Similarly, frameworks of tiered-supports for SMHPs could be developed, using procedures outlined in Crocker et al. (2023). Lastly, emerging evidence suggests matching tiered coaching to the profile of teacher strengths and needs may be more cost-effective than a one-size-fits-all approach for achieving positive student outcomes (Owens et al., 2021); however, replication with larger samples is warranted.

Cross-Disciplinary Collaboration

Schools are inherently a multi-disciplinary environment, including professionals trained in the disciplines of education, psychology, social work, nursing, physical therapy, speech therapy, occupational therapy, and law enforcement. In the context of multi-tiered systems of supports, it is recommended that educators form school-based decision-making teams to achieve specific goals (Nisar et al., 2022). For example, one team may focus on fostering positive home-school communications or school climate, whereas another team may identify whole-school or class-wide expectations for prosocial behavior and consistent strategies for equitably responding to violations of those expectations. Nisar et al., 2022 recommends such teams be multi-disciplinary and representative of diverse school professionals (e.g., from different disciplines, grades, and positions). Similarly, when teams include family members, they should be representative of the student body (e.g., regarding race, ethnicity, language, and economic status). For example, a team addressing home-school communication may include a principal, a school social worker, a general education teacher from Kindergarten and one from the fifth grade, a nurse, two parents from diverse racial or economic backgrounds, and two students representing different perspectives in the school (e.g., different genders, grades, or racial background). To be effective in this context, it is critical that SMHPs and teachers have the knowledge and skills to effectively communicate and collaborate with this diverse array of team members and families (see Witte et al., Chap. 24, [this volume](#)).

Skills and competencies espoused to help SMHPs and teachers be effective in this multi-disciplinary environment include, but are not limited to, (a) knowledge of roles and expertise of each discipline or professional on the team, (b) knowledge of children's developmental needs across domains (e.g., education, health, mental health, community), (c) capacity to listen to and appreciate differing perspectives, and (d) commitment to collaborative problem-solving and compromise (Ball et al., 2010). SMHPs and

teachers may also participate in intervention teams focused on developing individualized (Tier 2 or Tier 3) interventions for a given student with a disability. In this context, it is critical that team members communicate and collaborate to reduce redundancies or duplication in services and facilitate understanding among all team members of their collaborative role in supporting the student and each other.

Unfortunately, rhetoric promoting the importance of interdisciplinary collaboration has outpaced the research on this topic (see Mellin, 2009), in part due to the challenge in measuring the construct of interdisciplinary collaboration (Mellin et al., 2014). However, there is emerging evidence from mixed-method and quasi-experimental studies that quality interprofessional collaboration is associated with improved student outcomes in schools (e.g., Bates et al., 2019), improved service provision and outcomes in medical and primary care settings (see Reeves, 2016), as well as improved trainee knowledge, skills, and preparation for providing high quality services to patients (e.g., Shiyabolola et al., 2014). Thus, it is important that university faculty and school administrators in charge of professional development in schools consider how to enhance SMHPs' and teachers' competency in cross-disciplinary collaboration.

Pre-service Training

For SMHP trainees and teacher candidates, cross-disciplinary collaboration can take place in the context of courses, and clinical and school placements. In courses (prior to or concurrent to practice-based experiences), faculty can invite various professionals to class to discuss their role/s and area/s of expertise. Faculty can assign homework tasks of interviewing professionals from disciplines different from their own, or shadowing a team and evaluating strengths and areas for improvement in cross-disciplinary communication. Faculty can create seminars or workshop experiences wherein they bring professionals from multiple disciplines to create an interactive platform for dis-

crossing discipline-specific literature on evidence-based practice, discipline-specific biases, and to practice skills that will help SMHPs and teacher candidates become effective in cross-disciplinary communication and collaboration (e.g., Michael et al., 2014).

In the context of school and clinical placements, SMHP trainees should participate in a variety of teams and consultation experiences wherein they communicate with professionals from other disciplines and receive performance feedback following the experience. As one example, Michael and colleagues developed a model for training SMHPs in such skills in their school-based placement in the Assessment, Support, and Counseling (ASC) Center (Michael et al., 2009), which represents an interdisciplinary partnership between Appalachian State University and local schools (see Michael et al., 2023). Given the multi-disciplinary nature of schools, SMHPs should no longer be placed in schools for training without a portion of that training devoted to developing skills of cross-discipline communication and collaboration.

Similarly, at the pre-service level, teacher candidates can be exposed to content (e.g., children's developmental needs across domains, information about the skills and expertise of other school professionals) and the values of cross-disciplinary collaboration via courses. However, like most other skills, cross-disciplinary collaboration skills likely benefit from observing a model, practicing the skill, and receiving feedback and/or debriefing about the experiences. Thus, teacher candidates would benefit from observing their mentors and co-participating with their mentors on various teams within the schools.

In-Service Training

For SMHPs, leaders in the field have emphasized the importance of skills in cross-disciplinary collaboration and the need for cross-system collaboration (Anderson-Butcher et al., 2017; Michael et al., 2014; Weist et al., 2012). In this edition, Kelly et al. (2023). describe several best practice recommendations for workforce development in

the context of a multi-disciplinary post-master's certification program, the School Mental Health Advanced Practice Program (SMHAPP). Those who have completed the program highlight key features in facilitating their success, including opportunities to learn in the context of a multi-disciplinary cohort, to acquire new, more advanced communication and collaboration skills, and to develop and evaluate new practices designed to address a current challenge in their school.

Similarly, Crocker et al. (2023) describe a model for professional development within a school system. This model used the School Health Assessment and Performance Evaluation system (SHAPE; www.theshapesystem.com), which is available to schools across the nation. Crocker et al. describe how using the SHAPE system helped their SMHPs engage in a self-assessment process that informed the development of a 5-year professional development plan, including leveraging multi-disciplinary teams and implementation supports to achieve the planned goals. Readers are encouraged to borrow strategies described by Kelly et al. and Crocker et al., as both models demonstrate the promise of effectiveness and can be considered emerging best practices for developing cross-disciplinary collaboration and communication skills. In addition, researchers are encouraged to continue evaluating the effectiveness of such programs using outcomes measures, including observed change in SMHP practices, permanent products (e.g., school policies, intervention plans from team meetings), new infrastructure, and impacts on student outcomes.

For teachers, several studies reveal that teachers have limited training and knowledge about children's mental health (e.g., ability to recognize early warning signs or knowing how or when to intervene; Frauenholtz et al., 2017; Herbert et al., 2004; Walter et al., 2006). Thus, if they do not receive this training at the pre-service level, professional development training is likely necessary. One online course in mental health literacy for teachers that has been used widely in Canada is the LEARN program (Kutcher et al., 2013, 2016) offered by the University of British

Columbia (<https://pdce.educ.ubc.ca/learn-mental-health-literacy/>). One study shows that program attendees were satisfied with the programming and that the program has promise for changing in teachers' knowledge of mental health and attitudes toward mental disorders (Kutcher et al., 2013). However, this evaluation was a pre-test-posttest-only design; thus, additional research with random assignment methodology and assessment of the impact of the program on change in teacher behavior (e.g., increases in teacher implementation of classroom interventions to support students; increases in teachers referring a student to mental health counseling) is warranted.

Other opportunities for in-service training come in the context of multi-disciplinary school teams. For example, when school teams implement universal screening tools and interpret data from those tools, teachers are provided the opportunity to learn more about the risk factors screened and their impact on students' functioning (e.g., academic, peer-relational, psychosocial) and to hone skills for communicating with SMHPs to collaboratively address students' needs. SMHPs and experienced teachers can also serve as peer mentors to teachers with less experience and offer education before and after such meetings. If a teacher has concerns about a student and seeks an SMHP's assistance to support this student, it is critical that the teacher and the SMHP communicate about the primary concerns in the classroom, agree upon methods and measures for monitoring the extent to which the selected interventions are effective, and engage in data-based decision-making to modify interventions based on the progress monitoring data (Evans & Owens, 2018). Kelly et al., Chap. 20, p. xx, [this volume](#) states "we must all understand the presenting problem viewed by the teacher and use that as an anchor to determine if educators and SMH providers are making progress/interventions are making an impact." Thus, when seeking to maximize the success of school-based supports, it is crucial to collaborate effectively to leverage the expertise of teachers, SMHPs, and other professionals in the building.

Commitment to Equity in School Practices

Access to high-quality education is associated with positive health outcomes, financial opportunity, and high quality of life; however, not all children in the United States experience equal educational opportunity (Zajacova & Lawrence, 2018). For example, a recent meta-analysis documents disproportionality in use of exclusionary discipline practices (e.g., suspensions, expulsions, arrests) for Black students, wherein the odds of experiencing exclusionary discipline if Black are 2.5 times the odds of experiencing exclusionary discipline if White (Young & Butler, 2018). In addition, there is concern that racial bias influences educators' interpretation of behaviors that result in referral for and placement in special education services (Klingner et al., 2005). Namely, there are systematically higher rates of ethnic and racial minority students (relative to White students) placed in special education categories that are considered "judgment" categories (e.g., emotional disturbance, learning disabilities), but no differences in rates for low incidence categories (e.g., auditory and visual impairment) in which the disability is determined by physiological medical evidence (Klingner et al., 2005).

Such inequitable practices restrict students' access to the general educational curriculum and are associated with lower academic achievement, grade retention, school drop-out, adversity in adulthood, and involvement in the school-to-prison pipeline (Fabelo et al., 2011; Gregory et al., 2021; Noltemeyer et al., 2015; Wolf & Kupchik, 2017). Discrimination at school, whether from teachers or peers, has also been linked to student maladjustment (e.g., achievement, problem behaviors; Wong et al., 2003). In addition, exposure to racial violence and trauma in childhood can have deleterious effects on children's mental health outcomes (Bernard et al., 2021). Unfortunately, students of color and from rural areas evidence greater difficulty accessing school-based mental health supports (Croft et al., 2020). Thus, we encourage SMHPs

and educators to commit to achieving equity in school practices, so students (regardless of background) are provided resources and opportunities necessary to achieve equal outcomes (e.g., academic success, social-emotional well-being).

In this section, we discuss approaches to support SMHPs and teachers in centering equity and social justice. Multiple practices (e.g., culturally sensitive, responsive, and relevant; restorative practices; equity literacy; decolonizing; antiracist) to advance equity have emerged. Yet empirical evidence of their effectiveness on school practices and student outcomes is nascent (Bottiani et al., 2018; Bradshaw et al., 2018). Nevertheless, this should not minimize the urgency to address inequity. In the wake of the tragic homicides of Elijah McClain, George Floyd, and Breonna Taylor, among other Black persons killed by police officers, and assaults on Asian/Asian American persons during the COVID-19 pandemic, movements such as Black Lives Matter and Stop Asian American/Pacific Islander Hate have increased national awareness for the need to respond to injustice. Thus, there is momentum to enhance the depth and scope of school workforce preparation in dismantling structural racism and promoting equitable practices, to ensure all students can succeed in school (Crutchfield et al., 2020; García-Vázquez et al., 2020; Miller et al., 2020). Without overstating the science, we share recommendations from emerging programs, pilot studies, and leading scholars. Given the scope of this chapter and complexity of the problem, we provide a snapshot rather than a comprehensive review. For pre-service and in-service contexts, we highlight three themes to advance equity in schools: (a) education on equity; (b) training on implementing inclusive practices; and (c) efforts to recruit and support a diverse workforce.

Pre-service Training

We encourage university faculty to take several steps to prepare SMHPs and teachers to engage in equitable practices. First, when tackling complex problems, it is important to understand their

roots and contributing factors. Scholars propose that to support the workforce in addressing racial inequities, education on the contexts in which these arose and are maintained is a priority (Robillard et al., 2015; Wint et al., 2021). SMHP trainees and teacher candidates might have limited understanding of the educational and mental health impacts of colonization, displacement, slavery, and intergenerational trauma on generations of children. As recently as 68 years ago, racial segregation in US schools was legal. Although *Brown vs. Board of Education* (1954) paved the way for school integration, resegregation resurfaced in the 1990s (Orfield, 2001). Well-intentioned policies (e.g., *No Child Left Behind*) aiming to close student achievement gaps have contributed to student disparities (Jennings & Lauen, 2016). To enhance candidates' understanding of inequitable systems and disparities, faculty can integrate such topics into their coursework. As one example, Fleming (2020) developed a "Historical Roots of Health Inequities" course to challenge public health students to think critically about the intersections between context and health. In addition to covering historical perspectives, it might be beneficial to review cumulative factors (e.g., housing instability, especially in the youth of color and LGBTQ+ youth) maintaining academic and health disparities (Crumé et al., 2019). Although increasing attention is given to these topics, consensus is limited on how best to teach the material (for a review see Chandler et al., 2021).

Second, advancing equity in coursework requires more than adding syllabi readings about marginalized communities. Faculty should critically examine: the frameworks, perspectives, and voices centered; the representativeness of samples and readings assigned; and the inclusiveness and accessibility of class practices. Given the nascency of this pedagogy, faculty aiming to design such curricula could seek guidance from scholars who disseminate similar courses. For example, Dr. Garces provides a reading list on *Equity and Diversity in Higher Education* (<https://www.cswe.org/getattachment/Centers-Initiatives/Centers/Center-for-Diversity/Educator-Resource/February-2020/4-Topical->

[Reading-List-on-Equity-and-Div-in-Higher-Educ.pdf](#)). When teaching, Fleming (2020) recommends instructors: (a) establish inclusive norms for discussion; (b) incorporate interdisciplinary sources (e.g., law, policy); and (c) empower students to apply material (e.g., skills training to challenge structural inequities). Additional resources to aid in rethinking course syllabi are available (see Fuentes et al., 2021).

To revamp coursework, faculty can familiarize themselves with their fields' literature on equitable and inclusive practices (Jimerson et al., 2021). Recently published books, such as *Courageous Conversations About Race: A Field Guide for Achieving Equity in Schools and Beyond* (Singleton, 2014) and *Racial Trauma in the School System: Naming the Pain* (Handford & Marrero, 2021), can complement training. Professional organizations also provide free resources, such as the National Association of School Psychologists (NASP) resources on social justice (<https://www.nasponline.org/social-justice>) and supporting diverse populations (<https://www.nasponline.org/research-and-policy/policy-priorities/critical-policy-issues/supporting-diverse-populations>), the American Psychological Association's (APA) principles for multicultural training (<https://www.apa.org/about/policy/multicultural-guidelines>), the National Education Association's (NEA) resources for achieving equity in education (<https://www.nea.org/advocating-for-change/racial-social-justice>), and the American School Counselor Association's (ASCA) toolkit for anti-racism work in schools (<https://www.schoolcounselor.org/Publications-Research/Publications/Free-ASCA-Resources/Anti-Racism-Resources>). Revisiting the curriculum means recognizing the limits of our perspectives, committing to bridging the gaps through education, and centering equity in course policies and practices.

Third, in some departments, topics such as inclusive practices and social determinants of health are reserved for "diversity" or "multicultural" classes. Moving forward, we encourage faculty to integrate actionable, equity-focused education into all courses and practice opportuni-

ties. As described in section "Pre-service training" above, using performance feedback strategies while teaching such action steps will likely maximize skill development in SMHP trainees and teacher candidates.

For example, given that many SMHPs could be placed in a professional role wherein they are consulting with or coaching teachers (e.g., on classroom management or positive behavioral supports), Pas et al. (2023) recommend SMHPs receive training in culturally sensitive consultation models (Ingraham, 2000; Nastasi et al., 2004; Newell et al., 2010). Such training focuses on enhancing SMHPs': (a) knowledge of their own, teacher, and student cultural identity development; (b) skills for communicating about these identities; (c) knowledge of how identities impact relationships, processes, and outcomes; (d) appreciation of contextual and power influences; and (e) skills in culturally sensitive case conceptualization. Similarly, considering the utility of data-driven consultation, SMHPs would also benefit from training on how to interpret data in context. Faculty could assign vignettes about student cases with similar educational or social-emotional challenges, but distinct contextual or psychosocial profiles. With these vignettes, trainees could identify potential factors impacting outcomes; how to assess these factors; and how to consult with teachers to implement equitable and culturally responsive practices to address student needs. Such critical thinking can help prevent a "one-size-fits all" mentality and instead instill the value of individually focused, contextually sensitive assessment, plan development, and intervention adaptation. Exposure to learning these skills in supervised practica and traineeships may be particularly useful, as faculty could assess and provide feedback in this context. In fact, psychology trainees report wanting programs to expand their experiential opportunities to gain greater exposure to culturally relevant services (Gregus et al., 2020). Importantly, guidelines for creating case vignettes that do not perpetuate discriminatory stereotypes are emerging (Krishnan et al., 2019).

For teacher preparation, Ottley et al. (2023) describe the importance of faculty devel-

oping and modeling inclusive mindsets for teacher candidates. However, they describe that modeling these values may be a necessary but insufficient condition to shape teacher candidate beliefs. Teacher candidates should engage in targeted inclusive practices, observe the impact of the practices on students, and engage in self-assessment about the connection between teachers' practices and student outcomes. Considering the value of data-driven performance feedback on teacher practices, prioritizing performance feedback might be instrumental in helping candidates engage in equity-focused behavior change.

Lastly, we acknowledge an important caveat to the above recommendations. Namely, prior to training others in equity and inclusion, faculty and school leadership must first educate and prepare themselves to adequately guide others in this important work. School practices have historically been shaped by a few relatively homogeneous perspectives. Senior faculty may have not received in-depth graduate training in equity-based pedagogy, culturally responsive interventions, or skills for working with minoritized families. We challenge faculty to reflect on their knowledge and skills of these models, their own privilege and biases, and their attitudes toward fostering equity. For a self-assessment of relevant values and practices, see NASP's online checklist (<https://www.nasponline.org/resources-and-publications/resources-and-podcasts/diversity-and-social-justice/cultural-competence/self-assessment-checklist>). Following several recent social movements (e.g., Black Lives Matter, Juneteenth acknowledged as a national holiday), many local and university libraries have also organized reading lists for faculty to raise their own awareness of these issues and infuse these topics into their courses (e.g., see <https://heller.brandeis.edu/diversity/learning/readings.html>). In departments where there are few or no faculty with expertise in equity and inclusion, we recommended seeking professional consultation (e.g., scholars, organizations) on these models. For example, the Racial Equity Institute (<https://www.racialequityinstitute.com/>) can assist departments in evaluating their practices and coaching for sustainable change. REI, like other

programs (e.g., Culturally Responsive Leadership; <https://culturallyresponsiveleadership.com/>), also provides resources (e.g., readings, seminars, webinars).

In-Service Training

In-service training in equity-informed practices may be less accessible than during pre-service training years. Nevertheless, there are several opportunities, both formal (e.g., workshops, summer institutes, coaching, conferences) and informal (e.g., peer mentorship, self-paced modules, learning communities, book clubs), that SMHPs and teachers can use for ongoing professional development.

First, school district administrators can incorporate equity-focused professional development into annual in-service days. Administrators may consider developing long-term plans to create sustainable opportunities for SMHPs and teachers to receive training on equity and inclusion. Such training should consider the needs of students across different demographics (e.g., age, gender, race, ethnicity, sexual orientation), health status (e.g., disability, chronic illness, psychiatric diagnosis), and exposures to stressors (e.g., discrimination, trauma, immigration, poverty, foster care, court involvement). For example, training and consultation may focus on raising school staff awareness of racial and language microaggressions and hone their skills in practical strategies to address these within school contexts (Steketee et al., 2021).

Educators may also (a) participate in self-paced courses (e.g., www.equityliteracy.org), (b) seek local resources to guide difficult conversations (e.g., discussing race and police violence in the classroom (<https://dcps.dc.gov/release/preparing-discuss-race-and-police-violence-classroom>)), and (c) participate in peer-based learning communities to advance their education. Because many facets of diversity have been stigmatized or politicized, and because learning about how we each contribute to inequitable practices produces discomfort, it is common for teachers and SMHPs to initially showcase defen-

siveness, resistance, or limited behavioral change when exposed to self-reflective practices on such topics (e.g., privilege, ableism, biases). However, in other fields, practices for overcoming biases in professional practices are emerging, such as in medicine (e.g., Capers, 2020) and youth mentoring (e.g., Sánchez et al., 2021), offering optimism about these efforts and the fruitfulness of research to evaluate them.

Second, as mentioned by Pas et al. (2023), enhancing teachers' lens on equity can also occur in the context of consultation. For example, coaching teachers on culturally responsive practices may facilitate teachers' sensitivity to diverse student needs and use of classroom management practices that reduce disproportionality in student discipline practices (Bradshaw et al., 2018). Pas et al. recommend coaches adopt a multicultural approach to consultation (Ingraham, 2000; Nastasi et al., 2004) that (a) helps teachers engage in self-reflection activities to facilitate awareness of vulnerable moments in which biases may be activated and (b) incorporates strategies to dismantle the impact of biases on teacher discipline practices and mitigate biased practices (Cook et al., 2018). Given teachers' biases and limited multicultural awareness may perpetuate inequitable discipline and student disparities (McDaniel et al., 2021), SMHPs who consult with or coach teachers are well situated to impact these processes. For example, when consulting with teachers, SMHPs could use disciplinary referral data to discuss the reasons and situations that lead to such referrals, highlighting the potential interactions between race, ethnicity, gender, and other contextual factors on teachers' perceptions of student behavior. SMHPs can also educate teachers on research-based recommendations to mitigate overuse of exclusionary discipline. Thus, SMHPs can serve as the liaison between science and practice through consultation and advocacy for the well-being of all students.

Third, in addition to training and supporting current school personnel, districts should aim to recruit teachers and SMHPs from diverse backgrounds. Demographic data reveal that, as a

whole, students in US schools are representative of the ethnoracial diversity (48% White, 27% Hispanic, 15% Black, 5% Asian, 1% American Indian/Alaska Native, 4% Multiracial) of the US population; however, teachers predominantly skew White (79%, National Center for Education Statistics, 2021). Yet representation matters: the presence of racial and ethnic minority school staff can positively impact student outcomes. For example, a study found that, controlling other factors, Black students taught by at least one Black teacher prior to the fourth grade were more likely to graduate high school and attend college than same-school peers without a Black teacher during these years (Gershenson et al., 2018). Via recruitment, districts may broaden workforce representation, perspectives, and connections with students.

However, we note an important caveat for school districts and universities: the burden of advancing equitable practices should not be placed on professionals who identify as minoritized. Being a member of a historically marginalized or underrepresented group also does not equate to expertise in tackling issues related to equity, inclusion, or multiculturalism. In fact, such an expectation is a form of inequity, as individuals may be disproportionately required to engage in additional service not expected of others (e.g., committees, community service, interpretation), unless these were agreed upon during recruitment and contract negotiations. Faculty and school administrators should educate themselves on how best to support their personnel, particularly those from historically underrepresented communities (Proctor et al., 2020). In short, recruitment and support of candidates from diverse backgrounds is an important step toward equity, *and* organizations should aim for all its members to engage in equitable and inclusive practices.

In summary, equity-informed approaches are rapidly emerging, though there is need for more rigorous research. We encourage training program faculty and school administrators to engage in their own self-assessment about the extent to which their own department, school, or district values, promotes, and engages in ongoing train-

ing on equitable practices. We also recommend that leaders in schools and training programs routinely assess the effectiveness of their efforts to advance equity and justice and to develop a body of evidence about what practices do and do not change adult behavior and impact student outcomes.

Conclusion

This chapter was designed to serve as an introductory chapter for the Workforce Development section of the Handbook. The chapters in this section provide inspiring accounts of groundbreaking work in SMHP and teacher workforce development and offer innovative ideas for research and practice that may narrow the science-to-practice gap. In this chapter, we highlighted how prioritizing the use of performance feedback, preparing the workforce for cross-disciplinary collaboration, and enhancing school professionals' commitment to achieving equity in behavioral and mental health supports can improve outcomes for all students. We hope the recommendations and resources inspire readers to take action toward improving school-based personnel workforce development.

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Unifying the Field: Challenges and Best Practice Recommendations for Preparing School Mental Health Practitioners

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Preparing school mental health practitioners (SMHPs) is a complex endeavor because these professionals represent several groups governed by a multitude of licensure or certification bodies and are guided by different practice standards and models. Herein, we define workforce development as having two pillars: (a) discipline-specific graduate and postgraduate preparation programs leading to certification or licensure and (b) interdisciplinary professional development or certification programs for those employed as an SMHP (Ball et al., 2010; Forman et al., 2017). The purpose of this chapter is to describe the landscape of workforce development by highlighting several challenges to unification and describing the certification regulations, standards, and practice models for several disciplines that prepare SMHPs. We then offer best practice recommendations to inform a unified, interdisciplinary SMHP workforce development model and to develop a framework for the department of education administrators to identify the unique

and overlapping qualifications of prospective SMHPs within their localities and school administrators to effectively develop job descriptions and interview for school-mental health positions. Finally, we describe an innovative post-masters certification program that embodies our best practice recommendations.

Challenges Impacting Workforce Development Unification

SMHPs are difficult to unify because they are extremely diverse groups of professionals and because there is confusion regarding best practices for school mental health preparation and practice. These issues are synergistic, with the diversity of qualified SMHPs making unified best practices difficult to articulate and even more difficult to obtain buy-in for across the field of school mental health.

Qualified School Mental Health Professionals

Although school districts have autonomy to establish credentials for in-house (i.e., local education agencies (LEA) employees) SMHPs, education policy has long sought to guide LEAs in this effort. For example, the Disabilities in Education Act (IDEA) specifies related services;

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many of which are consistent with an SMH perspective (e.g., counseling services, early identification, family training-counseling and home visits, parent counseling and training, and psychological services; §300.320(a)(4)) to be provided by a “qualified provider” (Section 300.156). States are charged with maintaining standards for related service providers, which is typically done through Department of Education (DOE) licensure or certification requirements (Tharinger et al., 2008). Further, the Every Student Succeeds Act (ESSA) identifies two groups of qualified SMHPs. The first group, Specialized Instructional Support Personnel (SISP), is similar to the qualified provider provision in IDEA. The second group, referred to as a School-based Mental Health Services provider, is defined as “a state-licensed or state-certified school counselor, school psychologist, school social worker, or other state licensed or certified mental health professional qualified under State law to provide mental health services to children and adolescents” (ESSA, 2015).

By delineating these two groups of qualified SMHPs, the ESSA has significantly expanded the definition of qualified SMHPs beyond what was previously understood by some school districts and states and merits further consideration here. Note that the first clause of this ESSA definition (a state-licensed or state-certified school counselor [SC], school psychologist [SP], school social worker [SSW], school nurse [SN]) is similar to the credentials of a qualified-related service provider in IDEA and SISPs in ESSA. However, the inclusion of the second underlined clause expands the landscape of qualified SMHPs dramatically because it is inclusive of those who are not certified through DOE school-based licensure or certification requirements. Thus, although this recent policy change did not usher in a new mandate because states and districts already had autonomy to establish the qualifications of those they hired in these positions, it did validate the credentials of a more diverse group of providers than the federal policies that preceded it. The landscape of qualified SMHPs expanded from four groups of professionals who have distinct, school-based specific workforce preparation (i.e.,

SC, SP, SN, and SSW) to eight groups from five disciplines, not all of which have workforce preparation requirements specific to school-based mental health practice. Specifically, this clause deemed, for the first time via federal school policy, clinical psychologists, licensed professional counselors, nurse practitioners, licensed clinical social workers, and licensed marriage and family therapists as qualified SMHPs.

Confusion Regarding Best Practices for School Mental Health Preparation and Practice

Establishing best practices for workforce preparation is complicated by confusion or conflation of school mental health and traditional mental health services, which likely varies substantially within and between groups of qualified SMHPs. We have identified six dimensions of school mental health that differ substantially from mental health services provided in the community and other non-school settings.

The first dimension that differentiates mental health service provision in schools versus other settings is the extent to which effective practice depends on professional collaboration. Facilitating success in school-based practice is far more dependent on effective collaboration among professionals from disparate systems, including but not limited to education, health, mental health, child welfare, and juvenile justice than is typically required in non-school settings. Because students likely receive other services for similar or related challenges, it is critical that SMHPs integrate their work with other services provided by the school (e.g., other SMHPs, special education services) and community providers to avoid fragmentation and duplication (Anderson-Butcher et al., 2017; Ball et al., 2010; Weist et al., 2012). Foreza and Eckhardt (2020) have noted skills in interdisciplinary collaboration and leadership are critical for effective school mental health, and other leaders have emphasized the need for cross-system collaboration (Mellin & Weist, 2011; Weist et al., 2012).

The second dimension that differentiates mental health service provision in schools versus other settings is the nature of the practitioner–client relationship. The nature of the relationship between SMHPs and the constituents they serve is, in our view, radically different in school settings because SMHPs provide more diverse services, balance more competing interests, and are governed by additional local, state, and federal laws and policies than most mental health practitioners in non-school settings. For example, SMHPs practice in a host setting (i.e., the education system) and are typically employed by and located within the school, they are responsible for not only serving a single “primary client” but simultaneously serving all students, staff, and administration (Frey & Lankster, 2008).

This dynamic has a profound effect on the nature of the services provided. For example, in school settings, services provided by SMHPs frequently range from a one-time, informal, and unplanned conversation to formal, ongoing services (i.e., a formal service provided on an Individualized Education Program). Thus, when an SMHP initiates a relationship with a student, it is not always clear whether they are providing services specific to their role and training as an SMHP or general services as a member of the school staff. In the context of schools, the concept of “*in loco parentis*” (see Kopels, 2004) describes the relationship in which a non-custodial person assumes the status of a parent for the child. This doctrine is also used to describe the relationship of school personnel to students during the school day, particularly surrounding issues of discipline. When SMHPs engage in primary prevention, when the interactions between them and students are informal and unplanned, and when the SMHP assumes the role of a parent associated with the *in loco parentis* doctrine, the “client” status of the student in relation to the SMHP is very different from that assumed by the Codes of Ethics governing SMHPs from their respective disciplines. Specifically, these Codes address issues of privacy and confidentiality, conflicts of interest, and informed consent. Although discipline-specific, these codes are designed for relationships between professionals

and “clients,” relationships that are, in some situations at least, very different from the relationships of SMHPs and students, parents, staff, and administrators.

The third dimension is the range of evidence-based practices (EBPs) that are appropriate to adopt and implement (Langley et al., 2010). School mental health providers are expected to offer a continuum of services including primary, secondary, and tertiary levels of support; whereas mental health services in non-school settings, particularly those who are trained with a “clinical” or “therapeutic” orientation, are typically reserved for interventions for the youth who require tertiary services, often conceptualized narrowly as “therapy” (Weist et al., 2012). Thus, SMHPs must know how to find and evaluate interventions that span a wider range of intensity.

The fourth dimension is mechanisms of change targeted by EPBs that are appropriate for adoption and implementation. Specifically, because SMHPs operate in, and (ideally) have some control over the environmental factors that maintain the challenges that are the focus of their interventions, EBPs that include a focus on school climate, family engagement, and teacher practices should be given substantial consideration by SMHPs; Ball (2010) identifies the role of SMHPs as distinct from those in traditional mental health settings because of the ability of an SMHP to use the teacher as a conduit for the implementation of evidence-based interventions, including classroom management practices. Weist et al. (2018) and others (Atkins et al., 2010) have noted the importance of contextualizing school-based mental health interventions within an ecological framework that identifies the individual needs of students through an intersectional lens and team-based response.

The fifth dimension is the delivery of EBPs within the context of multi-tiered systems of support (MTSS; Hicks et al., 2014; Reschly, 2014), which is unique to school settings. Importantly, the process for determining who will receive EBPs (typically parent referral in non-school settings, but which can involve referrals by teachers, administrators, and self-referrals by students in

school settings) is itself a different starting point that impacts which EBPs are selected, and how progress or impact is determined. This is further impacted profoundly by delivery within the context of MTSS, where SMHPs are delivering these interventions, often within a teaming structure and based on extant three-tier frameworks within the school, such as Response to Intervention (RtI) and Positive Behavioral Interventions and Supports (PBIS). An important aspect of most MTSS frameworks involves the use of existing school data (e.g., attendance records, office discipline referrals, universal screeners, suspensions, academic engagement) to determine when services can be terminated or whether different or additional services are necessary. In addition to being able to deliver interventions within this context, many scholars and policymakers argue an essential role of the SMHP is to lead school- and district-based teams to select and coordinate EBPs within a school, district, or state, and to lead efforts to use data to determine who will receive interventions, when additional interventions are needed, and when intervention support can be responsibly terminated (Kelly et al., 2015; Weist et al., 2018).

A final dimension that differentiates mental health service provision in schools versus other settings is educational equity, which has been amplified by the COVID-19 pandemic and national struggles for racial justice embodied in the Black Lives Matter (BLM) movement. Our schools and students' mental health needs are often significantly impacted by new and challenging forces that require an evolved approach to SMH. The prevalence of children facing mental health challenges has been indicated to range between 10% and 20%; however, the ramifications associated with the COVID-19 pandemic may exacerbate the prevalence of student mental health needs (Singh et al., 2020). Data suggests SMHPs cannot be neutral on issues of social justice because the very outcomes we seek to improve do not impact students equally. For example, there is an abundance of research highlighting the persistent disproportionality in rates of exclusionary discipline (i.e., suspensions, expulsions, arrests, and referrals to law enforce-

ment) for students of color (Hirschfield, 2018). Black American students are both suspended and expelled at three times the rate of White students (DOE, 2014; Kyere et al., 2018). Rates of exclusionary discipline are associated with a host of detrimental outcomes, including lost instructional time, lower academic achievement, grade retention, drop-out, increased likelihood of juvenile justice involvement, adverse experiences into adulthood, and the school-to-prison pipeline (Fabelo et al., 2011; Mallett, 2016; Noltemeyer et al., 2015; Wolf & Kupchik, 2017).

The impact of systemic racism on the school system is further propelled by biases, stereotypes, and lack of culturally appropriate SMH services (Raible & Irizarry, 2010; Stephan et al., 2007). Evidence of this is supported by the overrepresentation of students of color receiving special education referrals and services (Sullivan & Bal, 2013). Disproportionality in special education is often a byproduct of disparate rates in exclusionary discipline and subsequent increases in emotional disturbance identification (Bal et al., 2019). Additionally, student behavioral differences have not been detected by race or ethnicity, yet disparities in outcomes remain, which further isolates the intricate role of bias in behavioral outcomes (Raible & Irizarry, 2010).

Collectively, these pathologizing experiences that students face often translate into hostile school environments which may be exacerbated by additional forms of school surveillance, including the increased presence of school resource officers (Mallett, 2016). This often-inhospitable school environment presents additional challenges for SMHPs and the students they serve, impacting their ability to deliver effective services to meet varying student needs (Mellin & Weist, 2011). Furthermore, these issues facing students diverge across varying student identities, and it is crucial for SMHPs to address the needs of students by accounting for race, culture, language, and other varied and intersecting identities (Blanchett et al., 2009). The depth of racial disproportionality in the school system and its direct impact on SMHPs and service delivery is an understudied area of research (Mellin & Weist, 2011). Miller et al.

(2021) suggest school mental health education and training aimed specifically at upending school racism appear to be lacking in scope and depth, and Crutchfield et al. (2020) suggest it is vital for SMHPs to ensure that their practice is aligned with changing demographic trends, in order to better meet the needs of students of color and attend to issues of structural racism.

To recap, school-based mental health services are provided by a diverse group of qualified professionals and confused or conflated with mental health services in non-school settings. The challenges highlighted above have a synergistic effect, complicating the field's ability to unify around best practices for school mental health workforce preparation, and making communicating clearly the qualifications of SMHPs to those charged with hiring SMHPs a very challenging task. To highlight the diversity of the preparation the various groups that represent qualified SMHPs receive, in the next section we describe the certification regulations and school-based standards and practice models for each SMHP discipline.

Certification Regulations and School-Based Standards and Practice Models

Five disciplines prepare qualified SMHPs: psychology, counseling, nursing, social work, and marriage and family therapy. There is much variation within and across disciplines with regard to infrastructure guiding workforce development that is specifically tailored toward school-based practice. Describing the non-school-specific requirements of qualified SMHPs is beyond the scope of this chapter. Thus, we focus only on school-specific certification regulations and standards and practice models for each SMHP discipline. Because clinical psychologists, licensed professional counselors, nurse practitioners, licensed clinical social workers, and licensed marriage and family therapists do not have school-based requirements for certification, there is no description of their workforce preparation included herein. To get a fuller grasp of how

complicated these issues in individual school contexts, we encourage readers to explore what their individual districts and states are doing in their efforts to hire and train those professionals to fulfill at least some of the duties of an SMHP.

Psychology

School psychology (SP) is a specialist credential that consists of 3 years of full-time study, 60 graduate semester hours with 54 internship hours of experience and institutional documentation of specialist-level program completion (National Association of School Psychologists' [NASP], 2020a, b). To unify state certification requirements, NASP offers a Nationally Certified School Psychologist (NCSP) credential, currently recognized in 39 states, and every state requires a master's level education (Mitchell et al., 2021; NASP, 2020a, b). NASP provides national standards aimed to offer guidance to state educating agencies. Specifically, NASP's standards span over 200 pages, offering detailed guidance to educating agencies by providing their practice model, standards for graduate preparation, standards for credentialing, state credentialing requirements and procedures, and ethical principles (NASP, 2020a, b). NASP's professional standards detail the role orientation and skills necessary for SP, alongside an articulation of the diversity in education, training, state credentialing standards, and local education agencies shaping practice (NASP, 2020a, b). Furthermore, these standards are distinct to SP, and role orientation and practice of clinical psychologists is notably unique.

NASP's practice model details 6 organizational principles and 10 practice model domains. The overarching principles entail: (a) organization of the service delivery model; (b) climate; (c) physical, personnel, and fiscal support systems; (d) professional communication; (e) supervision, peer consultation, and mentoring; and (f) professional development and recognition. Two practice domains 1 (data-based decision-making) and 2 (consultation and collaboration) permeate across all services, and domains 3 (academic interventions and supports) and 4 (mental and

behavioral health services) involve direct services at the student level. Further, domains 5–7 (i.e., school-wide practices to promote learning, services to promote safe and supportive schools, and family, school, and community collaboration) entail indirect services at the systems level, and domains 8–10 (equitable practices for diverse populations, research and evidence-based practice, and legal, ethical, and professional practice) are conceptualized as the foundations of service delivery.

Counseling

The American School Counselor Association (ASCA) has built national infrastructure leading to cohesiveness in state certification requirements for SCs. Specifically, all but 1 state requires a master's level education, with 43 states explicitly stating internship requirements (Mitchell et al., 2021). The American School Counselor Association provides professional standards and competencies which articulate mindsets and behaviors to guide SC services to K-12 students (ASCA, 2019). Specifically, there are 7 mindsets and 24 behaviors which include ethical principles, details of service provision, planning, and assessment (ASCA, 2019).

The American School Counselor Association (2020) states that SCs spend 80% of their role engaged in direct and indirect delivery of services to students and parents. ASCA defines their comprehensive national model to deploy skills, leadership, advocacy, and collaboration across four key components: (a) foundation, (b) management, (c) delivery, and (d) accountability. The foundation for SC consists of a program focus, and student and professional competencies. School counselors engage in system support and offer an array of management skills beneficial to schools, including the use of data, and participating on advisory councils and group action plans. All of these key components are encapsulated by overarching accountability and ethical principles (ASCA, 2020). Furthermore, the role and orientation of licensed clinical professional counselors may vary substantially from the focal point of SCs.

Nursing

Certification for SNs is dictated by state standards; therefore, requirements vary across the country (Costante, 2002; NASN, 2016). There appears to be a dearth of literature surrounding SNs; thus, there is little discourse regarding training and state certification requirements, with the last national evaluation conducted nearly 20 years ago (Costante, 2002). The National Association of School Nurses (NASN) provides (for purchase) their scope and standards of practice for school nursing which includes 6 standards of practice and 12 standards of professional performance (Selekman et al., 2019). Additionally, NASN offers their framework for twenty-first century school nursing practice rooted in evidenced-based nursing practice (NASN, 2020). The key principles are (a) care coordination, (b) leadership, (c) quality improvement, and (d) community/public health. More research is needed to understand state differences in role orientation, certification standards, and specific elements of education and training (Selekman et al., 2019). Furthermore, SN represents a specialized practice for schools, and nurse practitioners may experience different education, training, and certification requirements, which impact their ability to provide EBPs appropriate for school settings (Resha, 2020).

Social Work

The majority of states require a master's level for licensure ($N = 33$) of SSWs; however, 14 states have no legislation defining the certification requirements necessary to practice as an SSW (Mitchell et al., 2021). Furthermore, only 13 states currently offer master's level specialization in SSW, and the diversity in these programs is understudied (Mitchell et al., 2021). The National Association of Social Work (NASW) defines the standards for SSW with respect to three guiding principles: (a) education/school reform, (b) social justice, and (c) multitier interventions. Additionally, they provide 11 profes-

sional standards¹ to guide role orientation (NASW, 2012). To help build unity and consistency to professional development, certification standards, and practice, Frey et al. (2012) developed the school social work practice model. They present three overarching practice features which define and shape the role, including (a) provide evidenced-based education, behavior, and mental health services; (b) promote climate and culture conducive to student learning and teaching excellence; and (c) maximize access to school- and community-based resources. Additionally, they identify four key constructs that are critical to all three practice features: (a) home-school-community linkages, (b) ethical guidelines and education policy, (c) education rights and advocacy, and (d) data-based decision-making.

Discipline-Specific Regulations, Certifications, and Practice Models

This section highlights a few noteworthy limitations and nuances that are nested further within school-based operations. First, we did not include information on multiple groups of professionals who are, according to the ESSA definition, qualified SMHPs (i.e., clinical psychologists, licensed professional counselors, nurse practitioners, licensed clinical social workers, and licensed marriage and family therapists). We acknowledge that these individuals may have training and experiences that have prepared them well to provide mental health services in school; it is also important to note that there is limited evidence of these professionals having any formal training specific to school-based mental health—including all the distinctions noted in the introduction between

mental health practice in school versus non-school settings.

A second limitation is that we provide global descriptions of certification requirements, which can vary widely based on location. State certification requirements and inconsistent educational training within SSW provide two good examples; the majority of states require a master's level for licensure ($N = 33$); however, 14 states have no legislation defining the certification requirements necessary to practice SSW (Mitchell et al., 2021).

Another limitation is that we have articulated school-based certification, practice standards, and models as they are described by their respective disciplines and in the professional literature; we understand well that there is, more often than not, variability between what we have described and what is actually being done by professionals in school settings. Again, we turn to SSW as an example; the role of the SSW in day-to-day school settings sometimes diverges from SSW's traditional educational training, with the majority of work encompassing individualized student needs and not focusing on other EBP, prevention, and data-driven practices that are part of most MTSS frameworks (Kelly et al., 2010, 2015). There is also evidence of a gap between practice and the practice model within SC. Specifically, one survey found that a majority of SCs declared a limited preparedness and confidence engaging in RTI models (Patrikakou et al., 2016) and another found SCs reporting a lack of adequate knowledge and skills related to MTSS (Olsen et al., 2016, 2020).

A final limitation of this descriptive is that the practice models described communicate major areas of emphasis, but little empirical evidence exists to isolate these constructs as mediators of student outcomes. For instance, there is scant literature that documents that enhanced collaboration actually improves student outcomes (Mellin & Weist, 2011). These limitations notwithstanding, there is a clear need for guidance regarding best practices for SMHP workforce development.

¹(1) ethics and values, (2) qualifications, (3) assessment, (4) intervention, (5) decision-making and practice evaluation, (6) record keeping, (7) workload management, (8) professional development, (9) cultural competence, (10) interdisciplinary leadership and collaboration, and (11) advocacy.

Best Practices in School Mental Health Workforce Development

We are not the first to recognize that school mental health could benefit from a cohesive, interdisciplinary system to help define roles, reduce overlap, build collaborative networks, and guide workforce development (Anderson-Butcher et al., 2017; Hicks et al., 2014; Weist et al., 2018); nevertheless, such a system remains elusive. As noted in the introduction, we contend that the inclusion of “other state licensed or certified mental health professional qualified under State law to provide mental health services to children and adolescents” in ESSA expands the landscape of qualified SMHPs dramatically and exacerbates the potential confusion and conflating of mental health service provision in schools versus non-school settings. It is with these issues in mind that we offer the following SMHP best practice recommendations. While each of these recommendations on their own would ideally be implemented by all the different SMHP national- and state-level organizations, it is our more modest hope that these recommendations might form the basis of at least an initial dialogue between all those organizations to start to create inter-professional collaboration and break down the siloes of professional disciplines that create turf battles and fragmentation for the SMHP workforce. Based on the research here as well as our own decades of practice, teaching, and training experience in SSW (acknowledging that our training as SSWs colors our perspective as well), we recommend the following:

1. School mental health practitioners seeking employment or currently employed should be able to articulate how their education has prepared them to provide mental health services specific to school settings, and what the scope of their services entails. We believe SCs, SPs, and SSWers have made clear how their professionals are trained and what services ideally at least involve. However, creating brief, identically structured handouts for professionals, particularly administrators who hire SMHPs, to compare and contrast the potential contribution of each group would be useful.
2. All SMHPs should be able to delineate the different types of professional relationships they have with students and educators, and describe the implications of these variations with regard to their profession’s Code of Ethics, including issues of privacy and confidentiality, conflicts of interest, and informed consent. One option could be an interdisciplinary project to help illuminate these issues for more inter-professional collaboration and to make the meaningful differences between SMHPs clear to everyone, and also to help SMHPs be able to identify commonalities and unique, or specialized areas, in relation to other SMHP groups.
3. All SMHPs need to be knowledgeable about local, state, and federal education policies, and how these policies impact the definition of their services and what implications these policies have for their ongoing training needs. Having this clarity (again something that all SMHP state and national organizations can assist with) will enable individual SMHPs to identify what training needs they have and advocate for that training to be delivered within enhanced pre-service university training, practicum/internships settings, and post-master’s training certificates (e.g., the Loyola SMHAPP case study example we detail below). This could also lead to a growth in more post-master’s certificate programs that address those gaps in training and inform curriculum revisions at the pre-service level.
4. All SMHPs should have knowledge and skills to facilitate collaboration among professionals from disparate systems, including but not limited to education, health, mental health, child welfare, and juvenile justice. Infusing Nesting these components within pre-service training and infusing elements of interdisciplinary collaboration would be ideal.
5. All SMHPs should be able to identify and evaluate evidence supporting appropriate EBPs and the principles guiding the EBPs. In addition, it is also important for SMHPs to be

able to weigh the potential of interventions to address mechanisms of change at a variety of levels, including individual factors (self-regulation, social skill development), school climate, family engagement, and teacher practices. Doing this will give SMHPs the flexibility to adapt their interventions to their specific context while retaining the key ingredients of the interventions themselves, and also give them ample opportunity to collaborate with other SMHPs and educators within their schools to ensure they can effectively implement these EBPs. Ultimately, while allowing for some flexibility to adapt interventions to specific school contexts, it is critical that these EBPs are implemented with fidelity and have been shown to be effective for impacting outcomes that are valued by educators.

6. All SMHPs should be skilled in assessing education-related equity issues and identifying and implementing EBPs to address them. Building strong partnerships at the pre-service level with faculty and training centers who have expertise in addressing issues of race and equity in education will be crucial to implementing this recommendation and making it sustainable in the long term. Ideally, this could be a joint project between all the major SMHPs too, possibly even to jointly fund their own interdisciplinary center on training SMHPs in antiracist school mental health practice (Kendi, 2019).
7. All SMHPs should be knowledgeable about the coordination of intervention support with the context of MTSS and have skills in the area of interdisciplinary collaboration and leadership. Coordination involves having EBPs available for students who require primary, secondary, and tertiary levels of support and the use of school data (e.g., attendance records, office discipline referrals, universal screeners, suspensions, academic engagement) to determine who will receive interventions, when additional interventions are needed, and when intervention support can be

responsibly terminated. If anything, we think this recommendation might be one that each SMHP group is trying to meet within its own “silo” in terms of learning about MTSS. However, our research and practice experience show that SMHPs largely learn about interdisciplinary collaboration leadership in isolation from other SMHPs. Having more experiential educational and training opportunities where SMHPs come together to “do” this work together is imperative if we want to build these skills in our future SMHP workforce.

Implementing these best practice recommendations in workforce development efforts across all qualified SMHPs (eight groups from five disciplines) would be a good first step toward unifying workforce preparation requirements specific to school-based mental health practice, enhancing role clarification, and increasing the likelihood that SMHPs are effectively and responsibly addressing the needs of students, parents, and educators within school settings, as opposed to just providing traditional outpatient-style mental health services in a school building. While these are a good first step, we also contend that implementing these best practices themselves should be just the beginning, if the various SMHP disciplines are able to work past typical issues of turf to address the issues we have identified here. We believe these recommendations could be used to create an interdisciplinary school mental health practice model or framework. We also think these recommendations could be used to develop a framework for state department of education administrators to identify both the unique and overlapping qualifications of prospective school-based mental health providers within their localities to then assist school administrators to effectively develop job descriptions and interview for school-mental health positions. In the next section, we describe an innovative post-master’s certification program that embodies many of these best practice recommendations.

Case Study: The Loyola School Mental Health Advanced Practice Program (SMHAPP) Certificate

To this point, we have described the training gaps that exist for many SMHPs as they complete their pre-service workforce preparation. With a few exceptions, most of the post-service training SMHPs receive comes in the form of CEU conferences and possible one-off certificates that they pursue on a specific topic of interest to them. Our review of the post-master's training landscape has shown that there are few programs that are specifically targeted at the aforementioned training needs.

The innovative School Mental Health Advanced Practice Program (SMHAPP) draws on the work we have done at Loyola to create and sustain a post-master's credit-bearing certificate that focuses on building an interdisciplinary SMH practice identity and inviting all SMHPs into that space to become leaders in their school contexts. We'll first briefly describe the "origin story" of the SMHAPP itself based on our teams' research and decades of experience as SMHPs, and then share the key components of the 15-credit SMHAPP certificate. Drawing on the voices of our now-30 current students and graduates, we share what our promising initial outcomes tell us about the needs of SMHPs trying to navigate their school contexts after they have completed their initial pre-service training, and how we plan to further build the SMHAPP and related post-master's training efforts going forward.

Since starting at Loyola in 2006, I (Mike Kelly) have been focused on understanding what SMHPs do, the barriers to the practice role, and the training needs subsequent to pre-service training programs. To that end, I have been part of leading a CEU-based 3-day Summer Institute at Loyola (the Family and School Partnership Program, FSPP) that to date has provided CEU trainings to over 1500 SMHPs. While we are proud of our efforts to bring evidence-informed practice tools and strategies to the SMHPs who attend our FSPP, we recognized that this was insufficient, that it was not always

helping our SMHPs implement the new tools and skills they were learning in our Summer Institute when the blur of their Fall semester kicked in. Over the past decade, we heard loud and clear from some of our FSPP trainees (as well as the 40–50 certified SSW we graduated each year from our MSW program) that they wanted more than CEUs, that they wanted to go more in-depth on learning how to be more systemic, data-driven and evidence-informed in their work.

This led me to create a post-master's certificate designed to teach these components and provide SMHPs a way to earn graduate-level credit toward a possible salary advancement within their schools. The 2-year, cohort-based, 15-credit program is delivered almost completely online (with a week Summer residency, paired with the FSPP Summer Institute that we still offer every July). It was approved by the Loyola faculty and University Graduate Studies Board and started in Fall 2016, and to date has enrolled 30 SMHPs (SSW, SP, and SC) enrolled, with three cohorts already graduated, and another slated to graduate in Summer 2021.

Key Components of the SMHAPP

Drawing on a variety of Professional Learning Community (PLC) projects we have done (Brake & Kelly, 2019), we were able to refine the model for the SMHAPP in terms of the course content and structure for learning. The key components of the SMHAPP now include:

1. A 2-year cohort-based model, where all SMHAPP students participate in a 2-year Integrative Seminar that is delivered online in a synchronous format. This is also the setting where in addition to building a strong course community and PLC culture, the SMHAPP students study, develop, propose, and implement a school-change project based on significant mental health needs identified in their schools and incorporating anti-oppressive, evidence-informed, and data-driven frameworks into their project.

2. Three asynchronous courses, delivered by expert adjunct SMHAPP faculty active in the field, focused on competencies in EBP for SMHPs, use of data across all three tiers of MTSS, and delivering evidence-informed clinical interventions at a tier-3 level.
3. Multiple “products” from the school-change project that are disseminated widely within SMHP online spaces: the aforementioned school-change project becomes the basis for much collaboration between the cohort (many often identify similar topics they wish to work on), and each SMHAPP student is required to produce several articles, research briefs/infographics, and presentations for the FSPP that enhance their presentation, critical thinking, and writing skills. These “products” have been shared via the schoolsocialwork.net (SSWN) site I helped re-launch in Fall 2016, and the sister site SSWNetwork that we founded in 2018. (To date, articles on our SSWN site regularly reach 8–10,000 SMHPs a month, and there are now over 5000 SMHPs on our free SSWNetwork site.)

Promising Outcomes and Looking Forward

The work of the SMHAPP has shown that a rigorous post-master’s training course can provide SMHPs with both emotional and professional support, the opportunity to learn new skills and implement them with the support of their cohort and the SMHAPP faculty. SMHAPP graduates have been able to implement projects that tackle critical issues like disproportionality in discipline and special education referrals; building stronger referral procedures for SMH services within an MTSS framework; and designing and delivering culturally relevant parent support services within the school (just a few examples). Our SMHAPP grads shared their positive experiences in their exit interviews, saying that “the one year we have in internship practice in a school is not enough to learn everything there is” and the SMHAPP model helped them go deeper into the skills they needed to be effective. Another remarked on how

“burned out” she was feeling before she joined the SMHAPP and that when she “found a cohort” that was “supportive” she was then able to learn more about the EBPs she wanted to bring to her school.

We see this again and again in our review of the projects and the SMHAPP student experiences: the need for more training and skill building, but also to have it done in an ongoing, supportive cohort-based environment where it is acceptable to try things, make mistakes, and try again. Many of our students have remarked how this is one of the only post-service spaces where they felt that way. This makes us consider how we can continue to expand the SMHAPP model in order to allow additional PLCs to meet via our SSWNetwork site. Additionally, mini-modules can be created by our SMHAPP graduates and delivered free of charge through the SSWNetwork. Finally, these initiatives will support the continued dissemination of the important work our SMHAPP students are doing and their lessons learned.

Conclusion

We believe that many barriers to SMH service delivery could be addressed through a cohesive model across disciplines that informs training at both the pre-service and post-master’s/post-service levels. When roles are defined, collaboration and teamwork are instilled, and the chance for the dynamic and creative SMH work we see being conducted in our SMHAPP cohorts will have a chance to develop in PreK-12 schools everywhere. Developing a fluid system of training and collaboration has the potential to fuel administrative buy-in, building trust and confidence throughout the school system (Weist et al., 2012).

The future growth of school mental health, including the fostering innovative approaches in schools, needs cross-systems training and collaboration to be realized (Weist et al., 2012). We must look for strengths and overlaps across our existing SMH practice models to enhance and build interdisciplinary collaboration, as turf battles and fragmented service delivery by competing SMHPs do not serve our students or schools well.

Interdisciplinary training that aims to build cohesiveness and reduce the siloed orientation across SMHPs offers a sound path forward. We believe these best practice recommendations can provide a springboard to inform a unified, interdisciplinary SMHP workforce development model. This unified model can serve as a framework for department of education administrators and school administrators hiring practices, by helping to identify the unique and overlapping qualifications of prospective SMHPs within their localities.

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Preparing School Mental Health Providers for Practice in Rural Communities

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Preparing School Mental Health Providers for Practice in Rural Communities

In the second edition of the *Handbook of School Mental Health* (Weist et al., 2014), the immediate predecessor to this current and now third iteration, Michael et al. (2014), encouraged readers to systematize their efforts in preparing the future school mental health (SMH) workforce. At that time (2014), the literature on rural SMH was significantly underdeveloped and restricted to a few published studies and book chapters (e.g., Owens et al., 2013). Since then, the body of published literature regarding rural SMH, including program evaluations, open trials, chapters, and the inaugural *Handbook of Rural School Mental Health* (Michael & Jameson, 2017), has grown considerably.

Some of the published SMH studies that include rural samples reveal promising findings regarding the effectiveness of evidence-based

interventions. Examples include those for youth with attention deficit hyperactivity disorder, such as teacher consultation focused on classroom supports and interventions (Owens et al., 2017); daily report cards (Mixon et al., 2019); teacher practices in establishing positive peer climates (Mikami et al., 2020); students with depressive symptoms (Michael et al., 2016); identification and management of high schoolers experiencing suicidal thoughts (Capps et al., 2019; Michael et al., 2015); reductions in general distress (e.g., Albright et al., 2013; Kirk et al., 2019); improved attendance and reduced discipline referrals (Michael et al., 2013); and a relatively rapid response to a modest dosage (10–14 sessions, each 40 min) of cognitive behavior therapy (CBT) delivered in rural schools (Kirk et al., 2019). Despite these promising trends, much work remains in preparing a sustainable rural SMH workforce that can be deployed strategically, especially as we seek to close the overwhelming disparities and access gaps exposed by the COVID-19 pandemic.

Given the current state of the literature on rural SMH, this chapter has four primary aims: (1) to summarize and defend the rationale for scaling up rural SMH programs; (2) to describe the interdisciplinary and cross-system competencies needed among SMH providers; (3) to present innovative training approaches for preparing the school practitioner workforce; and (4) to offer insights for workforce training, retention,

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research, and practice in rural schools based on lessons learned from trainees.

SMH Services Within the Multitiered Systems of Support Framework

In addition to discussing some of the most important preprofessional competencies, Michael et al. (2014) also argued that the development of the SMH workforce must include a reliance on existing infrastructures in K–12 schools, especially the Multitiered Systems of Support (MTSS) framework. The benefits of using the MTSS framework are that most educators are familiar with these concepts; many interdisciplinary professionals (e.g., teachers, social workers, counselors, school psychologists, nurses, administrators, health educators) in K–12 schools currently use MTSS as the launch point for school-wide assessment and intervention efforts. Using MTSS and other systems of care familiar to educators (e.g., Individuals with Disabilities Education Act) enhances the potential for developing, implementing, and sustaining comprehensive SMH services and a competent workforce, which is especially relevant in under-resourced rural schools. Using systems like MTSS also helps prevent known barriers to effective implementation, including unnecessary duplication of services and communication gaps across service providers and educators. Two successful examples of embedding SMH services within the MTSS framework to address particularly high-risk populations, including students in rural and remote regions, are highlighted here to emphasize the value of this approach. First, homeless youth, especially those in rural areas, are a particularly vulnerable group, who experience not only the adverse physical and emotional impacts of an unstable living environment, substance use, self-harm, and suicidality, but also higher-than-average levels of discrimination (Budescu et al., 2021). Many schools are providing effective services to students without stable housing, and they are doing so within an MTSS model, because the myriad risks and needs of such students cannot be met at one level of intervention. Essentially, a

one-size-fits-all approach to service delivery is inadequate, and schools must be creative when flexibly implementing interventions and providing support (Sulkowski & Michael, 2014).

It is important to emphasize that, even if homeless students display needs that exceed what can be addressed by universal (Tier 1) interventions alone, they can still benefit from universal service delivery (Sulkowski, 2016). Using an MTSS approach, schools in southern Arizona have partnered with a community nonprofit agency, Youth On Their Own (YOTO), to provide an incentivized structure for homeless students to face the practical challenges they face each day. For instance, YOTO allows them to earn reinforcers for displaying adaptive and beneficial behaviors such as attending school, maintaining an adequate grade point average, and avoiding disciplinary infractions (Coulter, 2016). The school partnership with YOTO is a community-based, systemic approach that encourages student success by boosting motivation, classroom engagement, and practical incentives for learning. The YOTO partnership serves over 2000 students each year and provides access to basic supplies (e.g., food, clothing, computer access). The organization reported an 84% high school graduation rate among its participants during the 2019–2020 academic year.

An emerging body of literature suggests that Tier 1 interventions for homeless youth, including the provision of tangible social support from teachers and peers, can help buffer and reduce the stressors associated with housing insecurity. In a study of 98 homeless youth, Griffin et al. (2019) examined twice-daily mood ratings for 10 days and measured the associations with perceived social support from teachers and peers. They found that youth who experienced relatively higher levels of social support from teachers and peers early in the day tended to report relatively higher levels of positive affect later in the day.

A second example of embedding SMH services within an MTSS framework for high-risk populations, including students in rural areas, is the Supporting Transition of Newcomer Groups (STRONG) Program (Crooks et al., 2020). The STRONG program is a manualized, resilience-

enhancing, targeted (Tier 2), school-based intervention, designed for immigrant and refugee students experiencing psychological distress (Hoover et al., 2019). It was developed in direct response to the unique mental health needs of refugee students arriving from war-torn regions in the Middle East to Ontario (Canada) schools. The STRONG program has 10 sessions and an individual journey narrative session. During the journey narrative session, the STRONG clinician also conducts a post-traumatic stress disorder assessment to determine whether more intensive, individualized psychotherapy (i.e., Tier 3) is needed. If the need for Tier 3 services is identified, STRONG clinicians refer students to in-school, one-on-one trauma treatment or other psychotherapy or to other community-based supports if in-school services are not available (Crooks et al., 2020). In this chapter we will highlight two recent rural initiatives.

Rationale for Providing Comprehensive Mental Health Services in Rural Schools

Epidemiologic Rationale

Although school-aged youth experience many impairments that deserve ample attention, one key indicator of the mental health needs is how many students experience suicidal thoughts or behaviors. The 2019 Youth Risk Behavior Survey (YRBS) showed that nearly 19% of teens had seriously considered suicide during the previous 12 months (Ivey-Stephenson et al., 2020). Even more alarming, about 9% of high schoolers reported at least one suicide attempt, and 2.5% said that they made an attempt that required medical treatment, during the previous year (Ivey-Stephenson et al., 2020). Overall, the suicide attempt rate requiring medical attention for females was nearly double (3.3%) the rate among males (1.7%). There were also statistically significant differences based on race/ethnicity and sexual identity. Suicide attempt rates were higher for Black (11.8%) and Hispanic (8.9%) students than for White students (7.9%). Furthermore,

teens who were identified as lesbian, gay, or bisexual reported significantly higher rates of suicide attempts (23.4%) than did those who were unsure about their sexual identity (16.1%) or identified as heterosexual (6.4%). These data reveal a need to address suicide in schools broadly, but they also suggest the need to target specific high-risk groups, especially sexual-minority youth. Moreover, these risk behaviors and adolescent suicide deaths have increased substantially over the past 10–20 years (Ivey-Stephenson et al., 2020), and youth in rural areas died by suicide at nearly twice the rate of adolescents from the most urban locations in the United States.

From 1999 through 2019, a total of 44,479 young people (ages 10–19) in the United States died by suicide (Centers for Disease Control and Prevention [CDC], 2021). However, when the suicide death rate from the most rural areas (non-core, or “least populous”) is compared with that from urban centers (central metro or “most populous”), the suicide death rate among rural teens (7.6/100,000) is nearly double than that for adolescents who hail from urban areas (3.9/100,000) (CDC, 2021). These data are consistent with rural–urban differences across the lifespan (Fontanella et al., 2015), which are pertinent because adolescents who are exposed to family members or peers who die by suicide are much more likely to attempt suicide themselves (Nanayakkara et al., 2013). Although the reasons for these rural–urban differences among youth are multifactorial (e.g., economic distress, less access or availability to mental health care, help-seeking not acceptable), one plausible contributing factor is the “mechanism,” or means, of suicide death among 10- to 19-year-olds. Across all populations, the primary mechanisms of suicide death for these youth between 1999 and 2019 were about the same for firearms (46%) and suffocation (45%), whereas poisoning (7%) was a distant third. However, for 10- to 19-year-olds in rural areas, the leading mechanism by a wide margin was firearms (56%), followed by suffocation (37%) and poisoning (approximately 5%) over the same 20-year period (CDC, 2021). Although access to firearms is a serious public

health issue in general, it is especially relevant for rural youth. The current and historic trends regarding suicidality provide a compelling, if not sobering, justification for serving youth in rural schools. In addition, the data regarding specific disparities in risk behaviors and the differential mechanisms of suicide death among teens help SMH professionals sharpen targets of prevention and intervention.

Workforce Rationale

Mental health providers are in short supply in rural communities, creating an overreliance on SMH providers to address youths' needs during the school day, rather than through community providers. Rural communities experience limited access to evidence-based practices (EBPs), largely because of the limited availability of providers. A recent study considered more than 75% of all U.S. counties (many of which are rural) to be mental health shortage areas, and half of all U.S. counties have no mental health professionals at all (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016).

Similar to rural communities, many remote school districts also lack the resources and availability of providers to meet their students' needs. The National Association of School Psychologists recommends that districts have one school psychologist per 1000 students and suggests ratios closer to 1:500 or 1:700 students when psychologists are providing comprehensive and preventive services. Unfortunately, many states and districts miss this mark, including North Carolina (the context for the example programs discussed below). In the 2017–2018 school year, North Carolina schools reported a school psychologist-to-student ratio of 1:2008, far below recommended metrics. Moreover, these gaps in provider-to-student ratios between state and national levels continue despite recent improvements in the infrastructure of SMH. Compounding the problem, school psychologists in high-need districts spend most of their time in testing and assessment or administrative duties rather than in direct service provision for treating mental ill-

ness (Michael et al., 2009). Thus, scaling up suicide prevention programs in under-resourced schools requires doing a lot with very little (Schorr et al., 2017).

To combat low provider-to-student ratios in rural areas and rural school districts, some schools have partnered with regional university training programs in clinical psychology and other disciplines, whereby K–12 students and families are served and the mental health trainees are given opportunities to develop their clinical skills under the direct supervision of licensed SMH professionals. Such partnerships allow trainees to obtain critical experience in rural SMH provision and simultaneously allow states to build the future workforce that can address access barriers. That is, trainees provide services under supervision without charging students' families or health insurance, which simultaneously improves access to care. A strategy for offsetting costs is utilizing new full-time equivalents for SMH providers, modest contracts with local school districts, volunteer clinical labor provided by the universities, or grants, when available.

Defining Interdisciplinary and Cross-System Competencies in Rural SMH Service Delivery

A central tenet of training in rural SMH is learning and implementing EBPs across a diverse array of mental health conditions, especially given the professional workforce shortages described above. That is, SMH providers need to be prepared to serve as competent “generalists” who can manage the diverse issues that rural constituents face, given the reality that they are unlikely to see a specialist on demand. Likewise, it is essential that trainees develop skills for delivering evidence-based treatments competently within the *rural milieu*, which demands an understanding of the relevant contextual factors, including the acknowledgment of personal biases, the benefits and challenges of partnering with K–12 schools, a commitment to interdisciplinary collaboration, an appreciation for the significant impact of poverty, and a willingness to

leverage strengths of rural communities to address mental health ailments (Anderson-Butcher et al., 2017; Belhumeur et al., 2017; Owens et al., 2013).

Trainees in psychology are taught to follow the American Psychological Association (APA) Ethics Code (APA, 2017). To manage ethical challenges that are common when providing rural SMH services, providers need explicit didactic and experiential training in the following areas: the culture of rural America, patient confidentiality, possible multiple relationships with patients and their families, and services through telehealth methods.

Competencies in Multicultural Issues

Cultural competence is important because of the varied populations that might be encountered in rural SMH. In addition, courses in multicultural counseling will support graduate students in ensuring equitable access and treatment for youth who are impoverished and isolated because of the rurality of the region. It is essential for trainees to understand, and to have practice addressing, the culture of poverty affecting many students in rural areas. Recent qualitative data from families in Appalachia identified five central social determinants of health that create barriers for rural families: (1) poverty and lack of economic opportunity, (2) access to health care and health resources, (3) social and mental health challenges, (4) food insecurity and hunger, and (5) youth and older adults being most vulnerable to health disparities (Hege et al., 2018). Trainees should be exposed to each of these issues during practicum experiences to gain experience in helping students and their families identify and overcome relevant barriers.

Although 79–82% of residents of rural areas and small towns are non-Hispanic Whites, rural areas have become more racially and ethnically diverse in the past few years. Racial and ethnic minorities account for 83% of population growth in rural areas (SAMHSA, 2016). In North Carolina, the fastest growing population is the Latinx community, including migrant workers. A

key element of training in cultural competence is being cognizant of one's own biases and assumptions (Anderson-Butcher et al., 2017). Another key element is learning how to select or culturally adapt EBPs. Team-based supervision can help trainees learn from other trainees or supervisors how to competently address bias and promote cultural responsiveness in their work in schools. In the Innovative Training section, we provide an example of how we adapted an EBP (Coping Power) to fit the cultural context of rural schools (Coping Power Rural [CPR]).

Confidentiality

Although not unique to rural settings, maintaining confidentiality in rural school settings may be more challenging than, for example, in outpatient clinical settings in large cities. Because many rural communities are tightly knit and people are more likely to know a larger portion of others in their community, confidentiality as described by the APA Ethics Code (APA, 2017) requires particular care and protections. Still, with life-threatening issues regularly arising in SMH, limits to confidentiality will be immediately relevant to trainees in the rural SMH context. Trainees should be prepared via didactic courses to navigate these situations before beginning work in schools and should be monitored through onsite supervision.

Multiple Relationships

Multiple relationships present an ethical challenge when providers are involved in more than one unique and potentially harmful relationship due to power differentials. Because of the smaller number of people and available resources in rural communities, these issues are more common for rural SMH providers than for those in urban or suburban areas (Owens et al., 2013). For example, a trainee providing mental health services to a student in a school might live in a town where that student's parent is also the only dentist; therefore, the trainee becomes a patient of the

student's parent. Similarly, professors and advisers of a trainee may have family and friends who are otherwise involved with the trainee, and vice versa. The APA Ethics Code outlines specific guidance for multiple relationships: "If... a potentially harmful multiple relationship has arisen, the psychologist takes reasonable steps to resolve it with due regard for the best interests of the affected person and maximal compliance with the Ethics Code" (APA, 2017, p. 6). These situations require training, supervision, and consultation to help trainees readily identify them; determine whether they are potentially harmful; and, if so, take immediate steps to mitigate harm. Trainees may also be in a position of advocating for ending or altering a relationship with a clinical supervisor, student, or school staff member because of a potential multiple relationship, which can be a challenging scenario for a trainee to navigate.

Competencies in Telehealth Solutions

With the onset of the COVID-19 pandemic in spring 2020 and associated disruptions to in-person education, SMH providers turned to providing services via videoconferencing and telephone. Before the pandemic, telehealth was not typically covered by Medicaid or private insurance and was not widely or systematically taught in training programs (Perle, 2020). With changes to coverage concurrent with the pandemic and the potential for significant growth in the future, trainees in rural SMH should be introduced to the clinical, ethical, and legal implications of providing services to students and families via telehealth. Emerging literature has shown that students' mental health needs, including crisis assessment and treatment, can be addressed using traditional methods through telehealth (Holland et al., 2021). The particular barriers to telehealth in rural communities should be introduced to trainees. Despite progress and contributions from the federal government to improve communication accessibility in rural areas, 39% of individuals living in rural areas do

not have access to advanced broadband internet; as many as 19% have no access to basic broadband in their homes (SAMHSA, 2016). In response to this fact, families sometimes come to their child's school to use the school's reliable internet connection to contact providers. Rural parents also may be more likely to have problems with the digital literacy needed to engage with telehealth (Siceloff et al., 2017). Trainees should learn through practice opportunities how to find unique solutions that work for rural families.

Innovative Training Approaches in Rural SMH

Coping Power Rural

The goal of the CPR project is to adapt the existing Coping Power curriculum in three ways: (1) to fit within rural middle schools; (2) to address internalizing problems (e.g., anxiety and depression), as Coping Power is focused on externalizing problem (e.g., aggression and noncompliance); and (3) to expand it to align with an MTSS framework. The CPR project provides middle school students with extra social and emotional support while also providing graduate student trainees with experience in rural schools in North Carolina and Virginia. The curriculum includes a universal social-emotional learning program that all students receive in the classroom and a pullout component for a selected, more symptomatic, group of students. Consistent with MTSS, CPR uses data (i.e., rating scales) to inform decision-making regarding who may benefit from the small-group component. CPR uses school professionals (e.g., teachers, school counselors) to implement the program. This approach is not only imperative given workforce shortages and the lack of mental health providers in rural communities, but also enhances the sustainability of the program because it does not require specialized child psychologists. The inclusion of the prevention-based universal and selected group tier components of the CPR curriculum could protect the workforce by reducing the number of

students in need of Tier 3 services who would require more clinically oriented professional meetings with individual providers.

In addition to supporting students and the school workforce, CPR provides graduate student trainees with experience in rural SMH and the opportunity to develop the aforementioned competencies. Trainees involved with CPR are able to better understand MTSS and how SMH can fit within that academic framework, including how data can be used to facilitate decision-making about when more targeted services are needed. CPR includes content for parents and caregivers that trainees help to implement, and trainees have the opportunity to co-lead the small-group component of CPR. Working with a variety of families and students in this way enables the trainees to build more rural cultural competence. These experiences allow the trainees to work side by side with school professionals and become embedded in the local rural community, which allows them to gain important skills related to community engagement. Furthermore, experiences embedded in rural culture promote familiarity and comfort with these settings and, in turn, increase the chances of retaining trainees as part of the rural workforce.

Trainees are also involved with developing and adapting CPR material, which teaches them how to consider the rural context and make material relatable to the local culture. This experience in adapting existing evidence-based treatments (flexibility while maintaining fidelity) is imperative for training in rural settings, given that many treatments have not been developed or tested specifically for rural populations. Furthermore, the knowledge gained from developing and implementing CPR content (that is prevention focused but based on well-established CBT techniques and skills) helps build trainees' clinical skills and could enhance retention of trainees in rural settings because it is providing training in transdiagnostic skills targeted for rural youth, making the trainees better prepared to help a wide variety of youth.

Telehealth Adaptations During COVID

With CPR occurring partially during the COVID-19 pandemic, trainees are also building competencies in how to flexibly implement SMH interventions, consistent with the MTSS model promoting flexibility. For instance, CPR classroom content often includes small-group activities or work in pairs, which is more challenging in an online learning environment. These activities can still be completed online by using virtual "breakout rooms" to place students in small groups with a facilitator (e.g., teacher) who strategically rotates through each virtual room or by assigning a different facilitator to each room if available (e.g., teaching assistants, other teachers). Some schools have combined classrooms of the same grade (e.g., all seventh graders complete the CPR lesson together), which enables more implementers to be present to facilitate the content and activities.

Implementers have also needed to be creative about student engagement, given the potential for distractions while students complete the lessons virtually from home and the lack of obvious social cues when several students keep their video cameras turned off (because of privacy concerns, preference, or bandwidth limitations). Implementers have found the use of the chat function and interactive PowerPoint slides (e.g., Pear Deck) during CPR lessons to be effective in engaging students; using these tools has allowed students to respond to questions and share ideas even if they do not feel comfortable speaking. Trainees are helping generate ideas on how to make CPR content more engaging and easily implemented in an online format and are gaining experience in how to work flexibly in schools.

Overall, trainee involvement with CPR provides opportunities for modeling from professionals more experienced in SMH. The involvement also offers experience in building and maintaining community partnerships with schools, parents and caregivers, and students. This work is important for their professional development and for retention of the rural SMH workforce.

Assessment, Support, and Counseling Center

Preparing practitioners to work in rural SMH creates an opportunity to merge the missions of local training programs and the rural health care communities in which they coexist. A common goal of rural communities is to infuse the local economy with well-trained health care providers, whereas the university is tasked with preparing the workforce. Trainees who complete practice in rural communities, and in K–12 schools specifically, become members of the rural community of practice well in advance of graduation. This workforce development model also creates opportunities for recruitment and retention in rural practice, a factor shown to be important for rural communities (Jameson et al., 2009).

During the 2006–2007 academic year, faculty from Appalachian State University’s psychology, social work, and Marriage and Family Therapy (MFT) Departments worked in tandem with educators and administrators to develop embedded, comprehensive mental health centers—Assessment, Support, and Counseling (ASC) Centers—in one rural school in western North Carolina. The ASC Center, and its diverse constituents, created a sustainable partnership to provide mental health services in rural high schools (Michael et al., 2009), which was subsequently expanded into two additional school districts in the region. In addition to improving access for many students who would have otherwise faced insurmountable access barriers, such as transportation limitations, inability to pay for treatment, or stigma (Huggins et al., 2016), the ASC Centers provided a unique training opportunity for master’s and doctoral students in clinical psychology, social work, and MFT under the supervision of licensed, doctoral-level faculty (Michael et al., 2009).

The ASC Centers help to train a competent rural SMH workforce and not only benefit rural schools but also generate the empirical data to better inform and guide clinical practice in rural SMH, especially as it pertains to crisis intervention and managing suicidality. One example of practice-based research in rural schools is the

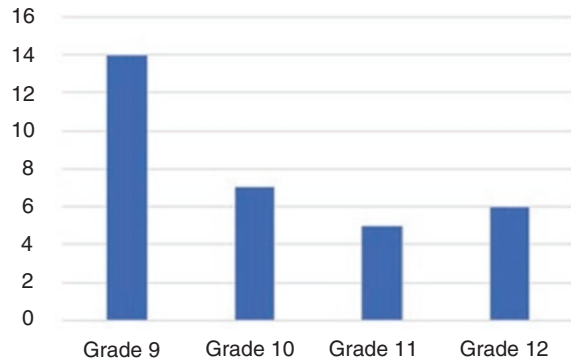
Prevention of Escalating Adolescent Crisis Events (PEACE) protocol. The PEACE protocol was designed specifically for rural schools (Michael et al., 2015) and now includes suicide-specific Tier 3 intervention components, including Counseling on Access to Lethal Means (CALM; Capps et al., 2019) and the Collaborative Assessment and Management of Suicidality (CAMS) program. As discussed previously, given the disproportionately high base rates of suicidality among youth in rural regions, trainees in rural SMH will likely encounter these students and therefore need to be well-trained and closely supervised in the assessment and treatment of suicidal ideation. As a current example during the COVID-19 pandemic, ASC Center staff in one of the rural schools responded to 49 separate crisis events involving 32 students (Fig. 21.1).

Six of the students were current ASC Center clients at the time of the crisis intervention. Five others became clients after the intervention. This emphasis on evidence-based crisis response and suicide prevention is an advanced training experience for graduate trainees while also being an intensive, but essential, service for students in crisis. Trainees providing CAMS, CALM, and other interventions in the ASC Center (e.g., brief CBT; Kirk et al., 2019) are closely supervised to ensure that they develop appropriate crisis assessment and intervention skills.

Training in Integrating SMH into MTSS Structures

The Department of Psychology at Appalachian trains graduate students pursuing a doctor of clinical psychology (Psy.D.) degree. The program aims to prepare students to serve rural communities and includes opportunities to complete practice in one of three local ASC Centers. Prior to serving students at an ASC Center, trainees complete a series of courses and receive supervision designed to enhance their skills in delivering evidence-based interventions to adolescents, particularly within the rural school setting. Trainees in the doctoral program at Appalachian also actively prepare for their ASC Center practicum by receiving cross-training in MTSS by education professional development trainers. The edu-

Fig. 21.1 Student crisis interventions through one ASC center, 2019–2020 school year



cation training and technical assistance team at RTI International provided virtual training sessions for Appalachian graduate trainees to raise their awareness of tiered interventions in schools. The design of these sessions follows a gradual release model, with the goal of building individual capacity for these preservice practitioners to integrate mental health supports within schools. Initial training included an introduction to response to intervention as a process and structure of support for students. Other topics covered in further workshops included universal screening, progress monitoring, and data-based decision-making. More advanced topics included understanding the importance of social-emotional learning and the benefits for students and staff. Graduate trainees specifically requested additional information about “children in at-risk circumstances (e.g., homeless children, children in foster care) and how MTSS and [social-emotional learning] might be tailored to benefit their unique needs” and those “in certain ethnic minorities such as the Latinx population” and “school faculty.” These topics will support seminar design in subsequent years with these trainees as they progress through their doctoral programs.

Telehealth Adaptations During COVID

The COVID-19 pandemic forced the statewide closure of schools in North Carolina on March 13, 2020 and closures across rural communities in other states around the same time. During the remaining months of the spring 2020 semester, ASC Center team members maintained contact with students by telephone, email, and, to a lim-

ited extent, videoconferencing. School closures, however, reduced the number of ASC Center student contacts and limited the ability to measure student mental health outcomes. Over the summer, several steps were taken to adapt the mental health service model in anticipation of modifications to in-person K–12 instruction for fall 2020. The ASC Center team developed a fully vetted set of telepsychology consent documents and protocols, acquired Health Insurance Portability and Accountability Act–compliant videoconferencing software, purchased personal protective equipment for in-person sessions, and obtained APA-accredited telepsychology training for all doctoral trainees. By the middle of the 2020–2021 school year, the ASC Center was operating as efficiently and effectively as possible, serving students in person wearing masks and maintaining social distancing in accordance with CDC guidelines, through videoconferencing technologies, or both. The ASC Center continues to operate flexibly to accommodate students during the COVID-19 pandemic and in the context of evolving policy decisions about when to continue with hybrid instruction or shift to remote instruction.

Workforce Development from the Trainee Perspective

To better understand the motivations and experiences of a group of graduate students studying rural mental health, we interviewed six trainees in the clinical psychology graduate program at Appalachian on topics related to their training

program. The topics of the semi-structured interviews included motivation for selecting the program, program satisfaction, and career plans. Four of the trainees were nearing the end of their first year in the doctoral program, and two were preparing to graduate from the master's program. Among trainees, there was considerable agreement regarding the factors that attracted them to the program—chiefly, a desire to serve children and adults from underserved communities. Other key factors included personal ties to a rural community, an expectation of exceptional supervision and clinical opportunities, and trust in the program faculty. Trainees' experiences in the program, particularly their clinical interactions, were largely positive, reinforcing their chosen career path and their perception of the positive impact of school mental health. Although these trainees represent a small fraction of clinical psychology graduate students, preliminary findings from their interviews are supported elsewhere in the literature (Jameson et al., 2009; Watanabe-Galloway et al., 2015). Graduate programs may uncover insights in these findings to guide the development of strategies to recruit and retain students in the field of rural SMH.

Ties to Rural Communities

The county I'm from doesn't even have a psychologist. So just knowing how important mental health is, especially for adolescents, because they're at that age where you're transitioning into adolescence, into adulthood, and how important it is to intervene at that area—I just found the ASC Center to be such a really special program that was implemented.

Several trainees from Appalachian's program described the impact their ties to a rural area had on their motivation to serve rural communities. This echoes findings by Jameson et al. (2009) that one predictor of positive attitudes toward working in a rural area is being from a rural area. One trainee suggested that university faculty should begin cultivating interest in clinical psychology among high school students in rural areas well before the point of applying to gradu-

ate school: "Maybe partnering with [secondary] schools and doing talks about professions and mental health, just to open up that opportunity for people to consider."

Supervision and Clinical Opportunities

Several trainees were drawn to Appalachian's program for the potential to provide supervised SMH services to clients early and throughout their training. One trainee observed, "A lot of the programs that I interviewed at for grad school don't have that. They don't have an opportunity for first-year students to really get involved with [volunteer] clients." Not only did the promise of gaining early hands-on experience appeal to some prospective students, but when asked to recall their most meaningful experience in the program, students frequently described an encounter with a client or volunteer client that happened early in their graduate career.

Trust in Faculty

Multiple trainees described their decision to enroll in the program as one based on confidence or trust in the Appalachian faculty. Learning of faculty members' commitment to serving rural communities through scholarship, practice, and advocacy attracted multiple trainees to the program. According to one trainee, "I really loved how passionate they were about it and how knowledgeable. And I felt like I would get extremely good training from what I knew about the program already." They were also influenced by the faculty's clear commitment to training practitioners and providing extensive supervision related to working in rural areas.

In making the choice to enroll, trainees also seemed to weigh the barriers they perceived to pursuing a career in rural mental health care. Trainees listed fewer advancement and job opportunities, professional isolation, stigma related to mental health treatment, and lower-than-average salaries as barriers they believed

they might face after graduation. The barriers were likely considered an acceptable trade-off for the opportunity to enjoy the benefits of living in a rural community and to contribute to reducing the mental health burden in an underserved area. These themes were similar to those found by other researchers (e.g., Jameson et al., 2009).

Training Experiences and Satisfaction

As to factors important to their satisfaction, trainees cited the program's many opportunities for applied or experiential work, as well as the high-quality and extensive supervision and mentorship, opportunities to work closely with faculty, and emphasis on rural issues. According to one trainee,

The rural aspect of the program is always integrated in pretty much every course that I've taken so far. We have the discussions about how research can apply to rural areas, as well as how rural areas face certain barriers and how we can overcome those barriers.

Trainees also appreciated the program's emphasis on preparing them to address the diverse issues they might encounter as rural mental health providers. "I think the fact that we're being trained as generalists is really important here," said one first-year trainee. "We've been exposed to a lot of basics of therapy that should work across all populations." Recognizing the many roles rural providers fill, the faculty train their students as generalists and "local scientists," with a strong emphasis not only on clinical work, but also on program evaluation, needs' assessments, and a host of other skills required to meet rural clients' unique and varied needs. Preparing students in this way may help address one issue Hargrove (1991) posited as explaining low demand among clinical psychologists for jobs in rural areas: that they don't feel equipped to meet the variety of needs they may encounter in a rural community.

Two trainees spent significant time working at the ASC Centers serving high school students.

These trainees had regular weekly supervision with their faculty supervisor and daily supervision from their site supervisor. They described the feeling of satisfaction they received from working in the ASC Centers. One shared, "That was probably one of the biggest successes, is seeing that students are improving, that this is actually helping. We're not just wasting time here." Across both degree programs, trainees' positive interactions with clients and volunteers served to reinforce their selected career path.

At the ASC Centers, trainees collaborated regularly with school administrators and staff within the MTSS structure to identify and treat students in need of mental health services. Guided by their faculty and site supervisors, trainees established standing within the school through their consistent presence on campus and attendance at weekly meetings with the principal, school counselors, and often the school nurse. One trainee also found it helpful to proactively "go into the classrooms and tell people about our services, talk with teachers first, see if they're okay with that," adding that "*having rapport with the teachers really helped.*" To encourage collaboration, this trainee suggested that providers look for ways to streamline the student referral process and acknowledge referrals made by staff, while maintaining strict student confidentiality. The trainee continued, "I don't know where I would have been... if I didn't work with the administration or other school counselors, because they know what's going on."

Building rapport with families was also important. Trainees contacted families to introduce themselves as soon as they began working with a student, checked in with families as needed about the youth's progress, and provided a summary and resources when services were terminated. One trainee explained,

I also think that families overall really appreciate the fact that we keep parents involved as much as possible. Otherwise, I feel like the program wouldn't be as successful if we were a very black-and-white like, "We work with students but never interact with parents," or "This is a school thing and it doesn't go home or it doesn't affect the

home,” because it has to affect the home. Otherwise, we’re not having an impact on them. So I think that collaboration with parents also really helps.

Trainees were encouraged by the results of their work with students and the impacts they perceived the ASC Centers to have within the community. Most commonly, they treated students for anxiety and depression and counseled them through relationship issues, family conflicts, and, occasionally, life-threatening crises. Trainees noted that 70%–80% of students were completely recovered at the time their services ended, which the trainees found gratifying. One shared, “Students come in saying that they’re suicidal, and even after three or four sessions—sometimes it’s that few and sometimes it’s more—they’re almost completely managing their suicidality on their own. That’s pretty rewarding.”

The ASC Centers were viewed by trainees as essential to alleviating the shortage of mental health providers in the community. Locating the ASC Center within a school was believed to enhance parents’ trust and reduce barriers to treatment such as transportation, cost (services are provided free of charge), and stigma associated with seeking mental health care. Trainees noted that students reported feeling safe enough to receive mental health services through the ASC Center. Both the trainees’ relatability and their status as nonschool staff may have been factors. “I think students really like that you have a 20-something-year-old coming in to help them who can understand what they’re going through,” observed one. They also touted the benefits of having mental health services available from someone “who was nonjudgmental, a neutral third-party person who’s literally there to hear them out and help them.... Not all schools have something like this.”

Despite their positive experiences working with students at the ASC Centers, neither of the graduating trainees pursued employment in a rural area upon graduation, although both expressed an interest in continuing to work with children and adolescents. They attributed this decision to a lack of available rural SMH jobs and a desire to move somewhere with more opportunities to foster pro-

fessional and social connections. The first-year trainees also described potential barriers faced by clinical psychologists in rural areas, although they generally expressed greater optimism and commitment to working in rural SMH upon graduation. Consistent with findings from other studies of rural workforce development, trainees frequently mentioned receiving lower salaries and facing stigma as potentially decreasing the appeal of a career in rural SMH. “Just knowing that... that’s probably going to be a challenge is maybe, like, a barrier that I consider. But it may just be easier to work in a city where they may be more open,” one trainee shared. Similarly, another said,

[Mental health stigma] might be something that could get in the way of that, just maybe as far as just morale might go. You’re trying to do something that you believe in, but maybe the community you’re in doesn’t necessarily agree with that.

Trainees offered potential solutions to reduce these barriers. Many focused on steps that primary and secondary schools and their funders can take to retain mental health providers in rural schools. Along with increasing funding for SMH services and providing incentives like loan forgiveness for providers who locate in rural areas, trainees stressed that schools and communities should prioritize student mental health “as something that’s necessary and needed, just in the same way a school nurse is needed.” Moreover, trainees noted that when schools demonstrate that mental health is a priority, students and families are less reluctant to seek help. The ASC Centers and their host school districts, through their partnership to embed clinical psychology trainees within a school building and culture, offer a positive example. As one trainee observed,

The ASC Centers have done quite a bit of good in building those partnerships with schools and with students individually. And one of the things I like about the ASC Center model is that it does seem to me that it breaks some of that stigma. It breaks down a lot of those barriers that we have to treatment services for youth in rural areas like lack of access or transportation barriers, cost barriers, really breaks those down and just simplifies it to, “Okay, who needs these services? Who wants these services? Okay, they’re here,” and I love that.

Conclusions

Given the current state of the literature on preparing the rural SMH workforce, we offer the following summary on how we addressed the primary aims of this chapter. First, we defended the rationale for scaling up rural SMH programs, in part by providing stark truths about the worsening picture of suicidality for teens in rural settings. The current data regarding the predominant mechanisms of suicide death among rural youth, especially access to firearms, suggest strongly that intervention efforts in K–12 schools need to include lethal means reduction strategies like CALM and suicide-specific interventions like CAMS. In addition, we discussed the need for providing comprehensive SMH in rural schools by leveraging existing systems, such as MTSS, in addressing mental health care disparities in the context of rural K–12 schools.

Second, we highlighted some of the most concerning professional workforce shortages facing rural communities and in K–12 schools in particular. In light of these justifications for providing rural SMH services, we discussed two specific innovative programs, CPR and the ASC Center, that are dedicated to preparing SMH practitioners in rural Appalachia. As part of both programs, we described some of the most important competencies necessary to work in rural K–12 schools, including the capacity to serve as “generalist,” the need to be sensitive and responsive to the cultural features of rural communities, the need to adapt existing evidence-based paradigms flexibly for rural constituents, the need to manage ethically, the realities of protecting confidentiality and multiple relationships, and the need to develop advanced skills in telehealth solutions and suicide-specific interventions.

Third, we provided recent qualitative insights into the perceptions of trainees: what motivates them; what concerns they have; what might help them to seek out rural practice opportunities after they graduate; and, most importantly, what might help them to be not only employed but satisfied in their work as rural SMH practitioners. The near

universally positive feedback from the trainees regarding their early clinical experiences underscores the value of providing trainees-specific didactic training in the ethics, systems, and practice guidelines for rural SMH; supervised clinical opportunities in rural SMH as soon as their first year; and exposure and training in specific strategies designed to prevent suicide. Maintaining a low trainee-to-faculty ratio ensures that each trainee receives high-quality supervision, another advantage trainees listed as contributing to their satisfaction.

Finally, we argued strongly throughout the chapter for the creation of symbiotic partnerships between rural K–12 schools and the surrounding communities and universities that share not only the burden of initially funding them, but also the responsibility and joys of implementing and sustaining them. As a group of coauthors who are all deeply invested in rural SMH, we have experienced small victories, including the funding of aforementioned grants, successful adaptations in SMH during a global pandemic, and the development of a doctoral program with an emphasis on rural practice. We have also experienced the challenges in helping to build and sustain a community of rural SMH practitioners. Despite the challenges, we remain undeterred in our efforts to create vastly improved capacity to serve children and families in our rural K–12 schools.

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District-Level School Mental Health Workforce Development: Lessons Learned from Methuen Public Schools

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Introduction

The behavioral health needs of children have been characterized as a ‘silent epidemic’ with grave implications for children, families, and communities (Durlak et al., 2011; Sprague et al., 2019). Despite increasing familiarity with the estimate that 20% of U.S. children meet criteria for behavioral health disorders (Perou et al., 2013), our society’s response continues to fall short, as only one third of youth with mental health disorders ever receive treatment (Merikangas et al., 2011). Embedding these services into schools supports early detection, reduces access barriers, and improves ecological validity by accounting for systemic factors and community context (Bernal et al., 2009). Moreover, the massive mental health need exposed by the COVID-19 pandemic sug-

gests that the most efficient strategy is to ensure a public health approach to school-based service delivery that emphasizes the promotion of population-based well-being, prevention, universal screening, early intervention, targeted interventions, comprehensive services, and community partnerships (Taylor et al., 2017).

A public health approach to school-based behavioral health is often conceptualized within a multitiered system of support (MTSS), in which a continuum of services are provided based on student need (August et al., 2018). Universal supports within the MTSS structures include early intervention efforts that involve all staff within the school to build a safe and supportive school environment for all students. More than curriculum implementation, the MTSS is grounded in communicating clear and equitable expectations, consistency in response to appropriate and inappropriate behaviors, and positive, respectful relationships. Classroom teachers instruct all students on these social, emotional, and behavioral expectations, with secondary supports targeted to students in need of increased structure, feedback, or intervention. Tertiary supports are individualized and intensive and may involve functional assessments, individual support planning, and/or wrap-around services. Additional interventions may be delivered by support personnel, such as school counselors or school psychologists, especially relative to the provision of group-based and intensive therapeutic services (Cook et al., 2015).

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Efficiently addressing students' behavioral health needs requires all school-based professionals to be skilled, as staff competency constitutes one of the most important drivers to implementation of quality school mental health (SMH) services (Bertram et al., 2015). To effectively serve the more intensive needs of students, SMH staff must be skilled in the implementation of evidence-based practices (EBP) in a way that is attuned to the various demands of a school setting. This dynamic environment requires staff to consider feasible implementation of EBPs that is sensitive to changes in the schedule, collaborate effectively with a team of educators and administrators, maintain appropriate confidentiality, and navigate the complexity of providing services to minors. These challenges are made even more complex with role confusion that often occurs between school counselors, school psychologists, and school social workers. A lack of awareness of the skills possessed by these staff results in assignments to responsibilities that fail to draw upon their clinical expertise and relegates them to serve in support roles for tasks other than their most foundational charge – supporting students.

The goal of this chapter is to outline strategies, systems, and practices that can successfully support workforce development and capacity building for effective SMH services. First, we describe the context for our work. Second, we illustrate the district-wide processes we used to guide the development of a comprehensive school mental health system (CSMHS) including: (1) team development, (2) district-wide needs assessment and resource mapping, (3) staffing models, (4) EBP needs assessment, and (5) provision of PD to support high-quality implementation. Within the PD domain, we used Implementation Drivers, specifically competency drivers (Bertram et al., 2015), to guide our procedures for new staff selection, training and coaching existing staff, and partnership activities designed to deploy SMH staff across multiple tiers efficiently and effectively. Lastly, we discuss strategies for building local capacity through community partnerships.

The Context: Building Comprehensive School Mental Health System in Methuen

Methuen Public Schools was one of twelve districts selected to participate in the first cohort of the National Quality Initiative (NQI) Collaborative Improvement and Innovation Network (CoIIN) in collaboration with the National Center for School Mental Health (NCSMH). The CoIIN sought to establish a learning collaborative of districts and leverage CQI practices to (1) use the National Performance Measures for School Mental Health (now referred to as the School Mental Health National Quality Assessment Domains and Indicators and based on the School Health Assessment and Evaluation System (SHAPE, discussed below) as seen in Table 22.1 to guide design and development of a CSMHS and (2) pilot implementation of evidence-based SMH practices, policies, and systems. This early stage set the foundation for the district's robust plan to work with the community to build school-based comprehensive services.

District-Wide Procedures

Teaming Practices to Foster Workforce Development

Development and implementation of a well-integrated model of SMH services require several planning steps, beginning with engagement of the community in pre-mapping work and assessment of staff PD needs (Crane & Mooney, 2005). Pre-mapping involves gathering a team of representative stakeholders, who ultimately engage in a model of distributed leadership grounded in structured, purposeful, and ongoing collaboration (Woodland & Mazur, 2015). The team forms a community of practice around a shared vision and uses data to drive decisions related to intervention selection and implementation, resource allocation, and job-embedded professional learning (Hoover et al., 2019).

Methuen Public Schools developed a mental health team to drive implementation and create a

Table 22.1 School Mental Health National Quality Assessment

Domain	Indicator
Teaming	Have a multidisciplinary team
	Use best practices for meetings, role delineation, and data sharing
	Avoid duplication and promote efficiency
	Make mental-health referrals
	Meaningfully involve youth and families
	Facilitate effective school-community partnerships
	Use data to determine service needs
Needs Assessment/Resource Mapping	Assess student mental health needs
	Assess student mental health strengths
	Use needs assessment to determine appropriate services and support
	Conduct or assess current resource mapping
	Use resource mapping to inform decisions about services and supports
	Align existing mental health services and supports
Screening	Screen for student distress and well-being to identify and refer students for additional supports
Mental Health Promotion Services & Supports-Tier 1	Allocate time to deliver Tier 1 evidence-informed services
	Determine evidence to support Tier 1 services
	Ensure Tier 1 services match unique school considerations
	Support training and monitor fidelity for Tier 1 services
	Assess and improve school climate and staff well-being
	Determine and implement school-wide positive behavior expectations
	Reduce exclusionary discipline practices
	Proactively build healthy relationships and community
	Promote mental health literacy
	Support social & emotional learning
Early Intervention and Treatment Services and Supports-Tier 2 & 3	Determine evidence to support Tiers 2 & 3 services
	Ensure Tiers 2 & 3 services match unique school considerations
	Support training for Tier 2 & 3 services
	Monitor fidelity for these services
	Monitor individual student progress across tiers
	Implement systematic protocol for crisis response
	Create SMART intervention goals
	Place staff with allocated time to deliver Tier 2 evidence-informed services
	Place staff with allocated time to deliver Tier 3 evidence-informed services
Funding & Sustainability	Use multiple and diverse funding and resources
	Leverage funding and resources to attract potential contributors
	Have strategies to retain staff
	Maximize expertise and resources of all stakeholders
	Monitor federal, state, and local policies that impact funding
	Support funding and resources at each tier

(continued)

Table 22.1 (continued)

Domain	Indicator
	Maximize opportunities to bill for eligible services
Impact	Document and report impact of your comprehensive school mental health system on educational, social/emotional/behavioral and services outcomes to a wide range of stakeholders

Note. Adapted from the School Mental Health National Quality Assessment Overview of Domains and Indicators retrieved from: http://www.schoolmentalhealth.org/media/SOM/Microsites/NCSMH/Documents/Resources/11SHAPE_QualityAssessmentDomains_Indicators.pdf

dynamic action plan informed by needs assessments, resource maps, and a comprehensive review of the current systems and practices. This district-wide CoIIN team engaged in PD, coaching, and technical assistance offered by NCSMH staff, with a heavy focus on CQI practices using a data-based, problem-solving process, and action planning efforts, specifically using the evidence-based approach of plan, do, study, act (PDSA) cycles (Taylor et al., 2014). With the district-wide team established, efforts shifted to action planning and implementation that leveraged building-based teams for the piloting of SMH practices. The full team was comprised of the CoIIN team (including 8–10 members over time) and building-based administrators and SMH staff (school counselors and school psychologists) from each school ($n = 12$). The team met monthly to conduct PDSA cycles, review implementation pilots and data, and make decisions regarding the action plan. Implementation was effectively monitored across the district, best practices and innovative implementation efforts were shared seamlessly between buildings, and a community of practice that strengthened the skills and capacity of the team members was fostered.

Needs Assessment and Resource Mapping

Once a team of stakeholders is established, it is critical that this group engages in a process of information gathering to better understand the needs of the student population, staff, and system (Hoover et al., 2019). A needs assessment helps teams identify strengths and weaknesses within a system and clarify starting points for

action planning. There is no one way to conduct a needs assessment and it may take over a year; however, the process should include diverse perspectives and should aid the team in identifying implementation priorities and their intended outcomes (Sprague et al., 2019). A key purpose of the needs assessment is to develop plans for PD and workforce roles and functions. Relatedly, resource mapping is a way to visually represent a district's strengths and needs (Hoover et al., 2019). Resource maps can be used in an ongoing way to depict an environmental scan of services, staff, data, systems, and funding within a setting to illuminate where resources are currently located and where additional resources are needed.

Following the establishment of a strong teaming structure that could monitor and guide implementation, the Methuen district engaged in needs assessment and resource mapping work to establish a baseline understanding of what human and material resources, systems, policies, and practices would be necessary to establish a CSMHS. One critical resource the district utilized to assess needs was the School Health Assessment and Evaluation System (SHAPE; <https://www.theshapesystem.com/>), which was created by the NCSMH, to assess schools' and districts' development of a CSMHS (see Table 22.1). The SHAPE web-based system enables schools and districts to gather information and map their SMH practices and systems in one place. It provides districts with a visual profile of their tiered support system, offers a library of relevant resources related to mental health screening, among other domains of implementation, and serves to guide dynamic and ongoing action planning.

This tool allowed the district to understand which components of a well-functioning CSMHS were missing and guided the creation of a dynamic action plan that was sensitive to the changes that were being piloted month-to-month. Each month, the committee met to review the SHAPE data and used this information to determine if changes to the action plan were necessary or if new avenues for implementation had been opened. The district completed the SMH profile, which oriented the committee to the district and community-based staff who were available to support implementation, the current services being provided, and the data systems established. This ultimately informed the creation of an action plan that was sensitive to the needs of the workforce. Each new system and practice requires some degree of training and coaching to ensure quality and sustainable implementation. Therefore, developing one's workforce starts with a comprehensive understanding of what staff will be asked to do as the system is developed.

Developing a Comprehensive Staffing Model

As schools and districts develop a CSMHS, they must assess their staffing models, including identifying individuals with behavioral health expertise, what activities they are currently engaged in, and the breadth of their services (Brenner & Demissie, 2018). Though districts may adhere to staffing ratio recommendations of national associations, such as that of the American School Counselors Association (e.g., 1 staff: 250 students), it is prudent for districts to also recognize whether staff are deployed efficiently and if they are able to deliver high-quality SMH services. Furthermore, from an implementation perspective, it is useful to understand how SMH staff can systematically collaborate and develop a community of practice in which ongoing learning and embedded PD can occur.

Resource mapping yielded important information that informed systemic changes to the allocation of resources and the organization of the

systems of support in Methuen. The caseload assignments across the district varied greatly between schools. In one school, caseloads were divided by the following grade spans: K-1, 2-3, 4, 5-6, 7-8. A student would cycle between five care providers in 6 years, resulting in a lack of continuity of care and a significant impact on the ability of staff to foster long-term relationships with families. Case management was impacted due to the frequent transitions that occurred between care providers, which resulted in a continuous need to reestablish working relationships with the family and outside service providers. Similar inefficiencies that impacted the ability to provide services across the tiers were identified in other buildings. To address these concerns, plans were developed to establish caseload assignments across the following grade-level spans in all schools: K-4 and 5-8.

The implication of this shift supported workforce development in several critical areas. First, teaming was established that allowed for counseling staff assigned to the same grade span to engage in peer consultation and coaching on group and individual services and project management. This further reinforced the development of a job-embedded PD approach to implementation that leveraged early adopters who were strategically placed at each grade span (Hanover Research, 2012). This permitted PD to be delivered in a far more effective manner, targeted to the specific developmental needs of each team in evidence-based therapeutic approaches and case management techniques. Common concerns that spanned across grades and teams were identified, which resulted in the creation of policies and procedures for greater efficiency of practice, access to resources, and systems to manage services.

Resource mapping uncovered additional inequities in caseload size at the high school-level relative to division of labor. There were specific responsibilities associated with positions established prior to the outset of the mental health initiative, and the previous model did not equitably leverage each staff member to provide tiered services that address the needs of students. At Methuen High School, six school counselors

were assigned primarily to academic and postsecondary responsibilities for approximately 2000 students and contributed to the social emotional needs of students for short-term concerns or instances requiring crisis counseling. Two separate positions, added in previous years, entitled “student support counselors” were leveraged to address the mental health concerns of the entire high school population. Tier II and III services were relegated to a fraction of the available staff who were able to provide them, which undermined the school’s ability to proactively address the needs of students, engage in preventive services, and reach the growing number of students who required services. Additionally, this model resulted in fractured service delivery and confusion regarding which staff member was addressing the needs of the students they shared.

Concerns presented in the school setting do not develop in isolation or remain confined to a single domain of need. Yet, the established staffing model presumed that academic concerns did not have mental health concerns as a root cause, or that postsecondary planning did not need to be informed by a student’s social emotional needs. This resulted in students seeking services from multiple providers who did not always communicate effectively about the needs of the student. Duplicated efforts, splitting behaviors, and fractured services were the result of not integrating services into a comprehensive staffing model. Lastly, this created significant inequities in the assigned caseloads at the high school. School counselors were assigned a portion of students from each grade-level equally. However, the student support counselors began each year with a handful of referrals and typically did not service more than 15–20 students each year. These students would also be assigned a school counselor who would work with the students for all other areas of need.

A new staffing model was designed, which outlined the responsibilities of each staff member across all domains of need (academic, postsecondary, social emotional, behavioral) and all tiers of support. It also established a case management approach to the provision of care. In essence, counseling staff were the point people for the

provision of care across all domains of need and all tiers of support, meaning that each staff member would be responsible for contributing to universal supports for all students, provide targeted group-based interventions to students across all caseloads, and intensive, individual interventions across all domains of need for their assigned caseload. The student support counselor role was eliminated from the staffing model and replaced with caseload-carrying staff, resulting in an approximately 23% reduction in caseload size. The new staffing model also ensured that complex cases that involved a need for care across multiple domains were addressed with a single, integrated treatment plan. Students no longer needed to seek support from multiple counselors, which reduced confusion and fracturing of services. A continuum of care was established and counseling staff were able to support students across tiers of support rather than referring students to another staff member during what might have constituted their greatest time of need.

Identifying Professional Development Needs

With staffing models defined and organized, it is important to generate a plan to ensure staff competency in implementing selected practices (Bertram et al., 2015). Such a plan may focus on an effective PD approach and a process for selecting and onboarding new staff. Grounded in the needs assessment, staff readiness can determine how to develop and implement training and coaching plans. Districts can design PD content using meaningful formats that are based on EBPs and contextually relevant to ensure high-quality implementation.

Establishing Readiness for Evidence-Based Practices

The Methuen team designed a needs assessment to determine SMH staff readiness to implement evidence-based interventions. The first section of the self-assessment asked respondents to report on their use of evidence-based interventions/strategies (EBI/S), defined as any research-based

action taken to improve student behavior, mental health, or academic performance. These practices represented the least intense category of interventions and included practices such as: consultation with staff and parents/guardians, instruction on coping strategies or conflict resolution skills, positive goal setting, processing and problem solving, and teaching social skills. The second section sought feedback regarding staff readiness to implement programs such as *Coping Cat* (Kendall, 1992), *Second Step* (Committee for Children, 1998), *Break Free from Depression* (BCHNP, 2012), and *Zones of Regulation* (Kuypers, 2011). Oftentimes, these programs contain lessons, resources, and skill building exercises that are designed to be delivered in a universal manner or to groups identified as requiring a similar intervention. The third section prompted respondents to report out on their training and implementation of evidence-based therapeutic approaches, which represent specific types of therapy that, when delivered with fidelity, improve mental health problems. These approaches are informed by counseling theory and incorporate therapeutic techniques and strategies that are embedded within a specific, manualized approach to treatment and that allow for flexibility to utilize techniques and strategies that are specific to the individual's presenting concerns (Weisz & Beerman, 2020).

Findings from this assessment supported workforce development in a number of key areas. First, analysis of these data informed a 5-year PD plan that supported implementation of EBP across all tiers of service and in each category outlined above. This plan identified priority areas that were common across respondents and opportunities to leverage and scale up pockets of promising implementation. The district determined that, to most efficiently address the most prevalent mental health concerns identified by counseling staff, PD would need to be offered universally to SMH staff. This would establish a common, evidence-based therapeutic approach and would enhance consistency, consultation, and supervision. Cognitive behavioral therapy (CBT) was chosen as the foundational approach that would be adopted by Methuen Public

Schools, due to its efficacy in addressing the most prevalent problem areas of the students in the district – anxiety and depression. This approach was also selected as staff expressed interest in pursuing further training in the strategies and implementation of this evidence-based therapeutic approach.

Professional Development and Implementation Planning

Effective PD models are those that aim to increase participants' knowledge and change their behavior. One-time training opportunities rarely change the behavior of individuals or facilitate sustained implementation of practices across a system. Well-designed training paired with ongoing coaching, performance feedback, and consultancy is more likely to ensure implementation (Hanover Research, 2012; Merchie et al., 2018; Thurlings & den Brok, 2017).

Methuen Public Schools developed a PD plan that supported staff readiness and the need to implement evidence-based therapeutic approaches and new SMH practices, such as screening and measurement-based care practices. Foundational PD that ensured all staff were prepared to effectively contribute to the larger CSMHS included: models of case consultancy; suicide risk assessment practices and procedures; cognitive behavioral therapy (CBT); positive behavioral interventions and supports (PBIS); treatment planning; and use of psychosocial data (including screening, initial assessment, and progress monitoring). PD sessions for these topics were delivered during in-service days and department meetings. Internal staff and university partners were leveraged to deliver the content and provide resources and coaching to support implementation. One major component of the PD plan involved a multi-session series on CBT offered by a university partner. SMH staff were resourced with training materials and engaged in practice-driven exercises, with opportunities for rehearsal of new skills between sessions.

Additional training sessions included topics such as: Brief Intervention for School Clinicians

(BRISC; Lyon et al., 2015); Solution Focused Brief Counseling (SFBC; Sklare, 2014); implementing tier II CBT therapy groups (TRAILS to Wellness, 2020); Bounce Back (Bounce Back, 2020); Screening, Brief Intervention, and Referral for Treatment (SBIRT; Babor et al., 2007); motivational interviewing (MI; Martin et al., 2020); and using measurement-based care practices to improve IEP service delivery for counseling services. The district's focus on role-specific PD allowed for the advancement of therapeutic practice and the effective implementation of a multitiered system of social, emotional, and mental health services.

Leveraging Early Adopters

One of the significant barriers to workforce development and SMH implementation is the varying degrees of buy-in across the staff responsible for implementing innovations (Langley et al., 2010). Diffusion of innovation theory suggests that innovators and early adopters, those who will readily support implementation of new practices and systems, only account for approximately 16% of staff (Dearing, 2009). As a function of this, generating buy-in, identifying staff who can be immediately leveraged to support implementation, and incentivizing innovation become essential implementation strategies to ensure the workforce development efforts undertaken sustain through the initial phase of implementation (Rogers, 2003). Several incentive strategies were used by Methuen Public Schools that targeted both early and later adopters.

Through the needs assessment, Methuen Public Schools identified early adopters who could champion the effort and serve as models for others. From the standpoint of SMH teaming, some of these champions were invited to join the mental health initiative committee that oversaw implementation. Committee staff were able to serve as liaisons for their building-based teams, which fostered cohesive and consistent implementation across the district and ensured the district committee was afforded the opportunity to monitor school-based implementation, address specific concerns, and pilot multiple practices that were sensitive to the school-based teams'

areas of interest. School-based teams were able to garner support from the district committee, share implementation successes at monthly committee meetings, and learn from other building-based teams to enhance their implementation efforts and reduce siloed work.

Incentives were used to encourage innovation and sustained implementation by early adopters and to recruit additional staff to implement. Membership on the mental health initiative committee served as an incentive by providing early adopters with decision making and leadership opportunities. This social capital served as enough reinforcement for those who were invested in the practices from the outset of implementation. Those who belong to late majority, which constitutes the greatest percentage of staff according to diffusion of innovation theory (approximately 68%), require greater social reinforcement, prompting, or knowledge and receipt of benefits to engage in implementation (Rogers, 2003). For these staff, PD, opportunities for coaching, and positive feedback were simple strategies to mobilize them to implement. Additionally, inclusion of these staff on subcommittees and stipended teams that focused on practices that were a closer fit for their areas of interest enhanced their buy in.

Additional incentive strategies included (a) supporting early adopters to submit proposals to present on their work at state and national conferences (with funding to support attendance), (b) creating opportunities for peer-led PD, and (c) highlighting exemplary work at department and staff meetings. Stipended teams that focused on SMH implementation were also formed. This served to augment SMH practices and provided an opportunity for informal PD to occur. These committees produced resources and engaged in problem solving on how best to implement SMH practices, which allowed for a collaborative forum that eased the concerns of those who had reservations about adopting new practices.

Marketing and promoting the impact of SMH staff's efforts incentivized implementation. Methuen Public Schools capitalized on opportunities to share the impact of the CSMHS on out-

comes that were meaningful to all stakeholder groups. The Mental Health Parent and Student Advisory Council, established at the outset of Methuen's engagement with the NCSMH CoIIN, served as a consistent sounding board for the district and served as a forum to share efforts and improvements. The district also sought out opportunities to hold parent/guardian information sessions, engage with local reporters, and present information at state and national conferences. The recognition of the implementers of these new practices served as a motivator that strengthened buy-in and sustained implementation.

The Methuen Public Schools CSMHS Accountability Report documented the impact of the system by aggregating and providing analysis of the screening and progress monitoring data collected by SMH staff. Additional data points that showcased the impact of the CSMHS on academic and behavioral outcomes were also offered. Summarizing the collective impact of the staff served to incentivize continued implementation and orient stakeholders to outcomes.

Implementation Accountability Systems

To ensure implementation fidelity across the district, strategies for reinforcement were developed, including establishing district and departmental policies and bolstering supervision and evaluation of mental health staff. For example, treatment planning and use of psychosocial progress monitoring practices were identified as areas of need for all staff. Following PD that guided staff through best practices in these areas, staff were directed to implement these practices with one student. Coaching was provided to ensure fidelity of implementation and to monitor uptake. These practices were scaled up incrementally and, ultimately, became common practice. Professional practice goals for continued use and scaled up implementation of these practices were drafted as well. These goals reinforced staff to implement with fidelity since they would be asked to report out on their goals and evaluated based on the evidence they produced.

Onboarding New Staff

Successful onboarding supports new employees in what Bauer (2013) terms as the 4 C's---connection, culture, compliance, and clarification. Clarification starts with ensuring that a clear description of the role is outlined and that the committee responsible for hiring new staff are well-informed regarding the qualifications, training, and background of the ideal candidate. Redrafting outdated job postings to match with the newly minted role was essential. This ensured that a consistent vision for staff was established and any misconceptions of what constituted the role of counseling staff were resolved. It was also essential to educate and support the hiring committee who were not as well versed in clinical language or the provision of CSMHS services.

To orient prospective candidates to the district's vision and culture for CSMHS, the interviews themselves required revision. Outdated approaches to interviewing candidates that focused on assessing an antiquated conception of counseling staff were replaced with more dynamic interview formats that leveraged a review of case scenarios that highlighted the candidates' approach to the provision of services, engagement in teaming and consultation practices, and use of evidence-based interventions and therapeutic modalities. Other practices included outlining the comprehensive staffing model prior to the engagement in questions and allowing for the candidate to ask questions to ensure their understanding of what the committee was looking for. Newly hired staff regularly received opportunities for supervision and were paired with a mentor who served as a day-to-day coach who helped with logistics and compliance during the first year, which helped new staff feel connected and supported.

Group supervision and PD sessions kept staff current with some of the more critical SMH practices and systems that had been implemented since the outset of implementation. Essential topics covered at the outset of a new staff member's first year were: suicide risk assessment procedures and practices; reporting abuse/neglect; treatment planning and progress monitoring

practices; Section 504 and special education responsibilities; and universal screening.

Clinical Supervision and Peer Mentoring

Mentorship and supervisory programs within K-12 schools are developed with the teacher in mind and, many times, SMH staff participate in a program that does not meet their needs. While appropriate supervision is specified within the ethical codes for all three student support professionals (ASCA, 2016; NASP, 2020; NASW, 2017), often these professionals are either offered administrative or programmatic supervision (Perera-Diltz & Mason, 2012), but few are offered clinical supervision (Bledsoe et al., 2018) or the unique school-based focus of systemic supervision (Harvey & Pearrow, 2010). Clinical supervision is a process that provides a non-experienced counselor support, instruction, and feedback on the clinical and ethical services being provided through observation and/or case conceptualization by an experienced counselor (Bernard & Goodyear, 2009; Perera-Diltz & Mason, 2012). Importantly, lack of supervisory support has been linked with lack of professional identity development (Kirchner & Setchfield, 2005), ineffective services (Burkard et al., 2009), negative feelings about the work environment, job stress, and burnout (Holman et al., 2019; Holman & Grubbs, 2018).

The district established systems to provide regular clinical supervision and case consultancy by experienced SMH staff, which was especially beneficial for staff requiring additional support to implement SMH practices. This practice fostered adoption of EBP and allowed staff to engage in meaningful discourse and feedback regarding cases. PD was offered that addressed models of consultation, including peer consultation, as well as use of protocols for case conceptualization. Staff were also taught how to seek consultation when complex situations arose.

Coaching opportunities were leveraged that matched Methuen Public Schools staff who had expertise in a particular practice with another staff member who was working to build capacity in the same area. This peer mentoring model was

a less intrusive form of coaching that fostered collaboration and built on the strengths of each staff member and enhanced staffs' reflection on best practices and their consideration of potential barriers to implementation that were not previously identified. Finally, this model also reinforced buy-in by ensuring successful implementation and competence and confidence to implement new practices.

The coaching and mentoring practice was especially important to build capacity for group therapy programs. Staff who had expertise in conducting CBT groups were matched with more novice staff. These pairs would co-facilitate groups, which allowed for real-time coaching, with increasingly shared responsibility for leading the group. This gradual shift in responsibility led to staff feeling supported in adopting this practice more readily and resulted in the development of a train-the-trainer approach to capacity building for CBT groups.

Leveraging External Networks

In January 2018, 3 years after the inception of Methuen's mental health initiative, efforts to establish the Massachusetts School Mental Health Consortium (MASMHC) began. The purpose and intent of MASMHC was to share resources and provide training and technical assistance to support SMH implementation across the state. In many ways, these efforts were an attempt to replicate the lessons learned and collaboration fostered during Methuen's engagement in the NQI CoIIN, as facilitated by the National Center for School Mental Health. What began as a meeting with 30 districts has, in 5 years, grown into a statewide, coordinated effort to foster SMH implementation. MASMHC's membership now exceeds 170 districts across all regions of Massachusetts, and sponsorship of the consortium has grown to include institutions of higher education, regional mental health advocacy agencies, and community-based service providers. Monthly meetings showcase best practices across all tiers of support and highlight innovative, local examples of

implementation and partner agency presentations that foster a greater connection with community-based mental health service providers and advocacy groups. Thousands of SMH staff and educators alike have received training and resources from MASMHC, and efforts at providing training, coaching, and technical assistance have advanced over time, allowing for deeper work to be conducted with individual districts.

Early sponsorship of MASMHC by Rep. Linda Dean Campbell translated into a legislative earmark, also supported by former MA Sen. Kathleen O'Connor Ives, that supported MASMHC in designing programs to foster SMH implementation. One such example, the MASMHC Mini-grant Program, provided funding to foster SMH implementation, which ultimately supported the larger membership through sharing lessons learned through project presentations required of grantees. Through continued advocacy relative to SMH policy and practice, direct implementation support, and provision of opportunities to convene and network, MASMHC has worked to ensure that students across the state get the help they need to find success.

Collaborating with Community-Based Partners

Partnerships between K-12 schools and the community can be advantageous in improving access to services for students, as well as providing PD for school-based providers. Researchers, practitioners, and policymakers have recognized the potential of school-community partnerships to create sustainable systems that address the multiple needs of students and their families (Vaillancourt & Amador, 2014). Methuen has expanded and improved its formal relationships with community-based mental health agencies to leverage greater access to services for students and enhance wraparound services. After drafting a memorandum of understanding (MOU) with a local community-based mental health services provider, a 15% gain in available mental health staff was achieved almost overnight for no cost. The agreement outlined in the MOU was simple

yet effective; the district would provide time during the school day for services to be provided to students, an appropriate meeting space for the services to be delivered, and appropriate referrals for mental health services. In exchange, the agency provided evidence-based services to address students' needs, consultation time with district staff to support collaborative case management, and data that could be used to gauge the efficacy of individual interventions and to inform program evaluation. Regularly scheduled meetings were held between the district and community partners to review data relative to the provision of services and to ensure services were aligned with EBP.

University Partnerships

Partnering with universities can also be mutually beneficial and ensure that high-quality PD opportunities are available and cutting-edge practices are shared with K-12 schools, all while preservice professionals obtain access to school-based experiences (Sprague et al., 2019). For example, in a partnership with Seattle Public Schools, University of Washington developed and conducted universal screenings, developed a Brief Intervention for School Clinicians (BRISC), provided SMH training, and evaluated existing programs and made recommendations for the future (Bruns et al., 2016). Locally, the Positive Behavioral Interventions and Supports (PBIS) Center from the University of Connecticut partnered with the state's Department of Education, as well as a number of Massachusetts university trainers, to develop a PD network for schools.

Partnerships between schools and hospitals that utilize the MTSS model are effective in improving students' mental health as well as the schools' ability to provide mental health services (Walter et al., 2019). Partnerships with nearby universities utilizing a service-learning model can be beneficial not only for the K-12 schools, but for the practitioners-in-training (Wilczenski & Cook, 2014). Currently, at Bridgewater State University, several classes in the School Counseling graduate program partner with

schools for project-based learning opportunities. While research is still being gathered, it seems that these partnerships help to increase the self-efficacy of school counselors in-training and provide a service for schools.

To address research to practice gaps, organizations such as the Ronald H. Frederickson Center for School Counseling Outcome Research and Evaluation (CSCORE, 2019) at the University of Massachusetts Amherst have developed opportunities for researchers and practitioners to build partnerships. They host an annual Evidence-Based School Counseling Conference where researchers and educators along with school counselors in the field can learn from one another. Additionally, online resources provide information for both school counselors and school counselor educators with a multitude of resources for both groups.

Similarly, in Boston, implementing a proactive service model required several operational changes as well as new coordinated supports and partnerships. Three main partnering agencies – Boston Public Schools (BPS), Boston Children’s Hospital (BCH), and the University of Massachusetts Boston (UMB) School Psychology Program – shared important resources for the development of a comprehensive behavioral health model (CBHM: Pearrow et al., 2016). The collaborative partnership began with the district’s Behavioral Health Services Department reaching out to the Children’s Hospital Neighborhood Partnerships Program (CHNP), which had a 15-year history of partnering with Boston schools, and the UMass Boston School Psychology program, which had expertise to increase staff capacity and training opportunities for graduate students with underserved populations. Course assignments were modified to align with field-based learning activities that support CBHM, thus building capacity for both the district and the university training programs. The mutually beneficial partnership also built opportunities for preventive and early intervention services, generous sharing of information and resources, and increased opportunities for research and access to services.

Conclusion

The examples of workforce development, capacity building, and partnerships from Methuen Public Schools can serve as a guide to other districts seeking to enhance the comprehensive SMH supports. The strategies to enhance services are grounded in Implementation Drivers (Bertram et al., 2015) and diffusion of innovation theory (Rogers, 2003) and highlight the need to secure buy-in from decision makers and responsiveness to local context. Improved access to SMH occurs when schools and communities work together; they continuously reflect on practices and seek growth and collectively address barriers.

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Innovative Approaches to Coaching Teachers in Implementing Tier 1 and Tier 2 Classroom Interventions

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Introduction

Coaching models have been increasingly used to support school- and classroom-based implementation of evidence-based practices and programs (e.g., Kraft et al., 2018). Such models target a range of outcomes, including student academic functioning (e.g., Garet et al., 2011; Rosenfield et al., 2014) and social, emotional, and behavioral (SEB) and mental health outcomes. Coaching to promote SEB and mental health outcomes are focused on range of practices, including classroom management (e.g., Bradshaw et al., 2018; Fabiano et al., 2017; Owens et al., 2020a; Reinke et al., 2008; Shernoff et al., 2018; Sutherland et al., 2015), promoting a positive classroom climate (e.g., Allen et al., 2015; Reinke et al., 2008), supporting access to school mental health services (e.g., Atkins et al., 2003), and implementation of specific interventions and programs (e.g., the Good Behavior Game; Becker et al., 2013).

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The purpose of this chapter is to describe innovations in teacher coaching to improve SEB outcomes for students and discuss the implications of these innovations for training, practice, and research. In the first half of the chapter, we clarify the definitions of coaching and consultation, describe who often serves as a coach in schools, and discuss how coaching intersects with the constructs of “practices,” “programs,” and “interventions,” as well as universal (Tier 1) practices and targeted (Tier 2) classroom supports. In the latter half, we review coaching innovations and recommendations for training, practice, and research. We aim to provide school mental health (SMH) practitioners and researchers with a guide for leveraging coaching innovations to support the implementation of evidence-based practices in classrooms.

Coaching and Consultation Defined

Historically, indirect service models engaging a consultant and consultee to improve youth outcomes have been referred to as consultation. There are a variety of consultation approaches, including client-centered (focused on a student or group of students) and consultee-focused (focused on building consultee skills; Erchul & Sheridan, 2014). Within the school consultation literature, Behavioral Consultation (Bergan, 1977) is the most common model. It involves a

staged problem-solving approach (e.g., building rapport, identifying and analyzing a problem [i.e., through data collection and teacher reflection], selecting an intervention, and evaluating outcomes). Other specific consultation models include Conjoint-Behavioral Consultation (e.g., Sheridan & Kratochwill, 2008; a derivative of BC), Instructional Consultation (Rosenfield et al., 2014), and Multicultural Consultation (Ingraham, 2000).

In more recent years, this process has also been referred to as coaching. There are many similarities between coaching and consultation (Pas & Newman, 2013), as most coaching models have developed from the consultation research base and include a multistep problem-solving process (Frank & Kratochwill, 2014). Within both literatures, coaching and consultation models can vary in their approach where some take a *collaborative* problem-solving process that recognizes the teacher's expertise, contributions in problem-solving, and autonomy to set goals and choose the direction of consultation. Stated differently, some models take a "shoulder-to-shoulder" approach, whereas other models involve a hierarchical relationship, where the coach or consultant is an "expert." Some coaching and consultation models focus broadly on instructional and classroom management practices (e.g., Fabiano et al., 2017; Owens et al., 2017; Reinke et al., 2008; Pianta et al., 2008), whereas others focus on specific practices (e.g., culturally responsive practices in Bradshaw et al., 2018; bullying in Pas et al., 2019) or specific interventions (daily report card intervention; Owens et al., 2017).

Evidence accumulated from the consultation and coaching literatures reveal the evidence of effectiveness across models. For example, Kraft, Blazar, and Hogan (2018) conducted a meta-analysis of 60 experimental and quasi-experimental coaching studies and reported average effect sizes of 0.49 on instructional outcomes (i.e., pedagogical practices, teacher-student interactions, student-content interactions, and classroom climate) and 0.18 on achievement. Other positive outcomes of coaching include

improvements in teacher's use (i.e., dosage) of evidence-based practices (Owens et al., 2017; Pas et al., 2015), implementation quality (Sutherland et al., 2015), reduced discipline referrals of Black students (Bradshaw et al., 2018; Gregory et al., 2016), and reduced student disruption (Owens et al., 2020b; Reinke et al., 2008).

Using both teacher consultation and teacher coaching literatures, researchers have also identified common evidence-based elements. These include the development of a positive rapport and a collaborative relationship, the use of a systematic problem-solving process, observation with data-based performance feedback, and teacher autonomy to choose their direction (Erchul & Sheridan, 2014; Solomon et al., 2012; Reinke et al., 2008). Although these common elements have been identified, how they are applied differs across models. Some models use live-only, in-person approaches to observation and feedback, whereas others use video recording technology (Allen et al., 2015; Pianta et al., 2008) and/or virtual teleconsultation (Bloomfield et al., 2019). Virtual approaches are gaining traction in rural areas and in the context of the COVID-19 pandemic.

In addition, feedback and skills practice are addressed differently across different models. Feedback and skills practice may happen in a one-on-one session after observation data collection (e.g., Reinke et al., 2008; Owens et al., 2017), or as live feedback to teachers during instruction (e.g., via bug-in-the ear technology; Ottley et al., 2019). An emerging innovation is the use of mixed-reality, virtual reality, or simulation within coaching to provide teachers with practice opportunities in specific situations (e.g., Pas et al., 2016a, 2019; Shernoff et al., 2018). See the section below on Innovations in Coaching for more details.

In summary, there are many similarities between consultation and coaching. We use the term coaching to acknowledge the evolution of the process over time and to highlight the importance of collaborative, shoulder-to-shoulder work between the coach and teacher. Both the consultation and coaching literature is utilized in the writing of this chapter.

School-Based Professionals Serving as Coaches

Within schools, there are myriad professionals who could serve as coaches, including those trained in SMH services (e.g., psychologists, counselors, social workers), those overseeing staff professional development, behavioral specialists, and master teachers. In fact, many professional organizations have encouraged SMH professionals to serve in this role, as illustrated by the National Association for School Psychologists (NASP) Practice Model, indicating that school consultation should permeate all aspects of practice (Skalski et al., 2015). Similarly, the American School Counselors Association (ASCA) suggests that school counselors should spend some time in indirect service delivery with explicit mention of consulting with teachers about classroom management and climate (ASCA, 2019). Lastly, the School Social Work Association of America (SSWAA) lists consultation as a role, highlighting universal SEB expertise, including positive behavioral and instructional supports (SSWAA, 2020). Because principals, assistant principals, and department chairs are instructional leaders, their supervisory role may make implementation of the collaborative and autonomous features of coaching challenging. Nonetheless, they can leverage other evidence-based features (e.g., data-based feedback).

Evidence-Based Practices, Programs, and Interventions

With increased federal funding of education research to determine what works for whom, and practitioner mandates to implement “interventions” with research evidence of effectiveness, there has been a proliferation of terms to identify an intervention as “evidence-based” (e.g., evidence-based interventions, evidence-based programs, evidence-based practices). There has been some writing to rectify term confusion by differentiating between *programs* with a manualized curriculum (i.e., in Newman & Rosenfield,

2019 called Evidence-Based Interventions) and “evidence-based practices” (EBPs; used henceforth and the focus of coaching in this chapter) that are practices based on evidence-based principles or common elements of EBIs (McLeod et al., 2017). Examples of EBPs include setting clear behavioral expectations, opportunities to respond, behavior-specific praise, and warm, positive teacher-student relationships (McLeod et al., 2017).

To support and promote EBPs, a coach needs a breadth of knowledge of multiple EBPs as well as an ability to help teachers integrate these practices within the classroom. Also needed is expertise in making cultural adaptations and modifications for the local context. This requires the teacher and the coach to understand the principles behind the EBP and the appropriate adaptations to balance cultural relevance with maintenance of critical features (e.g., providing praise in variety of ways to ensure it is reinforcing to diverse students). Given the complicated nature of EBPs, a coach must be prepared to assist with prioritization, integration, and alignment. In this chapter, we focus on the multiple approaches and innovations in coaching that can be flexibly applied across EBPs.

Consideration of Tiered EBPs and the Systems Context

In schools, EBPs are often provided within a multitiered system that includes universal supports for all students (Tier 1) and targeted or intensive supports for students at risk for SEB problems (Tier 2 or Tier 3). Because teachers are frontline implementers of EBPs across multiple tiers (Gravois, 2013), coaching processes should support high quality implementation of supports at each tier and should facilitate efficient implementation of services as students transition across tiers. For example, coaches should be prepared to work with some teachers to implement universal classwide interventions (e.g., positive behavior expectations and praise) or a team to implement these practices schoolwide. Coaches should also be prepared to assist teachers in problem-solving

around more targeted or intensive interventions (e.g., academic intervention or behavioral contract).

Coaches may require training in multiple models of coaching or consultation to support multi-tiered EBPs. As described above, some coaching models have a strong evidence base for supporting universal class-wide improvement (e.g., Reinke et al., 2008), whereas some consultation models are effective for targeted or intensive individual improvements (e.g., Erchul & Sheridan, 2014). Regardless of the model selected or level of service delivery, coaches must understand how the school operates as a system (e.g., climate, morale, vision, communication, leadership) and how that intersects with providing effective supports for EBP implementation in diverse classrooms (Forman et al., 2013) and across multiple tiers. Coaches must be aware of and sensitive to real or perceived barriers to intervention implementation (Sanetti & Kratochwill, 2009) and be equipped with coaching strategies to help school staff overcome these barriers (which may include student or family engagement issues that can be overcome by quality implementation and parent outreach; Ellis et al., 2013).

Innovations in Coaching

Extant consultation and coaching models have provided the field with great promise for what can be achieved in coaching. In recent years, several innovations (e.g., using technology, addressing individual teacher characteristics, considering student culture) have advanced the field of coaching. These innovations draw upon diverse literatures. Below, we describe recent innovations in coaching, then discuss how these can be integrated into a coaching meta-model designed to ensure equitable outcomes for all students.

Leveraging Technology to Maximize Coaching Reach and Effectiveness

Although a range of school professionals can coach teachers, there are barriers to coaching in

regular practice (e.g., training, dedicated time) that can create an access issue. New technology can make coaching more accessible through remote coaching, automation of coaching processes, and promoting mastery in new skills through technological practice opportunities. This section outlines technological innovations that should be considered for integration into a meta-model.

Addressing Accessibility Through Remote Coaching

Technology has created new avenues for remote (rather than in-person) contact between coaches and teachers. While teleconsultation is still in its infancy, it has emerged as a promising approach to address the issue of access. There is a growing body of research supporting its acceptability and effectiveness in producing student and teacher outcomes consistent with or better than face-to-face methods (Bloomfield et al., 2019). Teleconsultation has successfully been led by graduate student consultants with rural school staff or families, to increase access to these populations economically and efficiently.

To expand applications to practitioners, research indicates that acceptability may hinge upon consultants' perceptions of the consultee's skills with technology, the travel or commute distance, and the severity of the problem (Bloomfield et al., 2019) and thus may not be effective in all cases. For example, it is seen as acceptable and preferable for moderate behavior problems, at a great distance, with a teacher who is adept with technology, but not in cases of severe behavioral problems or with teachers less adept with technology. Teleconsultation is made possible by technology that can allow a coach to "look" around a classroom and follow teachers with what is sometimes referred to as telepresence robots (Fischer et al., 2019). The My Teaching Partner (MTP; Pianta et al., 2008) model is one example of how coaching can be conducted remotely, whereby teachers record themselves teaching, watch and reflect on the video, and send clips to the coach to review and discuss. There is also a movement toward tele-mentoring and online professional learning communities that

has been applied to education related to school health, autism, and early childhood (see examples of the ECHO model at http://www.uwyo.edu/wind/echo/echo_education.html and <https://education.virginia.edu/faculty-research/centers-labs-projects/star/training/star-echo-participate>). Considering remote coaching as an option for SMH providers could streamline work and make scheduling more efficient, particularly for professionals who work in multiple schools or in rural schools.

Automated Guidance for Decision-Making

There is also a movement toward using technology to provide teachers with interactive “wizards” that mirror the coaching process and help teachers select student behaviors to change, track baseline data, and use those data to set initial student goals. Technology-based programs can also provide guidelines to help teachers modify student goals (e.g., when and by how much), thus minimizing the need for live coaching. By providing such data-driven algorithms via technology, we may be able to enhance teachers’ data-based decision-making and/or lessen the need for such skills. One example of this is the web-based Daily Report Card.Online (DRC.O, see <https://oucirs.org/daily-report-card-preview/>) program, which provides an interactive, mobile-friendly system of professional development and supports for teacher implementation of a daily report card (DRC) intervention. Pilot studies in the U.S. (Mixon et al., 2019) and Canada (Owens et al., 2019) reveal that, for some teachers, this offers a feasible alternative to face-to-face coaching, produces similar teacher and student outcomes to those achieved with face-to-face coaching, and may be more cost-effective (Owens et al., 2020c). Such automation could be applied to promoting the implementation of interventions within a multitiered system of supports (MTSS) by similarly providing guided data-based decision-making and PD, thereby promoting knowledge and skills and addressing implementation gaps that persist in the field.

Promoting Mastery Through Interactive and Online PD

Another innovative use of technology is the use of virtual or mixed-reality simulation; using these approaches, coaches can expose teachers to a wide range of scenarios in a relatively short period of time (Pas et al., 2016a, 2019; Shernoff et al., 2018). These in vivo learning experiences allow the coach to observe the teacher under unique or challenging situations that may be difficult to capture in real time, leading to time-efficient mastery of new skills. These online PD and simulation platforms could be further enhanced to integrate data-driven algorithms for automated and performance-based changes, making them even more tailored to teacher strengths and needs. To our knowledge, current online interfaces for virtual- and mixed-reality or simulation are not yet programmed with such algorithms, although Shernoff et al. (2018) did incorporate leveled professional development with some automation regarding teacher response time. Models utilizing mixed-reality simulation for practice opportunities (Pas et al., 2016b, 2019) and virtual reality simulation to support training in behavior management (Shernoff et al., 2018) demonstrate promising impacts on teacher practices. Such online practice provides flexibility in the timing of skills practice, provides a safe space to do so, and could be integrated into any coaching case where skills practice is needed. It is important to note, however, that these effects have been demonstrated in studies with external (not school-based) coaches.

Moving Toward a Meta-Model of Coaching

Given the siloed development and research of consultation and coaching models and the (sometimes) narrow problems any given model addresses, testing and disseminating a coaching meta-model (i.e., an idea first posited by Lopez & Nastasi, 2014) would be an innovation for the field. While consultation models target different

levels or systems (e.g., school, classroom, individual student, family), they are complementary to each other but in need of a framework that holds them together (Lopez & Nastasi, 2014). We propose that a meta-model integrates the common elements of evidence-based models and addresses issues including: (1) reach and capacity, (2) strategies to ensure teachers' skill mastery and high-quality implementation of EBPS, (3) the need to address a wide range of problems simultaneously (i.e., classroom climate; student SEB needs; and academics), (4) the need for embedded strategies to ensure cultural responsiveness and competence, and (5) barriers to implementation of EBPs in schools.

Common Elements Within Evidence-Based Models

As noted in the Introductory section, many consultation and coaching models share common elements that arguably should be infused into any coaching approach. These include the development of a positive rapport and working relationship, use of a systematic multistep problem-solving approach, and data-driven processes for problem identification, intervention selection, intervention evaluation and modification, and performance feedback (Erchul & Sheridan, 2014; Solomon et al., 2012). Though extant models focus on specific assessment tools for set outcomes, a meta-model would provide the tools that assess student behavior, social and emotional well-being, and academics as well as teacher practices and classroom dynamics through coaches' classroom observation, teacher report, and review of permanent products.

Addressing Motivational, Relational, and Cognitive Barriers

Even in the context of problem-solving coaching with performance feedback, teacher implementation of recommended practices is variable (e.g., Owens et al., 2020a), suggesting that other factors beyond skill mastery influence implementation (Han & Weiss, 2005) and should be addressed explicitly through coaching. Effective strategies to address motivational, relational, and cognitive (i.e., knowledge and beliefs) barriers are needed.

Some models integrate motivational interviewing (MI) techniques (e.g., Reinke et al., 2008) or implementation supports that directly address specific barriers to high quality implementation (Owens et al., 2017). We argue that such elements should be incorporated into a meta-model and could also be considered a common element to evidence-based models.

Applied to teacher coaching, MI principles suggest the need for coaches to recognize and accept that ambivalence about implementation of new classroom practices is normative. MI processes provide language techniques to facilitate collaborative conversations that promote teacher autonomy and evoke change in practices (Miller & Rollnick, 2013). Recent research demonstrated that coach use of MI-consistent language and teacher change talk (evidence of readiness for change) occur consecutively (Pas et al., 2021a).

A meta-model should incorporate structured guidance in how to utilize language that supports and empowers teacher autonomy and change (e.g., Bradshaw et al., 2018; Pas et al., 2019; Owens et al., 2020b; Reinke et al., 2008; Newman & Rosenfield, 2019). Such language should be leveraged in developing the relationship and rapport, providing performance feedback (both at the problem identification and evaluation stages) and facilitating intervention/EBP selection. Such language techniques are hypothesized to build teacher self-efficacy and the coach-teacher relationship. Extant literature examining the coach-teacher relationship indicates that it may be key to the initial stages of coaching readiness (de Haan et al., 2020) and can improve teacher implementation dosage (Johnson et al., 2018). Across a series of studies, there is evidence that teacher beliefs about the importance of an intervention, teachers' confidence in their ability to implement an intervention, and perceptions of the fit of an intervention all relate to implementation practices (Domitrovich et al., 2015; Owens et al., 2020b). Further, explicitly targeting teacher beliefs has been shown to result in changes to those beliefs, which in turn related to higher quality implementation (Cook et al., 2015). A coaching meta-model should ensure that coaches can help teachers (1) identify beliefs that may be

a barrier to implementation, (2) identify an alternative belief, and (3) examine possible outcomes of each belief (Coles et al., 2015; Owens et al., 2017).

Addressing Equity Within a Meta-Model

Any meta-model must incorporate elements to ensure coaches utilize a culturally sensitive and responsive lens for their work (Newman & Rosenfield, 2019) and advocate for social justice through dismantling systems of oppression and inequity (Sander, 2013). Though the focus on culturally responsive training and research spans four decades (Ingraham, 2014), in just the past two decades, there have been at least four special issues devoted to this topic (i.e., in the *Journal of Educational and Psychological Consultation* 2020, Vol. 30, Issue 3; 2009, Vol. 19, Issue 1 and 2016, Vol. 26, Issue 3; and in the *School Psychology Review* 2000, Vol. 29, Issue 3). With the raised public awareness of racial injustice in 2020, following the heinous killing of George Floyd and Breonna Taylor (and countless others), many mental health scholars have amplified the call. In the most recent special issue on this topic (*Journal of Educational and Psychological Consultation*, 2020, Vol. 30, Issue 3), power and resource imbalances, implicit bias, white defensiveness or complicity, and deficit-based thinking (Schumacher-Martinez & Proctor, 2020) were discussed as areas that must be addressed. Although multicultural coaching is not an “innovation” per se, prioritizing it as a central focus in a meta-model, and not as separate model, would be.

Two models have emerged as exemplars for multicultural consultation, Ingraham’s (2000) Multicultural School Consultation (MSC) framework and the Participatory Culture-Specific Consultation model (PCSC; Nastasi et al., 2000; an action-research collaborative problem-solving model developing culture-specific interventions). Their core elements should be integrated into a coaching meta-model, addressing coaches’: (1) own self-awareness and understanding of their own and others’ cultural identity development,

(2) ability to identify and navigate the cultural identities between themselves, the teacher, and students and determine how this impacts the relationship, process, and outcomes, (3) recognition of the contextual and power influences, and (4) framing of the problem in a culturally competent way by self-reflecting and engaging in professional learning to promote success (Ingraham, 2000; Nastasi et al., 2000). This includes language, cultural content, and goal alignment to the targeted student(s) culture and forming relationships with the students’ family and other key stakeholders in intervention development (Domenech-Rodriguez et al., 2011; Nastasi et al., 2000).

Recommendations for Training, Practice, and Research

In this final section, we synthesize the content of this chapter into concrete training, practice, and research recommendations. Our goal is to help SMH practitioners leverage evidence-based coaching strategies to support teacher uptake of Tier 1 and 2 EBPs and to stimulate innovative research that will advance a meta-model of coaching.

Training of Coaches

The innovations outlined in this chapter create a range of opportunities for the field to push forward coaching approaches in practice. This cannot be achieved, however, without a focus on training that enables coaches to utilize such innovations in their regular practice.

Training in the Use of Technology

While many technological applications for coaching exist, much training is still needed. Coaches not only need the knowledge and skills to utilize technological innovations, they also must be equipped to provide teachers with training, troubleshooting documentation, and ongoing supports to use these applications (Bloomfield et al.,

2019). Without adequate training, technological innovations will likely not be implemented.

To prepare coaches to use technology in their coaching practice, we recommend that higher education faculty and school-based trainers consider the best practices outlined within both the consultation and technology training literatures. This includes incorporating (1) didactic training (e.g., reading, lectures) for awareness; (2) modeling and demonstration of skills for conceptual understanding; (3) guided practice or role-play simulations in class or training for skill acquisition; and (4) supervised practice cases in applied settings with feedback for skill application (Newman & Rosenfield, 2019). The incorporation of both the clinical and technical skills involved in coaching when using technology is also needed. It is possible to utilize technology in such training (e.g., mixed- or virtual-reality platform to practice teleconsultation).

Training for a Meta-Model

In-depth foundational coaching training, supplemented with other common elements, is warranted in graduate programs. A survey of early-career school psychologists demonstrated that the strategies that received the most in-depth training (behavioral consultation, covered in greater detail for 41% of participants) were also the most frequently used in practice (50%; Newman et al., 2015). Given that the second most endorsed approach by early-career practitioners (i.e., about one-third of those surveyed) was selection of a model based on case demands, training in a greater range of common elements (beyond the behavioral consultation model) should be provided to preservice trainees (Newman et al., 2015). Also eliminating the notable false dichotomy between academic and SEB problem-solving is needed, as both sets of concerns are often highly interrelated (Kuchle et al., 2015).

Additional training is also needed to help coaches address teacher motivational, relational, and cognitive barriers. For example, explicit training in core language, such as OARS (open-ended questions, affirmations, reflections, and

summaries) and skills for evoking motivation toward use of practices could be particularly influential in promoting the uptake of EBPs (Miller & Rollnick, 2013). This could even be aligned to counseling training and scaffolded to be relevant to coaching.

Regarding equity, the APA *Multicultural Guidelines: An Ecological Approach to Context, Identity, and Intersectionality* (2017) provides the field with 10 principles for training that directly relate to the earlier point that any meta-model, and by extension training, must address culture. Even in the absence of a clear meta-model framework, SMH provider training must address cultural responsiveness and competence. Unfortunately, a recent syllabi review study of graduate school psychology consultation courses indicated that less than half of the courses addressed the trainee's culture, despite most addressing the culture of teachers and students (Hazel et al., 2010). Even fewer syllabi mentioned social justice. This demonstrates a need for building self-awareness of cultural identity and its impact on the coaching process, as outlined in the prior section. Training must also promote development of a strong cultural knowledge base, which includes culture-specific knowledge, while also emphasizing flexibility and critical thinking to recognize the complexity of intersectionality and within-group differences. Further, training in how to access and review research of effective cultural adaptations and modifications of EBPs is needed, as is training in data-analysis for inequities and disproportionality. To achieve this, training should include self-reflection and supervisory feedback highlighting the importance of language in the consultative relationship (e.g., bias-free language, active and reflective listening, reflection of feelings to support marginalized groups). Trainees should be guided, during role plays and practicum, when they lose objectivity and supported in identifying and clarifying racially or culturally loaded inferences or assumptions, navigating uncomfortable conversations, and framing teacher concerns using a strengths-based approach.

Practice

All training recommendations are meant to also facilitate coach practice changes, whereby coaches utilize meta-models and technology. Coaching supports to teachers should be the focal point in conceptualizing and delivering tiered supports to students. We assert that students could most benefit from high-quality instructional and SEB Tier 1 practices within the classroom and that coaching to support and empower teacher implementation of Tier 1 EBPs is needed. If SMH providers coach teachers, there are likely to be positive ripple effects for all students that cannot occur with pull-out Tier 2 services provided by SMH or other behavior providers. The current implementation of MTSS, which relies heavily on separate (pull-out) services provided by highly trained specialists, perpetuates a student-deficit focus that fundamentally “ignores historical, political, and systemic forces that interact to create the problems identified in the school context and may serve to maintain structures that create and sustain inequity” (Parker et al., 2020; p. 148). A reframing of our current educational service-delivery system to an aligned-services framework is needed (in juxtaposition to ‘triage-education’; Gravois, 2013). This normative shift could also result in improved implementation and sustainability of EBPs in schools and begin to close the research-to-practice gap (e.g., Durlak & DuPre, 2008).

The research-to-practice gap is a multifaceted issue, stemming from many barriers that impede EBP adoption. Fortunately, known drivers of implementation (i.e., competency, organization, and leadership) can be supported by coaching (see Frey et al., 2021) and address these barriers. Some important areas to address are: (1) allocating adequate time for teacher coaching to promote use of EBPs; (2) implementing accountability structures for adult collaboration; (3) securing long-term commitments to adoption, training, and implementation, involving a wide range of stakeholders; and (d) prioritizing and aligning initiatives to ease issues of complexity to address the fact that

teachers tend to implement the simplest interventions (Baker, 2005). If done well, coaching may be one way to support better alignment between research and practice.

Research

As noted in the Innovations section, there are many areas in need of additional research regarding coaching innovations to support Tier 1 and 2 classroom supports.

Researching Meta-Models

To promote a meta-model for coaching, additional developmental research testing the effectiveness of individual common elements and a full meta-model is needed. Currently, literature demonstrates some evidence on core elements. For example, studies that isolated the effects of performance feedback demonstrate it as a best practice (e.g., Reinke et al., 2007; Solomon et al., 2012). There is also some emerging research regarding motivational interviewing mechanisms (Owens et al., 2020b; Pas et al., 2021a). More research is also needed on strategies that may impact data-driven decision making (e.g., through embedding technology). For example, research is needed to evaluate the impact of various data-driven algorithms and use of technological tools to change teacher practices and improve student outcomes.

To advance our understanding of best practices in culturally responsive coaching, we need to advance our research of these skills and practices. This will require research to (at least) include: (1) more thorough descriptions of participants and researchers, (2) diverse samples and perspectives, and (3) full descriptions of the schools where studies are conducted (Ingraham, 2014). Regarding development, refinement, and integration across models, more research is needed to determine if the communication approach a coach uses produces changes in the teachers’ perceptions of their culturally diverse students, their skills, and student outcomes (Parker et al., 2020). For example, school consultants tend to use a ‘soft confrontational approach,’ (Parker et al., 2020,

p. 147) rather than direct confrontation to educate a teacher around raised cultural issues. Similarly, in a study of Double Check checking, which aims to improve culturally responsive teaching (Bradshaw et al., 2018), coaches prompted teachers to set culturally responsive teaching goals less frequently than they prompted positive behavior support goals, despite being trained to do both (Pas et al., 2016b). Even when prompted by the coach, teachers were less likely to set goals regarding culturally responsive teaching practices. Thus, efficacy or comfort discussing cultural differences with teachers should also be explored in relation to process skills and teacher and student outcomes. The prevailing communication approach should be what is included in a meta-model.

What Works for Who and Under What Conditions?

Just as more research can elucidate the importance of specific coaching components, additional research examining key teacher practice changes that serve as mediators of improved student outcomes is also needed. Akin to how academic and behavioral supports should be differentiated to match student needs, we argue that implementation supports need to be differentiated for teachers; however, extant research does not well inform how to approach this. For example, some teachers may achieve positive student outcomes with low-cost, technology-driven solutions, whereas others may need intensive, individualized supports. Providing intensive approaches to teachers who do not need it or utilizing technology with teachers who will not use it would be inefficient and ineffective. There are likely cost efficiencies in matching implementation strategies to teacher needs; however, additional research on the development of reliable and valid tools for determining how and when to tailor supports is needed.

Need for Longer-Term Outcomes and Cost-Effectiveness Studies

Although the coaching literature demonstrates promising short-term outcomes, there are concerns about the translation into real-world prac-

tice (Kraft et al., 2018). The overreliance of research studies on researcher-hired and trained coaches creates concerns about whether school personnel can achieve the outcomes evidenced in the research. Research on the systems-level supports and implementation drivers needed for coaching to be utilized in typical practice is therefore needed. Further, although coaching is theorized and designed to lead to sustained teacher practices, the sustainability of coaching impacts is questionable. Few studies have examined long-term impacts and extant results are mixed (Kraft et al., 2018). Studies with longer-term outcome measurement (i.e., greater than a year) will allow for greater precision in estimates of the timeframe in which the most distal outcomes (e.g., student achievement) can be expected.

Additional research is also needed on cost effectiveness. Emerging data suggest that coaching is reasonable in price (Pas et al., 2020, 2021b), particularly compared to traditional workshops (Barrett & Pas, 2020). There is also some evidence to suggest that coaching individualized to teacher needs is more cost-effective than a one-size-fits-all consultation approach (Owens et al., 2020c). More research is needed about the most efficient approaches, the necessary components, and the cost effectiveness of the approach for various student outcomes.

Conclusion

The consultation and coaching fields have developed a rich theoretical and empirical foundation for coaching teachers in Tier 1 and Tier 2 classroom interventions. It is evident that innovation for the field would include better integration of promising technological advances with common elements of evidence-based models. Core to any innovation is the ability to overcome implementation barriers and the all-too-common inequity in educational services and outcomes for students of color. This requires thoughtful alignment in coaching models that infiltrates training, practice, and research and can improve the reach of such innovations.

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Preparing the School Mental Health Workforce to Engage in Partnership Approaches to Address Children's Needs

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Preparing the School Mental Health Workforce to Engage in Partnership Approaches to Address Children's Needs

Most children spend the majority of their time in two settings: home and school. They learn and grow with the support and guidance of families, teachers, and other school personnel. Ecological systems theory (Bronfenbrenner, 1979) describes the importance of home and school environments, as well as the role key individuals play in promoting child development. Ecological systems theory also underscores that child development is influenced by the connections between contexts. The relationship between families and teachers as well as similarities and differences between home and school practices, routines, interpersonal interactions, and expectations impacts children's social, emotional, physical, and academic development. Positive family-teacher relationships and environmental congruence support optimal development and enhance strategies for addressing problems (Smith et al.,

2020b; Kim et al., 2013). Therefore, it is essential that a school mental health workforce is prepared to build and support home-school partnerships necessary to foster child mental health and interventions to address mental health concerns.

The purpose of this chapter is to describe the importance of home-school partnerships in school mental health workforce preparation so that school mental health practitioners are equipped to provide effective supports for their clients. In this chapter, we begin by establishing a foundation for home-school partnerships, as well as home-school partnership programs and practices that promote student mental health. Then, we describe preparation needed to train a school mental health workforce to design, implement, and evaluate home-school partnership programs and practices. We conclude with implications and future directions.

Throughout this chapter, we use the term parent to describe any adult in the primary caregiver role. We use the term school mental health practitioners (SMHP) to refer to any professional providing mental health services in connection to schools (e.g., social workers, counselors, psychiatrists, school psychologists). Although our primary emphasis will be on home-school partnerships, we will also describe family engagement which refers to practices that promote family involvement in their child's education, development, and mental health.

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Home-School Partnerships

Home-school partnerships have many facets that change over time as children grow and gain independence, and as key partners (e.g., teachers) change. Home-school partnerships look different for different children, parents, teachers, and schools. The details of how families engage in their child's education and how families and schools interact differ depending on needs, strengths, and individual, cultural, and contextual characteristics. Although there is no single "correct" home-school partnership, there are some key characteristics necessary for positive home-school partnerships (Christenson, 2004). These characteristics include the following: (a) partners assume mutual responsibility for supporting the child's learning and success; (b) partners share information, values, expertise, and goals with one other; and (c) positive working relationships between family members and school personnel (Raftery et al., 2012).

Mutual Responsibility

Shared responsibility among parents and teachers for student development is a core feature of successful home-school partnerships. Though roles vary across contexts and over time, in home-school partnerships there is a mutual understanding that families and educators are both critical to student success. Parents and educators typically acknowledge their own roles but may be less clear on how their role fits in relationship to their counterpart's role. For example, whereas a teacher may believe she has a responsibility to help her student learn to read, she may be less convinced that it is her job to teach her student how to share. Similarly, a father may believe he is responsible for teaching his daughter to share, but he may be wary of his role in teaching her to read. Understanding how family and school roles complement one another is possible when both parties recognize their shared responsibility. School mental health practitioners, in collaboration with school administrators, can promote shared responsibility in their formal and informal

interactions with parents and teachers (Garbacz et al., 2017). Formally, they can include mutual responsibility language in school newsletters, promote discussions of roles in collaborative meetings (e.g., parent-teacher conferences, individualized education program meetings), and describe mutual responsibility in mission statements. In informal conversations, they can help parents and teachers identify how their work enhances and can be enhanced by the work of each other.

Shared Information, Values, Expertise, and Goals

Shared knowledge and desires are critical to robust home-school partnerships (Girio-Herrera & Owens, 2017; Fefer et al., 2020; Garbacz et al. 2020a, b). Two-way communication that allows for the flow of information about student strengths and needs as well as the sharing of expertise from home and school facilitates collaboration. Engaging families in setting school goals ensures that the home-school partnership is infused throughout all levels of school practices from policymaking to individual student achievement. Over time, these two-way interactions, mutual goal setting, and expertise sharing can begin to form shared values.

Relationships

The relationship between family members (primarily parents) and school personnel (primarily teachers) has long been viewed as an essential influence in children's academic and social-emotional success (Hughes & Kwok, 2007). Parent-teacher relationship quality refers to the affective quality of the home-school connection, characterized by trust, mutuality, affiliation, support, shared values, and shared beliefs about each other and the child (Vickers & Minke, 1995). It is distinguished from parent involvement (Rimm-Kaufman et al., 2005), which includes behaviors and activities such as volunteering at school, attending school functions, and assisting with

homework. Home-school partnership is rooted in the relationships between its partners and relationships drive partnership practices.

Research Examining Home-School Partnership

Researchers have documented positive effects of interventions with different aspects of home-school partnerships on a variety of student outcomes across a range of student groups. Although it is difficult to separate the effects of an intervention from the effects of the partnership, interventions that embed home-school partnerships are associated with improvements for students and families. Several reviews and meta-analyses have revealed numerous positive associations between interventions with different home-school partnerships and children's learning and development (e.g., Smith et al., 2020b), in addition to improved social-behavioral competence and mental health (Sheridan et al., 2019). For example, Fabiano et al. (2010) found that relative to a control group, elementary school students with ADHD experienced significant improvement in academic functioning and disruptive behavior when their parents and teachers worked as partners to develop and implement an intervention to help the student achieve the goals on their individual education plan. Humphrey et al. (2013) implemented an intervention for students with special needs that included structured conversations with parents. They found that relative to a control group (representing typical practice), students who received the intervention demonstrated improvement in behavior problems, positive relationships, and bullying. Furthermore, the benefits of quality parent-teacher relationships for children's developmental outcomes have been well-established (for a review, see Clarke et al., 2010) such that parent-teacher relationship quality is closely associated with child behavioral, social-emotional, and academic outcomes.

Benefits are also present for families. A recent meta-analysis revealed that home-school interventions improve parents' attitudes towards school, parent-teacher relationships, and home-

school communication (Smith et al., 2020a). Furthermore, parent involvement at home and parent-teacher communication have been found to be the most effective factor influencing teachers' job satisfaction (Li & Hung, 2012) and parent-teacher relationships have been found to be the most significant factor in teacher retention (Buckley et al., 2004). Home-school partnership has been endorsed by a majority of school administrators as beneficial for positive school climate through communication and problem resolution and increased staff morale (Povey et al., 2016). Close home-school relationships have been shown to predict more responsive and sensitive parenting behavior (Iruka et al., 2010).

Home-school partnerships may also help to reduce racial educational inequities and close achievement gaps. Numerous studies and education policy reports have documented outcome disparities, both in terms of achievement and social competence, of Black and Hispanic children compared to their White peers (Aud et al., 2010; Haskins & Rouse, 2005). Fortunately, the pattern of positive outcomes linked to home-school partnerships has been demonstrated for children of all races (Jeynes, 2003). For example, using a multistate dataset, Iruka et al. (2011) found that when parents and teachers reported that they had strong relationships, Black children were more likely to be rated as more socially competent and less aggressive than White children. Additional research from early childhood and elementary school studies has demonstrated that programs that include culturally sensitive, strengths-based family components can be successful in supporting children's language and literacy with Hispanic migrant families (Boyce et al., 2010), reducing children's behavior problems with urban Black and Latino families (Brotman et al., 2011) and American Indian families (Kratochwill et al., 2004), and increasing the on-task behavior of Black children living in low income conditions with Attention-Deficit/Hyperactivity Disorder (ADHD; Jurbergs et al., 2010). Preparing a mental health workforce to foster positive parent-teacher relationships and home-school partnerships may be an effective way to address the needs of all students.

Home-School Partnership Frameworks

School mental health practitioners are uniquely positioned to advance home-school partnerships to promote positive student outcomes; they are often called on to provide mental health supports for students at all levels, including core social-emotional learning programming, small group-specific skills training or interventions, evidence-based individual or group therapy, and crisis interventions. School mental health practitioners also often work with other school personnel (e.g., teachers, principals) in a variety of roles and may serve on committees charged with selecting, developing, and consulting about behavioral expectations and mental health interventions. They are also involved in the ongoing evaluation of implementation and continuous improvement of practices to support mental health. Therefore, SMHPs have multiple opportunities to advocate for the inclusion of home-school partnerships in school decision-making and practices. They can be instrumental in encouraging administrators and teachers to promote home-school partnerships. For example, principals play a vital role in shaping school climate and facilitating family engagement in children's education through their expectations, leadership style, communication, and attitudes (Barr & Saltmarsh, 2014). Further, when teachers initiate family engagement in their children's educational processes, parents typically respond positively, appreciate teacher guidance in supporting children, and report greater personal efficacy for helping their children learn (Hoover-Dempsey et al., 1992, 1995). SMHPs can raise awareness of the importance of home-school partnerships and provide information and resources to build school personnel capacity to foster home-school partnerships.

In order for strong home-school partnerships to flourish, partnership practices must be imbedded into the school community. Foundational partnership attitudes and skills will lay the groundwork for specific partnership practices of increasing intensity to be used depending on

child need. SMHPs should be well-versed in and promote prerequisite partnership foundations.

The Four A's Framework for Developing Effective Partnerships

One well-established framework for establishing a partnership foundation is the four A's (Christenson & Sheridan, 2001). This framework establishes the necessary Approach, Attitudes, Atmosphere, and Actions for effective home-school partnerships. Infused throughout the four A's framework are home-school relationships. This attention to relationships encourages interest in shared meaning across home and school and tightens connections across settings.

A partnership *approach* is one with an appreciation for diversity and a core belief that home-school partnerships are necessary for student success. This approach, adopted schoolwide, is student-focused, prevention-focused, and solution-oriented. There is an emphasis on the quality of home-school relationships and interactions. School and family have co-roles as co-communicators, co-supporters, co-learners, co-teachers, and co-decision makers.

Partnership *attitudes* include the values, beliefs, and perceptions parents and educators hold about one another, and about home-school relationships. Examination of personal beliefs and biases is necessary to establish non-blaming attitudes, willingness to share perspectives, and an understanding of needs. Partnership attitudes for both families and educators are necessary for the development of home-school relationships. For example, it is critical that educators believe outreach to families is essential and that families across income levels and diverse cultural backgrounds support their children's education. Similarly, families need to believe schools are places where individual students can grow and develop and there are several ways that a home environment can support learning.

The *atmosphere* includes the physical (e.g., welcome signs, comfortable seating) and emotional (e.g., focus on solutions, family liaison) climate of the school. A partnership-oriented

atmosphere is welcoming and respectful and indicates true value placed on family input and mutual trust. Developing mutual trust can sometimes be challenging and may develop slowly over time through repeated contact and exposure to positive experiences. Open two-way communication is key to establishing a partnership-oriented atmosphere.

Partnership *actions* are the specific strategies for building shared responsibility. Certain actions that support the establishment of home-school partnerships include training to support effective communication, establishing a structured home-school partnership problem-solving process, engaging in active listening to learn about families before acting on assumptions, and encouraging learning continuity across home and school. Christensen and Sheridan (2001) emphasize that actions differ from activities in that actions are focused on building the home-school relationship and building shared responsibility, versus activities that tend to be school-directed and short-term. They emphasize that actions be infused throughout the school system through administrator support, clear policies, and home-school partnership teams.

Although the four A's provide a general framework for establishing home-school partnership prerequisites, the manner in which each of the 4 A's is implemented for a particular school should be established by a family-school-community stakeholder group. Family and community ideas, needs, and concerns should be at the forefront when establishing practices aimed at promoting the 4 A's within a school. It is critical that a representative group of family and community stakeholders are meaningful members of the group. Including racially and ethnically diverse members of the group helps to ensure that the four A's for each school community represent the values, goals, and needs of the diverse families. Community stakeholders can bring unique perspectives grounded in the broader perspective of local faith, business, and social services communities that both serve and benefit from effective and equitable schools. SMHPs should be active members of the stakeholder group to represent the social-emotional and behavioral learning and

associated academic outcomes that can benefit from an inclusive home-school partnership.

CRAF-E⁴ Family Engagement Framework

The Culturally Responsive, Anti-bias Framework of Expectation, Education, Exploration, and Empowerment (CRAF-E⁴; Iruka, et al., 2014) provides another framework for promoting home-school partnerships. CRAF-E⁴ was designed to support practitioners to engage with racially and ethnically diverse families. In this model, family engagement refers to the relationship practitioners develop with families that promotes involvement in their child's education. Similar to the four A's, CRAF-E⁴ is rooted in relationships and emphasizes the emotional connections between school staff and family members.

Through this model, practitioners are asked to *expect* families and students to do their best. They are encouraged to raise their expectations of racial and ethnic minority families and students. When practitioners establish a school culture in which all parents are expected to be intentionally engaged in their child's learning, they must also assess and address barriers to family engagement.

Next, practitioners are asked to *educate* families on how to support their children's optimal development. Families know their children's strengths and needs, but they are not always well-served in the complex institutions and systems involved in their children's education. It is the practitioner's role to collaborate with families to convey how to effectively advocate for their children's best interests and how to effectively navigate the educational system for the benefit of their children.

Practitioners should *explore* ways to partner with families and value their strengths. SMHPs may not be of similar racial/ethnic backgrounds to the children and families with whom they work (Proctor et al., 2017). For example, in one study data suggested 87% of school psychologists surveyed were White and 86% spoke English only

(Walcott et al., 2016). SMHPs can learn about family culture and strengths to enhance their relationship with the child and families and to improve school practices.

Finally, practitioners *empower* families to advocate on behalf of their child's education and well-being. Empowerment is the crux of the CRAF-E⁴ framework. Building family member's self-confidence and self-sufficiency requires practitioners to explore families' assets, educate them on advocacy, and hold high expectations about their role as parents. SMHPs should be trained to work and interact with diverse families and to partner with them in a way that is culturally meaningful and sensitive to their individual context. Furthermore, they are encouraged to foster a culturally competent school climate in which minority families are not viewed as unsupportive or deficient and to support teachers and administrators to continue seeking ways to be more effective in supporting and engaging minority families.

Tiered Home-School Partnership Practices

Within a schoolwide focus on home-school-partnerships, there are many innovative practices school personnel can engage in to support children's mental health and academic outcomes. These practices will vary in intensity depending on child need and the child's responses. This tiered approach to using partnership practices to support mental health includes three tiers of support. Tier 1 encompasses core partnership practices used for all students and families. Tier 2 practices are employed for some students whose needs are not met through core practices and who demonstrate risk of developing more serious problems. Tier 3 interventions are individualized and intensified for the families and school partners of the few students who need additional support beyond Tier 2. Tier 2 and 3 supports are not meant to replace core instruction, but are intended to enhance it for the students who need it. Once students meet benchmarks, intensified partnership interventions can be reduced or withdrawn.

Some student mental health problems may not be detectable by observation or may go unnoticed by inexperienced or untrained teachers (Allen et al., 2018); therefore, universal screening should be conducted rather than relying on teacher nomination. Universal screening can help identify the level of support needed for each student. Additional measures may also be needed to determine special education eligibility or to identify the specific student needs for intervention. Because social and behavioral needs are often culturally based and subject to bias, universal screening and other measures should be designed and implemented in a culturally responsive manner and grounded in partnerships with parents (Moore et al., 2016). SMHPs can help guide the selection or adoption of mental health screeners that rely on teacher- and parent-report to understand student needs across settings and from different perspectives. Screeners and other measures should be evidence-based as appropriate for the school community. Although mental health screening and special education eligibility assessment are needed to identify all students in need of support, many families may be unfamiliar and/or uncomfortable with such practices. Therefore, it is critical to engage families in two-way communication about the assessment process, its benefits, and the concerns families have. It is especially important to be responsive to concerns and make adjustments to measures and procedures accordingly. In the sections that follow, we describe a continuum of home-school partnership practices within a school mental health framework that can be used to address student needs while emphasizing family strengths.

Tier 1

Home-school partnerships are essential to school mental health practices at all tiers of support. Tier 1 or core home-school practices to support student mental health development can include creating positions with the school that are specifically focused on social-emotional and behavioral learning (SEBL) and home-school partnerships. The staff members in these positions can support

students and families to set SEBL goals and monitor and support their progress toward meeting their goals. Schools can create a schoolwide team, committee, or advisory board that is focused on SEBL and home-school partnerships. This team can create a family room, lending library, or resource center (digital or otherwise). They can plan SEBL and partnership initiatives that coordinate with the school calendar. An important role may be to develop, facilitate, and monitor a two-way communication system. With ever-changing technology, the options for communication are seemingly endless. This means parents and teachers from different age groups, different backgrounds, and varying levels of comfort with technology all have different preferences for communication. Modern communications technology allows for easy translation into hundreds of different languages, increases access to special needs accommodations, and helps communication fit into busy schedules more readily than ever before. The team charged with the two-way communication system will need to account for parent and teacher preferences and limitations. However, because communication is the foundation for home-school partnerships, the investment in time and resources is worthwhile.

Tier 2

Within a prevention framework, Tier 2 secondary prevention is defined by its focus on providing targeted support to parents and educators of students who are at risk for developing more serious academic, emotional, and behavior concerns. Within a continuum of support intensity, Tier 2 provides more support than at Tier 1, but less support than at Tier 3. At Tier 2, support can be implemented at an individual level for specific families or teachers or in the context of a group-based program. In either case, Tier 2 support should promote student skill building, such as the development of phonemic awareness, numeracy skills, coping skills, or problem-solving skills in a partnership-centered manner. Together, parents and teachers create Tier 2 support plans in a man-

ner that will promote skill building and build continuity across home and school. For example, teachers can prompt the use of newly formed skills in classrooms and non-classroom school settings. In addition, parents can prompt skill use and reinforce efforts at home and in community settings. Parents and teachers collaborate throughout to implement plans and evaluate student progress. In addition to promoting generalization, parent collaboration is essential to improve cultural sensitivity, enhance home-school continuity, and strengthen home-school collaboration for long-term planning and problem solving. We will use three programs to illustrate how family collaboration can be embedded in Tier 2 supports for students, Check-In/Check-Out, Coping Power, and Resilience Education Program.

Check-In/Check-Out Check-In/Check-Out (CICO) is designed for students who are at risk for developing serious academic behavior concerns or emotional and behavior concerns and who are likely exhibiting emotional and behavior problems that are non-dangerous (Turtura et al., 2013; Crone et al., 2010). CICO involves students checking-in and checking-out with different school staff members throughout the day. Often, a morning meeting is held between the student and a CICO coordinator, with periodic feedback with a teacher throughout the day, an afternoon meeting is then held with the coordinator, and home feedback is provided. A point card is used to acknowledge students for following a defined set of expectations based on the setting, typically aligned with a school's positive behavioral interventions and supports (Sugai & Horner, 2002) expectations (e.g., be safe, be respectful, be responsible). Students receive points and praise from school staff for following expectations at different times throughout the day. Points students earn can be exchanged for rewards at school and at home, with different point values aligned with different rewards (Campbell & Anderson, 2011). Smolkowski et al. (2017) developed a family-centered version of CICO that included collaborating with families when components of CICO are initially defined (e.g.,

expectations, points, rewards). The power in collaborating with families at the outset of CICO before procedures are set is that families are allowed the opportunity to be active coequal participants in the design and delivery of CICO rather than passive recipients of information. If families are not involved as coequal participants at the early stage, the effectiveness of CICO may be undermined. For example, families may not feel that the school-defined expectations accurately reflect their values, and as a result, do not implement CICO as designed by school staff at home with their child. Alternatively, families may not feel equipped to implement an academic skill building intervention at home. Defining the intervention with families at the outset allows cross-setting capacity building while building on family strengths to support positive student outcomes.

Coping Power Program The Coping Power program child component includes a group of five to seven students, targeting aggressive and other disruptive behaviors (Lochman et al., 2020). The 34-session program meets weekly for 1 h. During meetings, children learn a variety of skills, such as goal setting, organization and study skills, emotion awareness, anger management, perspective taking, social problem solving, and peer affiliation and peer pressure. In addition to group meetings, students meet with the group leaders, who are often school mental health clinicians and school psychologists. Group leaders are in regular communication with teachers and other school staff to support cross-setting connections and generalization.

The Coping Power program also has a parent component. The parent component includes groups with parents, conducted in a collaborative manner with families. Within the parent component, a variety of skills are targeted, such as supporting child academic success, stress management, positive parenting behaviors, home-school connections, and family communication and problem solving. These parenting skills complement the skills children learn and allow parents to be effective in parenting their

child and supporting their child's development of social and problem-solving skills.

The Coping Power program has been examined in multiple randomized trials, with significant improvements in valued outcomes for students and parents. Relative to students in a school-as-usual control condition, students who participated in the Coping Power program experienced improvements in behavior concerns, with effects on student outcomes mediated by improvements in parenting practices and children's social-cognitive processes (Lochman & Wells, 2002a, b). Parents who participate in Coping Power demonstrated more positive and supportive behaviors during interactions with their children (Lochman & Wells, 2002b). Results from a study that examined a briefer version of the Coping Power program with face-to-face and web-based components suggested similar preventative effects for reduction in growth of student behavior concerns at school as the longer version of the program (Lochman et al., 2017).

Resilient Education Program The Resilience Education Program (REP) includes CICO and group-based support to children at risk for developing internalizing problems (Kilgus & Eklund, 2020). In REP, students experience a modified CICO and group-based program that provides cognitive-behavioral instruction focused on promoting coping strategies and problem-solving skills. Group sessions include five lessons: an introduction, identifying strong emotions, using coping skills to manage strong emotions, thinking good thoughts, and using problem-solving skills. CICO focuses on (a) meeting with a mentor in the morning to remind the student about individualized goals for the day and assess school readiness, (b) meeting with teachers throughout the day to provide feedback about their ability to control their emotions and make good choices, and (c) meeting with mentor at the end of the day to determine whether the student met the goal and can earn a reward. Results of studies examining REP have suggested a decrease in internalizing behaviors and an increase in social engagement (Allen et al., 2019), as well as

improved coping skills and social support (Kilpatrick et al., 2021).

A Resilient Families component of REP was recently developed and includes promoting home-school collaboration in support of students' development of coping strategies and problem-solving skills. Resilient Families focuses on engaging families in a collaborative relationship when initiating REP, aligning REP procedures with family goals and expectations, creating shared goals for student performance across home and school, providing parents with resources to promote positive parenting and support their child's development of coping strategies and problem-solving skills at home, and coaching to assist parents in supporting their child (Garbacz et al., 2020b).

Tier 3

Tier 3, or tertiary prevention, provides individualized support to students with serious emotional and behavior concerns. In the context of a prevention-oriented, tiered framework in schools, Tier 3 support should be necessary in few instances as most students should be supported when they experience positive, safe, and predictable environments at Tier 1 and Tier 2, with clear expectations and support for developing and refining social-emotional competencies. We use three approaches to describe individualized emotional and behavior support at Tier 3, with an emphasis on aligning and integrating families, schools, and communities: mental health therapy, conjoint behavioral consultation, and family check-up.

Mental Health Therapy Individual mental health therapy is offered in many schools by a school counselor or school psychologist to support students with individualized support to help manage emotional and behavior concerns. Individual mental health therapy is often conducted in a manner that is disconnected from other school systems and parents. However, as noted below, there are strategies to integrate school systems and parents in mental health ther-

apy. Mental health therapy often includes an initial intake or interview, goal setting, and a limited number of sessions targeted on addressing clearly defined areas of focus to reach goals. Therapy sessions can include a variety of techniques, but the most research support is available for cognitive behavioral approaches that target developing coping strategies, problem-solving skills, and adaptive thought processes (Higa-McMillan et al., 2016; Weersing et al., 2017). The logic underlying this approach suggests that thinking patterns (e.g., "I am not smart enough to pass that test") influence emotions (e.g., anxiety about a test), which can impact behavior (e.g., avoiding studying for a test). Through developing more adaptive thinking patterns (e.g., "I have prepared for tests in the past and performed well"), negative emotions can decrease (e.g., decrease in anxiety about a test), which can impact behavior (e.g., studying for a test).

In schools, individual mental health therapy is often conducted in a colocated manner where the therapy occurs in the school setting but is disconnected from school systems and practices. Aligning and integrating mental health therapy within a broader set of mental health systems and practices within PBIS (Eber et al., 2020) is likely to be most effective as students can experience the continuum of supports in an integrated manner (e.g., goals in therapy can be linked to group-based support).

In addition to aligning and integrating mental health supporting within school systems, families should be integrated in a therapeutically and developmentally appropriate way. Parents can promote and affirm their child's development of coping strategies and problem-solving skills learned in therapy, as well as provide an appropriately safe environment at home if their child poses a risk of harm to themselves or others (Evans et al., 2014). Ideally, family partnerships are integrated into a school's tiered system of support, so that integration in mental health therapy at a systems level (e.g., systems for identifying students appropriate for mental health therapy) and individual level (e.g., parent involvement in goal setting for their child) is possible.

Conjoint Behavioral Consultation Conjoint Behavioral Consultation (CBC; also referred to as Teachers and Parents as Partners; TAPP) provides a framework for integrating home-school partnerships in individualized social and behavior supports (Sheridan, 2014; Sheridan & Kratochwill, 2008). The goals of CBC include promoting positive outcomes for students, building parent and teacher competencies and skills, and strengthening the home-school relationship (Sheridan & Kratochwill, 2008). CBC includes four stages: Needs Identification, Needs Analysis, Plan Implementation, and Plan Evaluation. Needs Identification, Needs Analysis, and Plan Evaluation are collaborative meetings that include the student's family, a focal teacher, a consultant, and other partners as appropriate (e.g., physician). During Needs Identification, strengths and areas of concern are identified, a target concern is prioritized for home and school, and plans are made to collect data about the target concerns to better understand the context and baseline levels of performance. During Needs Analysis, data are reviewed, goals are set, conditions surrounding the behavior are discussed (e.g., antecedents, consequents), and a support plan is created. During Plan Implementation, the family and teacher implement plans at home and at school with the support of a consultant. During Plan Evaluation, data are reviewed across a pre-intervention and intervention stage to determine whether goals are met. Plans are revised, faded, or extended to other settings where appropriate.

CBC is a home-school partnership program that is well-aligned with a tiered, prevention framework and can be implemented seamlessly within PBIS (Garbacz et al., 2018b). The CBC model can support students' development of academic and social behavior, though more research support exists for CBC in promoting social behavior relative to academic behavior (Garbacz et al., 2015). Although many home-school interventions exist, few integrate families in an authentic partnership; over time, CBC has been identified as integrating more elements of a partnership-centered orientation than other home-school interventions (Cox, 2005).

Family Check-Up The Family Check-Up (FCU; Dishion & Stormshak, 2007) is a family-centered approach to assessment and treatment. The FCU includes an initial interview, an ecological assessment, and a feedback session. Family consultants meet with families for each stage to guide them through the process. Throughout the FCU, motivational interviewing is used as a method of communication to motivate families toward goal-directed actions. During the initial interview, a collaborative tone is set for future interactions that centers on family strengths, goals, and priorities. Through an ecological assessment, data are gathered about children's developmental ecologies in several dimensions (e.g., child adjustment, family functioning, home-school connections). In the feedback session, family consultants review assessment data in a manner that points out areas of strength and need and provides guidance to motivate actions that are aligned with family goals and priorities. A target child is identified early in the FCU process to provide individualized support. After the feedback session, families can engage in additional sessions with the family consultant and engage in community-based or school services, based on their goals.

When implemented in schools, the FCU is integrated at Tier 3 within a tiered, prevention framework (Dishion et al., 2020; Smolkowski et al., 2017). Within a tiered framework, the FCU's focus on family centeredness also provides a framework for aligning and integrating family-centered principles and practices with other social-emotional, schoolwide frameworks. Within that tiered context, the schoolwide practices, such as parent engagement in screening and proactive outreach to parents, can facilitate engagement in the FCU for families and students in need of individualized support (Smolkowski et al., 2017).

Special Education For many students, special education services may provide an avenue for delivering needed intervention through an individualized education plan (IEP). The Tier 2 and 3 interventions and family-school partnership practices described above may be incorporated in

IEPs. Unfortunately, often parents of children with exceptionalities report dissatisfaction with the IEP process, feeling that they are not equal members of the team and that their perspectives and input are not valued (Tucker & Schwartz, 2013) as well as uncertainty about how to support their children's learning at home to meet their academic goals (Jacobs et al., 2016). SMHPs can promote family-school partnerships in special education by ensuring IEP meetings are conducive to partnerships. Partnership-centered planning in IEPs should address procedural, physical, and facilitation factors (Weaver & Ouye, 2015). To address procedural factors, SMHPs may contact the parent before the meeting to prepare. This initial contact with the family can include reviewing the meeting agenda, clarifying team members and their roles, obtaining parent input about the agenda and process, and identifying parent goals for the IEP. Physical and temporal factors can be addressed by providing clear meeting start and end times (and adhering to them) and a comfortable meeting space (e.g., meet parent and walk to the meeting, sit with parent, temperature, lighting). Physical and temporal factors also include being flexible and responsive to parent needs. For example, if a parent schedule changes, the IEP team should not hold the meeting without the parent, and instead wait to hold the meeting until the parent can fully engage. In addition, meetings should involve key individuals as identified by the parent (e.g., parent advocate, cultural liaison). Facilitation strategies may include determining who will facilitate the meeting in advance, following the agenda and staying on task, using effective communication skills (e.g., limited jargon, summaries, clarification, modeling, positive regard) and checking for understanding and agreement for team decisions (e.g., clear IEP goals and plan). The meeting should conclude with a set of goals and next steps that are mutually determined and agreed upon by parents and school staff.

Another issue considered important in special education eligibility decisions and IEP meetings is the language used to describe students. Weist et al. (2019) provided recommendations for avoiding stigmatizing language and labels. These

recommendations include a focus on people as individuals and empowering families and youth. Ultimately, language used to describe students is in part based on the assessments used. Thus, assessments used in special education eligibility decisions should emphasize family and youth strengths and minimize stigmatizing labels. In addition, a focus on people as individuals emphasizes humanity over symptomology. Finally, empowering families and youth allows families and youth to share their perspectives on language used. Once those perspectives are shared, they should be honored.

Issues in Mental Health Workforce Preparation

There are several training issues to consider when preparing a mental health workforce to use home-school partnerships within tiered programs and practices. Primary issues to consider include (a) culture and context, (b) family centeredness and home-school partnerships, (c) alignment and integration, (d) adaptations and qualitative methodology. Preparation of a mental health workforce in considering these issues should focus on building knowledge and skills. Knowledge and skills in these areas address the systems and practices, implementation and sustainability, and a process of teaming or collaborating with other stakeholders.

Culture and Context

Home-school partnerships are inextricably linked to education and related community mental health systems. Systemic racism in U.S. public education has for decades oppressed minoritized Black, First Nation, Latinx, Asian, and other communities of color, straining home-school relationships, and contributing to outcome disparities. Thus, training in home-school partnerships must acknowledge these realities, prepare a workforce to interrogate education and mental health systems, and adopt a critical race lens to understand how racism and white supremacy

have impacted home-school partnerships (Ladson-Billings & Tate, 1995). In the absence of a critical race orientation, home-school partnership strategies are likely to fall victim to the same systems and practices that have oppressed minoritized families and youth. Thus, in addition to focusing on home-school partnerships, workforce training should address building knowledge about bias and its role in discipline decisions (McIntosh et al., 2018). For example, training could focus on ways to minimize the impact of implicit bias during discipline decisions at vulnerable decision points. In addition, training should address the impact that exclusionary discipline has on families, as well as student outcome disparities (Powell & Coles, 2020).

Furthermore, the role of context or place is essential to consider as variation in setting can explain changes in how home-school partnerships are designed and implemented. For example, in urban communities, neighborhoods surrounding schools play a vital role in community partnerships. In rural areas, families may live an hour or more away from the school in isolated areas that lack access to community supports. In addition to important in-class instruction, field-based activities in schools and clinics should include further development of skills through supervision and in vivo support to promote generalization.

Family Centeredness and Home-School Partnerships

Explicit training in family centeredness (Dunst et al., 2007) and home-school partnerships (Christenson & Sheridan, 2001) is necessary to build knowledge in a strengths-based and collaborative approach to working with families that is grounded in capacity-building, promotive strategies, and harnessing family strengths to support goal-directed change (Dishion & Stormshak, 2007). Promoting home-school partnerships requires building the capacity of families to be empowered in their work with educators, as well as building educators' capacity to partner with families (Mapp & Bergman, 2019). Mental health providers, such as school psychologists, social

workers, and counselors are positioned to build that dual capacity of both stakeholder groups and support partnering among families and educators.

Although building family and educator capacity to partner with each other is important, it is often expected that the impetus to reach out to families is on the school (Reschly & Christenson, 2012). In that context, preparation of a mental health workforce should also focus on district and school supports to promote partnering. This includes embedding in job descriptions role definitions that include partnering with families, along with specific indicators for success. Embedding role definitions on home-school partnerships can reduce the risk of changes in leadership or staff turnover undermining progress (Dishion et al., 2020).

Alignment and Integration

Creating home-school partnerships is not a stand-alone activity, limited to a specific activity or process. Home-school partnerships are essential to children's success; accordingly, home-school partnerships must be aligned and integrated into school systems and practices. However, common school programs and practices are often implemented standalone initiatives. Fortunately, schoolwide frameworks such as positive behavioral interventions and supports (Sugai & Horner, 2002) can support a mental health workforce in embedding home-school partnerships in education systems and practices in a culturally responsive manner (Bal et al., 2018). Training a mental health workforce must include training in alignment and integration activities, including frameworks such as implementation science that provide a process for adopting, implementing, and sustaining practices with a scope and sequence (Fixsen et al., 2005).

Adaptations

Interventions common to school that promote social and emotional competencies and skills currently include minimal family integration.

Thus, a mental health provider in a school or community is likely to be faced with a set of programs and practices that do not prioritize home-school partnerships. As a result, adaptations will be necessary to embed home-school partnerships in a culturally responsive manner. Cultural and home-school adaptations of research-supported programs provide a framework and process for centering on culture and establishing home-school partnerships in ways that allow a review of program core features, guidance about modifications, and along with implementation science, a process for making cultural adaptations (Arora et al., 2017).

Qualitative Methodology

Family centeredness and home-school partnerships integrate families' and educators' perspectives and experiences in schools and schooling. To realize the benefits of integrating family and educator perspectives in school mental health, it may be helpful for SMHPs to have training in qualitative methodologies to integrate qualitative methods in their work with families (Creswell, 2013). For example, qualitative research offers a range of epistemological viewpoints that may help SMHPs in designing an approach to gather and use family perspectives about mental health options and services in school systems. In addition, qualitative analysis can support SMHPs in understanding themes in experiences across families in a school or community. These qualitative data about family and educator experiences can be integrated with impact evaluations of school programs or practices to provide a clearer depiction of a program's effects (Woodbridge et al., 2014).

Another way that qualitative methods are useful pertains to partnering with families. A qualitative approach is embedded in community-engaged processes that allow for the design, development, and implementation of programs and practices with the individuals who will experience the program as implementers and recipients (Wallerstein et al., 2020). A community-engaged approach provides mental health providers with a frame-

work for partnering with families in a bottom-up manner, rather than approaching families when a program is chosen for adoption by the school. Such an approach positions families and educators as leaders and innovators in education (Ishimaru, 2017). With these processes in place, benefits to families, youth, and educators are likely to be maximized (Wallerstein et al., 2020).

Recommendations for Research and Practice

Despite strong evidence in favor of home-school partnership programs to promote student mental health and address student mental health concerns, schools rarely engage parents as partners (Garbacz et al., 2018b). School personnel often report a desire to partner with families, but barriers such as lack of knowledge interfere (Garbacz et al., 2018a). SMHPs are positioned to be strong agents for promoting home-school partnerships in advancing student mental health. We recommend school mental health professional organizations (e.g., National Association of School Psychologists, American Psychological Association, School Social Work Association of America), state and local education agencies, and institutes of higher education advocate for both pre-service and in-service home-school partnership training. Training should encompass a home-school partnership framework, emphasize the necessity for home-school partnerships, and specific home-partnership practices and interventions.

The research community can also contribute to advancing home-school partnerships in promoting student mental health in two primary ways. First, sophisticated studies that identify mechanisms of action that are responsible for improvements in student outcomes are needed. Family-school intervention research has amplified over the last 10 years, with studies identifying factors such as the parent-teacher relationship as partially responsible for effects on student behavior (Sheridan et al., 2012). In addition, using meta-analysis researchers have started to uncover components of efficacy that are respon-

sible for family-school intervention effects on outcomes (Sheridan et al., 2019). More studies such as these are needed to better understand possible operative elements that underlie family-school interventions.

A second research need pertains to scaling and disseminating home-school partnership programs. Many promising and efficacious home-school partnership programs that have been tested under ideal conditions without independent evaluation should be moved to effectiveness trials and independently evaluated under routine conditions. Furthermore, effectiveness studies should examine the implementation process to facilitate scale-up. Many programs are developed, some proceed to efficacy, but most do not proceed any further (i.e., effectiveness, scale up; Robinson & Winthrop, 2016). One implication is that efficacious home-school partnership programs are not independently evaluated under routine conditions and scaled. In the absence of evidence-based programs ready for adoption, schools often implement programs that do not have evidence to support their use. Indeed, many schools are not implementing evidence-based practices to address serious emotional and behavior problems, and some schools are implementing strategies that may actually do harm (Gottfredson et al., 2002). For schools to implement and sustain appropriate, home-school partnership programs, more effectiveness trials are needed to explore impact under routine conditions. Movement through research phases in partnership with end users will help support implementation and sustainability.

Conclusion

The promise of home-school partnerships to support the mental health of students is great. More attention to home-school partnerships, knowledge of home-school partnership practices and interventions, and use of innovative training approaches to prepare the school mental health workforce is needed. Fortunately, a variety of frameworks, practices, interventions, and training approaches are available.

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Practice-Based Teacher Education for the Preparation of Teacher Candidates to Use High-Leverage Practices to Promote the Inclusion of Students with Disabilities

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Introduction

The United States Department of Education requires that students with disabilities participate in settings with their same-age peers without disabilities (i.e., inclusive settings) and make progress in the general education curriculum (Individuals with Disabilities Education Improvement Act, 2004). For general education teachers to be successful in this endeavor, teacher education programs must prepare prospective teachers (hereafter called candidates) to provide high-quality core instruction to all students (Forlin & Chambers, 2011; Juma et al., 2017) and targeted and/or intensive intervention to students who do not make adequate progress from the core instruction. However, most teacher prepara-

tion programs include minimal coursework and fieldwork related to teaching students with disabilities (Allday et al., 2013). Moreover, teacher education faculty must balance the contextual intricacies of their preparation programs (e.g., educational philosophies, state requirements) with the instruction of candidates in the use of evidence-based practices that meet the academic and social-emotional needs of all students in their classrooms.

Paramount to the field's effectiveness in ensuring that all children receive access to equitable educational opportunities is for teacher preparation programs to ensure their core values encompass principles that promote inclusivity and equity for all PK-12 students (e.g., all students can learn; educators have the responsibility to meet the diverse needs of all students regardless of the extent of a disability, scope of trauma experienced, or the differences in cultural makeup between the educator and student; it is the collective responsibility of all educators to ensure that each child learns to their potential). The inequitable achievement between students with and without disabilities highlights the complexities of this feat. There remains considerable room for improvement in the preparation teacher educators provide their candidates specific to inclusive practice (Haq & Mundia, 2012). In this chapter, we provide insight into how teacher edu-

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cators can help students with and without disabilities make significant learning gains by providing the science behind a practice-based approach to teacher education. In addition, we describe how teacher educators can provide their candidates with effective preparation using a four-step process that includes (1) modeling, (2) offering multiple and varied learning opportunities, (3) providing coaching and performance-based feedback, and (4) promoting candidates' self-evaluation of performance. A focus on co-teaching between mentor teachers (i.e., practicing teachers working for local education agencies who host candidates in their classrooms) and candidates provides a foundation for engaging in this four-step process, which when used within a practice-based approach to teacher education enhances candidates' effectiveness in using evidence-based practices with all students.

The Rationale for Practice-Based Teacher Preparation

Practice-based teacher education is an approach to preparation that focuses on supporting candidates to effectively use core instructional practices (Zeichner, 2012). Core instructional practices are the teaching strategies used regularly by teachers to plan, implement, and assess academic and social-emotional instruction and to collaborate with other professionals. They reflect high-quality instruction and interactions that are effective for students of all races, ethnicities, genders, classes, and abilities.

Practice-based teacher education has existed for decades, but variations in perspective (e.g., viewpoints that a stronger emphasis is needed on classroom management) and implementation (e.g., what constitutes a core instructional practice) have impacted the model's efficacy in serving as an effective approach for preparing candidates (Zeichner, 2012). These and other differences emphasize the rationale for providing a framework for implementing practice-based teacher education so that teacher educators (i.e., faculty members) implement the approach consistently and at a high quality. In Table 25.1 we

provide the four core components, their rationale, and descriptions of the acceptable and unacceptable variations of each component.

Aligned with the practice-based approach to teacher preparation, the American Association of Colleges for Teacher Education (AACTE) (2018) has called for teacher preparation to be grounded in clinical practice (i.e., practice-based experiences in PK-12 settings), include clinical coaching, and focus on PK-12 student learning. More specifically, the needs of PK-12 learners should guide decision making in practice-based teacher preparation. Of particular importance, when teacher preparation programs demonstrate strong collaboration with PK-12 schools and purposeful planning between coursework and practice-based experiences (e.g., tutoring PK-12 students based on content learned in their coursework), candidates demonstrate greater confidence in teaching students with disabilities (Gottfried et al., 2019).

The process required for teacher educators to develop inclusive beliefs in their candidates is complex. Attempting to develop these beliefs by fostering an acceptance of and enthusiasm for them by the candidates is unlikely to result in meaningful change in candidates' actual beliefs (Jones & Hayes, 1980). However, by supporting candidates to enact target behaviors and to evaluate the impact of their practice on PK-12 students' learning, candidates may observe the influence they have on their students' outcomes. It is through this process that candidates experience a shift in their beliefs (Guskey, 2002). By structuring practice-based experiences to be inclusive of all learners, candidates can utilize inclusive practices within their clinical experiences and strengthen their commitment to inclusive practices.

High-Leverage Practices in Practice-Based Teacher Education

With the focus of practice-based teacher education being the use of core instructional practices that positively impact PK-12 student learning, it is critical that teacher educators intentionally select the instructional content of their programs

Table 25.1 Implementing the core components of practice-based teacher education

Core component	Acceptable implementation	Unacceptable implementation
<p>Modeling</p> <p><i>Providing examples of what high-quality implementation of the behavior looks like</i></p>	<p>Explicit demonstration of the target behavior being implemented in multiple ways or contexts</p> <p>Task analyzing complex behaviors to show the step-by-step process</p> <p>Thinking aloud to describe implementation of the behavior</p> <p>Having candidates use a fidelity checklist to identify the components of the behavior being implemented</p>	<p>Demonstrating a behavior once and expecting candidates to implement it correctly</p> <p>Expecting candidates to implement a behavior exactly as it was modeled without allowing for adaptations based on the context</p> <p>Measuring fidelity of implementation of a behavior without preparing candidates to implement each component of the practice</p>
<p>Multiple and Varied Practice Opportunities</p> <p><i>Supporting effective implementation with students who have varying levels of abilities and needs</i></p>	<p>Providing repeated opportunities to practice the behavior with decreasing levels of scaffolding and support</p> <p>Creating opportunities in the university classroom to practice a behavior with case studies, peers, or virtual simulations to develop proficiency</p> <p>Collaborating with PK-12 school partners to provide candidates with opportunities to implement the behavior with PK-12 students with various characteristics</p>	<p>Providing practice opportunities that limit exposure to PK-12 students with diverse abilities</p> <p>Providing the same level of scaffolding over time without fading supports to promote independence</p> <p>Expecting candidates to implement a behavior with fidelity with PK-12 students without practicing it in a structured environment first</p> <p>Planning practice opportunities in PK-12 settings without including PK-12 educators or school-based mental health professionals as members of the planning process</p>
<p>Coaching and Performance-Based Feedback</p> <p><i>Providing positive and constructive feedback to enhance skill and confidence</i></p>	<p>Ensuring candidates receive performance-based feedback throughout the full process of learning a new behavior</p>	<p>Providing all positive feedback without constructive information that can support candidates to improve one's performance</p>
	<p>Ensuring candidates have time between observations to practice a behavior to improve one's proficiency</p> <p>Creating structures so that a variety of individuals (e.g., peers) provide candidates with feedback</p>	<p>Providing critical feedback without a system that supports candidates to improve in one's practice</p> <p>Providing feedback that is unrelated to a target behavior</p> <p>Providing untimely feedback (e.g., too infrequent)</p>
<p>Self-Evaluation of Performance</p> <p><i>Providing opportunities to examine the effectiveness of one's practice</i></p>	<p>Explicitly teaching candidates about metacognition and how to assess one's performance</p> <p>Scaffolding candidates to critically reflect on one's performance based on the aims and implementation of the behavior</p> <p>Supporting candidates to evaluate the impact of one's teaching on PK-12 students' learning and behavior</p> <p>Creating opportunities for candidates to analyze videos of themselves teaching to identify strengths and opportunities to improve in one's practice</p>	<p>Providing candidates with requirements to reflect on one's practice without guiding them on what to reflect and how to identify the quality of one's performance</p> <p>Offerings candidates limited support to make connections between the target behavior, one's performance, and the learning of the PK-12 students</p> <p>Including self-evaluation as a programmatic element without pairing it with the requirement that candidates change one's practice based on the information</p>

based on sound pedagogical practices. High-leverage practices (HLPs) are instructional practices that (a) occur regularly in PK-12 settings, (b) beginning teachers can implement accurately, and (c) result in large gains in PK-12 student learning (e.g., Grossman et al., 2009). Examples of HLPs include establishing and maintaining community expectations (Ball et al., 2009), providing constructive feedback to guide students' behavior (Howley et al., 2021), and collaborating with professionals to increase student success (McLeskey et al., 2017). Whereas some teacher educators advocate for a focus strictly on evidence-based practices, the challenge of this approach is that most evidence-based practices are limited to specific grade levels, content areas, or student characteristics. Consequently, they have a narrower scope than HLPs and they may not be beneficial for the diversity of candidates' clinical settings (McCray et al., 2017). However, if teacher preparation programs focus on core instructional practices that have a strong evidence of effectiveness across contexts (i.e., HLPs), these practices would be more relevant to candidates' clinical placements and thereby present more opportunities for candidates to practice the behaviors and improve their performance. Utilizing a practice-based approach to teacher education sets the stage for teacher educators to provide the sustained clinical experiences necessary for candidates to practice the HLPs and acquire the skills necessary to enact them across the diversity of PK-12 students they teach.

Implementation of Practice-Based Teacher Education

In practice-based teacher education, teacher educators organize practice experiences for candidates that are appropriately sequenced, scaffolded, and structured (Leko et al., 2015). These clinical experiences should begin early in the preparation program and should be built upon strong co-teaching models. Co-teaching has been defined as two adults (e.g., mentor teacher and candidate) collaborating to work with students through co-planning, organization, delivery, and

assessment of learning (Bacharach et al., 2010). In this model, all adults in a classroom are actively focused on students' learning. Friend et al. (2010) identify six forms of co-teaching that may be applied to practice-based teacher preparation. These include such practices as one teach-one assist, parallel teaching, and team teaching (Friend & Cook, 2017). Although the type of co-teaching may evolve as a candidate progresses through a program, adopting co-teaching practices places the PK-12 student at the heart of teacher preparation. When co-teaching is a focus, students benefit – student-teacher ratios are reduced, students' learning needs are addressed more quickly, and more targeted interventions may be provided to PK-12 students (Hartman et al., 2020). In Table 25.2, we provide descriptions of the different co-teaching structures, along with an example of how each could be used within clinical experiences to develop proficiency of HLPs. We posit that the four strategies outlined in this chapter function best when a co-teaching model provides a foundation for practice-based teacher preparation.

Implementation of practice-based teacher education is the responsibility of all members of the preparation program, including university faculty, mentor teachers, and boundary spanners (i.e., individuals who work closely in both school- and university-based structures) who play a role in providing candidates with feedback on their practice (ACTE, 2018). For example, collaborating with school mental health professionals creates opportunities for candidates to deepen their knowledge of the mental health needs of youth in the community (e.g., addiction, depression, family separation). The level of collaboration required for all team members to be knowledgeable about the scope of the clinical experiences necessitates regular team planning meetings to coordinate the structure and sequencing of clinical experiences and to ensure that practice opportunities and feedback are provided on the HLPs aligned with clinical experiences.

When planning where to offer clinical experiences, teacher educators should consider the variety of community-based settings available in the greater vicinity of the institution of higher educa-

Table 25.2 Co-teaching in clinical structures

Type of co-teaching	Definitions of co-teaching structures	Target Skill Example: I can make math content explicit through explanation, models, representations, and examples.
Leading Teaching	One adult in the classroom independently teaches while the other(s) observe or assist.	One adult in the classroom models a math expression on the whiteboard independently while the other observes or assists.
Observing	The teacher candidate or mentor teacher observes the teaching of the other.	The teacher candidate or mentor teacher observes as the other models a math expression on the whiteboard. Active taking of reflective notes and/or debriefing may occur during and after teaching.
Assisting	One adult in the classroom assists PK-12 students while the other leads teaching.	One adult in the classroom models a math expression on the whiteboard while another adult assists PK-12 students who need additional examples.
Parallel Teaching	The mentor teacher and teacher candidate both teach the same content, but they divide the class into groups and teach simultaneously.	The mentor teacher and teacher candidate divide the class into two groups and both model the same math expression using the same strategy on separate whiteboards.
Station Teaching	The mentor teacher and teacher candidate divide content and PK-12 students. Each teacher teaches the content to one group and then repeats the instruction for the other group.	The mentor teacher and teacher candidate divide the class into small groups. The mentor teacher models a math expression in writing to one group while the teacher candidate models a math expression using manipulatives with a different group. Each adult then repeats the same instruction for the other group(s).
Alternative Teaching	One adult in the classroom takes responsibility for the large group while the other works with a smaller group.	One adult in the classroom models a math expression for a large group while the other adult provides more individualized modeling with explanations with a small group of students.
Team Teaching	The mentor teacher and teacher candidate deliver the same instruction at the same time to the whole group.	The mentor teacher and teacher candidate share the modeling of a math expression at the same time to the whole group.

Note. Co-teaching structures and definitions are from Friend and Cook (2017)

tion and should develop and sustain strong collaborations with partnering schools and entities. Teacher educators should intentionally select a variety of experiences that span the ages, abilities, and cultures of today’s PK-12 students for candidates’ respective areas of licensure. In addition to traditional settings (e.g., public PK-12 schools), additional options include formal and informal educational experiences such as tutoring programs, before- and after-school programs, libraries, museums, juvenile justice centers, early learning centers, and home-based programs. For example, Kahn et al. (2018) leveraged a collaboration between special education candidates and a discovery museum to plan and implement an

Inclusive Science Day event for the community. This informal clinical experience allowed candidates to practice developing and implementing inclusive practices with children in community-based settings. These types of nontraditional clinical experiences increase the opportunities candidates have to practice teaching PK-12 students and can diversify the expertise candidates develop through their program.

In considering how to implement practice-based teacher education, its critical to be intentional and systematic about the approach to follow. As shown in Table 25.1, and described in turn, we propose using a four-component model to scaffold candidates to use HLPs well.

Modeling

Modeling is an intentional teaching practice where candidates are shown how to implement a specific teaching behavior correctly. It is through modeling that candidates have the opportunity to observe the implementation of a specific practice by a skilled expert, which assists them in understanding how to implement the practice (Grossman et al., 2009). When university faculty strategically plan with mentor teachers and boundary spanners the practices to target during a specific timeframe (e.g., a semester), they can all model the practices for candidates, which can further deepen candidates' knowledge about how and why to use the practice. For example, Table 25.3 shows how adults can collaborate to model universal design for learning (UDL) for candidates. UDL is a process used to promote students' access to the curriculum in ways that provide multiple opportunities for (a) educators to present the information, and (b) students to engage in the content and show what they know (CAST, 2018; Darragh, 2007). When principles of UDL are used effectively, all learners have access to and can participate in inclusive settings.

Whereas skilled teachers can synthesize the multiple steps of a teaching practice in a matter of seconds and implement the practice flawlessly, beginning teachers acquire the skills to implement a target practice with fidelity when teacher educators deconstruct the practice into its component parts (Grossman et al., 2009). One can compare this deconstruction process with the process teachers use through a task analysis to break a target skill down into smaller behaviors that are easier to learn how to complete. Deconstructing practices are not necessary for all teaching practices, because some behaviors are straight forward (e.g., prompting a student to clarify a response). Deconstructing practices is most beneficial for the teaching practices that are complex and/or multifaceted (e.g., conducting functional behavioral assessments).

A critical component of candidate preparation that is both complex and multifaceted, thereby lending itself well to deconstruction, is culturally relevant practice (CRP). CRP has been defined by

the following criteria: “(a) PK-12 students must experience academic success; (b) students must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through which they challenge the status quo of the current social order” (Ladson-Billings, 1995, p. 160). Within the CRP framework, one recommendation to support the development of candidates is to focus on critical self-reflection and one's ability to acknowledge their own biases (Favela & Torres, 2014; Howard, 2003; Rossetti et al., 2017). This includes, but is not limited to, candidates acknowledging and reflecting on bias, power and privilege, misperceptions, misunderstandings of cultural norms, and how our worldview influences our perceptions of right and wrong. Training in critical reflective practices engages candidates in the ongoing process of understanding themselves – not just as educators, but also as human beings (Derman-Sparks & Edwards, 2010). Using a deconstruction approach to deconstruct the reflection process can scaffold candidates in thinking through each part of the practice, so they learn how to implement the component parts of critical reflection well. Modeling one or more parts of a deconstructed practice benefits candidates' understanding of how to implement teaching skills that are complex and/or more difficult to master.

Multiple and Varied Practice Opportunities

In order for candidates to develop into skilled teachers who can implement high-leverage and evidence-based practices with precision, they need multiple opportunities to practice each teaching behavior across a variety of contexts. Teacher educators can maximize these practice opportunities by creating a system that allows for candidates to approximate the practice in the university classroom while receiving feedback on their performance prior to implementing the practice in their clinical setting with PK-12 students (Grossman et al., 2009).

Although candidates typically have training and content knowledge related to professional

Table 25.3 Modeling the principles of universal design for learning

UDL component	Definition of component	Examples
Representation	The WHAT of learning – provide opportunities to recruit interest, sustain efforts and persistence, and self-regulation	School-based mental health professional pre-teaches skills to promote connections between students' experiences and prior knowledge (e.g., pre-teach turn-taking skills prior to engaging in an activity that requires sharing or collaboration). Mentor teacher scaffolds students to use a target skill during a variety of routines and activities throughout the day. Teacher educator incorporates explicit opportunities to review and practice skills.
Action and Expression	The HOW of learning – provide opportunities for perception, language and symbols, and comprehension	Mentor teacher provides individualized feedback on students' behavioral development depending on the needs of the learner (e.g., praising a student who starts working right away if they are a student who struggles with initiating a task). Teacher educator provides multiple examples of problem solving within authentic settings. School-based mental health professional provides scaffolded support to aid students in gradually working toward independent skills.
Engagement	The WHY of learning – provide opportunities for physical action, expression and communication, and executive functions	Mentor teacher uses authentic situations to demonstrate target social skills (e.g., how to tell someone “no”). School-based mental health professional encourages classroom community by working with small student groups of similar interest (e.g., small-group literacy activity for children interested in community helpers). Mentor teacher provides prompts that guide individual learners to support their targeted skill.

Note. Definitions were gathered from the UDL guidelines retrieved from <https://udlguidelines.cast.org/>

practices, they may have limited opportunities to implement practices or they may have misconceptions of how to weave practices together to promote positive student outcomes. This is why learning activities that allow for a thorough approximation of the PK-12 context, such as role playing, simulating instruction (either in the university classroom or a virtual learning environment), and video analysis, can be effective approaches for offering students diverse opportunities to hone their skills.

There is growing criticism of traditional teacher training programs that too few opportunities are provided to support candidates' acquisition of high-leverage and evidence-based practices (AACTE, 2018). From early in their careers, PK-12 teachers are often scrutinized through the teacher accountability system; this creates additional pressure on teacher preparation programs to prepare candidates who provide data-based evidence they are ready to teach (Ball & Forzani,

2011; Cochran-Smith et al., 2013). One approach to addressing this need is for instructional reform in the preparation program. For years, teacher education has been criticized for being too theoretical while not practice-based (Grossman et al., 2009) and not focusing on the whole child (Kim et al., 2021). Candidates often have the academic content and pedagogical knowledge, but limited experiences applying this knowledge into practice (Ball & Forzani, 2011) and addressing students' social-emotional learning. There is an ongoing need in the field of education to identify the characteristics of effective teachers and appropriate design of teacher preparation (Cochran-Smith & Fries, 2005). Over time, legislative and policy circumstances have continued to shape the teacher education landscape by shifting the focus to quality, accountability, and student outcomes (McLaughlin, 2010). Despite ongoing efforts to reform teacher preparation in response, teacher education has been criticized for not producing

teachers who are adequately trained for addressing the diverse and complex needs of all students within inclusive service delivery models (Blanton & Pugach, 2011).

In a seminal article by Grossman et al., (2009), the authors argue that teacher training programs should focus on modeling and providing opportunities to practice a core set of skills in clinical settings. It is not enough for candidates to acquire knowledge about these practices. They need multiple opportunities for “deliberate practice” where they role-play and rehearse skills and competencies in their coursework, and then apply the skills in PK-12 classrooms (Ericsson, 2002). However, with a shift in focus towards candidates’ deliberate practice of skills, there must also be accompanying coaching (Grossman et al., 2009; Ericsson, 2002), because without expert feedback, candidates may practice and reinforce poor technique (Ericsson & Pool, 2016).

Coaching and Performance-Based Feedback

Coaching is a practice-based method that increases candidates’ use of evidence-based practices (Aikens & Akers, 2011; Joyce & Showers, 1981). It provides opportunities to connect what is occurring within university and PK-12 classrooms. When provided at the preservice level, it can help teachers to be more receptive to coaching at the in-service level (e.g., from literacy coaches and behavior consultants). Coaching models include various components such as goal setting, reflection, and performance-based feedback (Hemmeter et al., 2011), which creates an ongoing and cyclical process to increase teachers’ implementation fidelity. Feedback that is specific, immediate, suggestive, affirmative, and corrective is most effective (Scheeler et al., 2004).

Performance-based feedback can be delivered by various individuals within teacher preparation programs (e.g., faculty, mentor teachers, peers, oneself) (Barton et al., 2016; Coogle et al., 2020). In addition to diverse individuals providing performance-based feedback, there are a

variety of modalities by which feedback can be provided. Historically, coaching has included face-to-face observations paired with post-observation feedback; however, this can result in logistical challenges related to scheduling, resources, and staff capacity, which can limit the quantity and quality of feedback provided to candidates. Individuals providing feedback have begun to use innovative, technology-based methods to resolve these challenges. They have paired distance observations collected via video conferencing (e.g., Google Meets, Skype), with technology-enhanced methods to provide feedback. Scholars have used technology to provide delayed feedback, such as through email or text messages, and immediate feedback via bug-in-ear technology in real-time (e.g., Barton et al., 2019; Coogle et al., 2015). When delivering performance-based feedback, either the teacher educator can select the method (e.g., deciding at the beginning of the semester to provide email feedback to all candidates) or candidates can choose their method (i.e., providing candidates with two or more options of methods by which they would receive feedback). Despite the methods used, candidates consistently have increased their use of core instructional practices as a result of receiving performance-based feedback while they practice their skills within clinical settings (e.g., Coogle et al., 2015, 2021a, b).

In an effort to scale up coaching and address capacity issues related to one individual providing feedback to all of their candidates, researchers have begun to investigate alternative approaches to coaching such as varying the intensity of feedback delivered to candidates and having peers provide feedback to one another. For example, Coogle and colleagues (2021a, b) had candidates deliver feedback to one another within their courses. In this study, peers (1) captured videos in their clinical placements that showed them teaching in a manner aligned with course content, (2) brought these videos to class to share with their peers, and (3) provided feedback to one another face-to-face during class sessions. This peer-coaching process resulted in an increased use of evidence-based practices by the candidates, and thereby more opportunities for the

PK-12 students to practice their target skills and receive feedback on their performance (Coogle et al., 2021a, b). We provide a sample assignment related to peer-coaching in Fig. 25.1.

Self-Evaluation of Performance

Self-evaluation is an introspective process wherein candidates consider the strengths and weaknesses of their teaching and identify ways to enhance their instruction. Self-evaluation provides an avenue to intentionally support candidates to consider the next steps necessary to extend the instruction. This process, also called instructional reasoning, assists candidates in developing the skills of data-based decision making. Namely, when candidates evaluate the effectiveness of their instruction based on the instructional context and their PK-12 students' learning, they are able to identify not only how to proceed, but why they should proceed in that manner (Nagro, 2020). Embedding this higher-level thinking process addresses a main criticism of practice-based teacher education that it is too skill-focused and overlooks the planning, instructional, and assessment processes that undergird sound teaching (Kavanagh et al., 2020).

In continuing the effort to pair performance-based feedback and self-evaluation of performance, teacher educators have scaffolded candidates to engage in self-feedback through reflection and video analysis as a component of a coaching model (Coogle et al., 2021a, b; O'Brien et al., 2021). In these studies, candidates received feedback in real time, reviewed a video of themselves using a target HLP, and used a reflection matrix to evaluate their practice. Without providing candidates with intentional supports to reflect upon their practice, they typically summarize events superficially (Calandra et al., 2008; Kalk et al., 2014; Nagro & deBettencourt, 2019).

Matrices that prompt reflection across a continuum can prevent surface-level reflection and facilitate deeper self-reflection and evaluation. For example, after observing a video recording of themselves teaching, candidates can describe their teaching choices using a reflection matrix

that prompts them to (1) describe specific elements of their lesson, (2) analyze why such choices were made, (3) judge the success of those choices based on PK-12 student outcomes, and (4) apply insights from the reflection to plan for future lessons (see Nagro et al., 2017). Educators can pair this continuum of reflective practice (i.e., describe, analyze, judge, apply) with the specific elements of the HLPs they are aiming to implement. Reflection matrices paired with video samples of teaching provide candidates with a tangible approach to reflect on their practice. The continuum of reflective practices within the matrix serves as a tool, guiding candidates to focus on specific aspects of their teaching when watching their video recordings and reflecting on the quality of their HLPs. When candidates are scaffolded to self-evaluate the quality of their instruction, they can improve in the quality and quantity in which they implement target practices (e.g., HLPs) in the classroom (Calandra et al., 2009; Coogle et al., 2020).

Recommendations and Future Directions for Teacher Educators

Momentum around the practice-based approach to teacher education has been growing over the past decade. This shift focuses on increased clinical experiences where candidates work in partnership with their mentor teachers and other boundary spanning professionals to instruct all PK-12 students in inclusive settings. With the additional educator in the classroom (i.e., the candidate), this clinical model lends itself well to exploring the impact of varying co-teaching models on the active participation and learning of all PK-12 students. This could particularly be helpful in supporting students with disabilities to access and benefit from high-quality core instruction in the general education setting. In theory, this approach could be helpful in shaping mindsets that may be siloed in nature (e.g., beliefs that it is the responsibility of the special education teacher to ensure positive outcomes for students with disabilities and the responsibility of the

Action Research Project: Part 1 – Identifying Your Focus Child

Teacher candidates will revisit the “research ideas” addressed during class and reflect on the topics to select an idea in which they would like to pursue as a research focus for the course.

Specifically, candidates will think about the children with whom they interact to identify the children’s strengths and needs. Then, candidates will collaborate with their mentor teacher to select a child who will serve as their focus child for intervention. In collaboration with the mentor teacher, candidates will identify a target learning skill or goal for the child in which they want to focus for intervention. Using the template below, candidates will specify information about their focus child, the setting, and the target skill or goal and the specific strategy that will be used within an embedded-intervention instructional approach.

Focus Child Information: Template

Focus Child Information, including: <ul style="list-style-type: none"> • Non-identifiable acronym or pseudonym • Child age, race, language, gender, etc. • Child developmental information 	
Setting (place in which you will interact with the child)	
Dependent variable (measurable skill or goal)	
Independent variable (strategy used within an embedded-intervention instructional approach)	

Action Research Project: Part 2 – Giving and Receiving Feedback from a Peer

Teacher candidates are required to video-record 10-minute clips of themselves teaching on three occasions throughout the semester. Candidates will be partnered with a peer in the class and will serve as peer coaches to one another. Each pair of candidates will review videos of themselves teaching and give and receive feedback to improve their performance. Candidates should provide three instances of affirmative and three instances of suggestive feedback for each 10-minute clip (six instances of feedback total). Candidates may use the model language provided on the feedback form or they may revise the template to use their own voice to provide feedback.

Feedback Form: Template

Affirmative Feedback #1	Suggestive Feedback #1
I noticed you used _____ <i>(Independent Variable [IV] from ARP here)</i> when you _____. <i>(specific example of how IV was used)</i> Students with whom you were working responded by _____. <i>(Child response after the IV was used)</i>	You might consider using _____ <i>(IV)</i> by _____. <i>(specific example of how to use IV)</i> This would create an opportunity for the child to practice _____. <i>(Dependent Variable)</i>
Affirmative Feedback #2	Suggestive Feedback #2
Affirmative Feedback #3	Suggestive Feedback #3

Fig. 25.1 Sample field-based assignment involving peer-coaching

school counselor to teach pro-social behaviors) into more inclusive mindsets where all teachers take collective responsibility for ensuring the learning of all PK-12 students. However, additional research is warranted to understand the impact of practice-based approaches to teacher education on the beliefs and practices of teachers,

school mental health professionals, teacher educators, and candidates.

One way to meet the evolving demands of teacher preparation programs is an increase in the use of technology to deliver instruction and provide ongoing feedback (Heafner & Petty, 2016). The use of videos in educational set-

tings offers the opportunity to model what high-quality implementation of an HLP looks like, so candidates can better understand the practice. Moreover, by creating assignments that require candidates to video record themselves using one or more HLPs and share their videos with someone serving as a coach creates practice opportunities for candidates, so they can receive feedback and develop proficiency in their skills. This approach can easily be paired with critical reflection, as the use of technology supports the candidate in reflecting on what they can observe in the video, rather than their memory (Jordan, 2012; Rosaen et al., 2008). The combination of recorded video and written reflections allows candidates to evaluate specific aspects of their instruction within a lesson, which can strengthen their instructional reasoning skills and ability to make changes to their instruction on the spot if their lesson is not going as well as planned (Corbin Frazier & Eick, 2015).

Whereas technology-based methods create opportunities for high-quality implementation of practice-based teacher education, there remains a consistent need for teacher educators to evaluate their own implicit biases and ensure all candidates receive equitable opportunities to receive high-quality feedback and supports to enhance their teaching. Some national teacher preparation initiatives encourage the use of video as a core component of the evaluation of candidates' quality (e.g., edTPA); however, there continues to be racial bias in how candidates are evaluated through video, with Black candidates being evaluated inequitably (Petchauer et al., 2018). To address the equity concern related to the use of videos, teacher educators should consider using technology systems that allow for videos to be collected easier (e.g., using systems that automatically upload videos directly into the university's learner management system) and giving candidates the choice to select an element of teaching in which they want the content of their teaching to focus (e.g., classroom management, peer-assisted learning). This can help candidates feel supported in the process and can

guide the coach to deliver relevant and fair feedback by focusing on one or more candidate-identified HLPs and using pre-created tags to ensure both positive and constructive feedback are delivered to the candidates during each instructional video. Finally, using self-monitoring practices can support candidates to learn from another's perspective regarding areas of strength and areas to improve. This can empower candidates to direct their own professional learning as they transition from candidates to licensed professionals.

The effectiveness of performance-based feedback as a practice-based method for promoting the use of HLPs has been variable across candidates (Barton et al., 2016). Candidates differ in the amount, duration, and intensity of performance-based feedback needed to use HLPs with fidelity. Because of this, individualized models of practice-based support may be something for teacher educators to consider. A multitiered system of support that includes a universal tier for all candidates and more targeted and intensive tiers for those in need of more support may prove to be a feasible approach to teacher preparation that is responsive to the diverse needs of today's candidates. The tier of support for each candidate should be made based on data for each HLP. For example, a candidate may be exceptional at providing constructive feedback to guide students' behavior from Tier 1 support alone, but may struggle with re-explaining content in alternative ways when students do not understand. Consequently, the candidate would benefit from adding Tier 2 support in re-explaining content, but this support would not be necessary for the HLP of guiding students' behavior. In this manner, teacher educators can use flexible groupings of candidates across the tiers based on their performance in implementing each HLP.

Tier 1 might include a series of high-quality course sessions where the teacher educator guides candidates through the representation, decomposition, and approximation instructional approaches for a target behavior (Grossman et al., 2009). This tier might include (a) model-

ing of multiple and varied examples, (b) describing what the practice does not encompass, and (c) application activities that allow candidates to practice the target behavior in the university and clinical classrooms. Each candidate's performance during the classroom-based practice opportunities would inform the teacher educator regarding the extent to which more intensive supports are needed. All candidates would receive this tier of support, and based on a specific assessment measure (e.g., role-play; simulation; video analysis), the teacher educator would determine whether or not additional supports were necessary for the practice. One objective approach for determining these decisions would be to use a fidelity matrix (i.e., a tool to measure fidelity of implementation) to determine the extent to which each candidate implemented the core components of the practice with fidelity (i.e., calculating fidelity by dividing observed components of the behavior by total components observed and not observed). Candidates not meeting fidelity would benefit from additional supports for that specific behavior.

Tier 2 supports could include additional small-group discussions focused on the specific targeted practice. The teacher educator could facilitate these sessions and provide tools for candidates to use to develop a deeper understanding of the practice along with guidance into how to provide performance-based feedback to one another to enhance the group's knowledge and skills. Although these groups would be supportive in nature, the teacher educator should still utilize multiple opportunities to measure fidelity of implementation. If, after receiving Tier 2 supports, candidates are not yet using the target practice with fidelity, this would suggest a need for more intensive supports such as one-on-one performance-based feedback. This could be provided face-to-face or from an alternate location using a video conferencing system. Using a tiered model for providing support increases the capacity of teacher educators to meet the individualized needs of each candidate across a variety of HLPs.

Implications for School Mental Health Professionals

School mental health professionals have a wide and diverse array of expertise that complements that of teachers. The depth of knowledge specific to classroom management, social-emotional learning, trauma-informed care, and teaching to the whole child exceeds that obtained by most candidates in their preparation programs. Candidates, mentor teachers, and teacher educators would benefit from collaborating with school mental health professionals on the design and delivery of practice-based experiences. School mental health professionals should ask to be included in discussions between the school and institution of higher education to understand the target practices to be learned for each clinical experience and opportunities to participate in teacher educators' clinical seminars. During these seminars, school mental health professionals can describe the diverse academic, social-emotional, and identity development of the students in the school and community and important considerations for providing culturally relevant instruction that meets students' academic, mental, social, and emotional needs.

Another opportunity for school mental health professionals to engage in practice-based teacher education is through the modeling of social, emotional, and behavioral HLPs and evidence-based practices (e.g., constructing lessons that are responsive to students' cultural, religious, family, academic and personal experiences; teaching social behaviors). Professionals could model these practices during a seminar, in a mentor teacher's classroom, or through video. Using video could be particularly helpful for school mental health professionals who typically have limited time to support teachers' instruction and interactions. Use of video also creates a sustainable product that multiple cohorts of candidates could benefit from viewing from one year to the next. These videos could also be shared with teachers and used to build the skills of teachers across the district (including those who serve as mentor teachers) to use the mod-

eled practices with their PK-12 students to enhance the quality of their instruction in meeting the whole needs of each student. Indeed, the use of video can increase the capacity of school mental health professionals to support more educators across the district, which could in turn make available time to observe teachers' and candidates' practice and provide performance-based feedback.

Conclusions

As is the case with most professional development frameworks, practice-based teacher education is a complex approach to preparing teachers for the workforce that relies heavily on partnership efforts between teacher educators at the institution of higher education and professionals within PK-12 schools. Collaboration among these partners promotes alignment between coursework and clinical experiences, especially when teacher educators identify the specific HLPs that are the instructional focus of the program and organize these with relevant practice-based opportunities. Such structure clarifies the target HLPs that should be modeled for candidates by teacher educators, mentor teachers, and boundary spanning educators and then practiced by candidates across the preparation program and during each clinical experience. These concerted efforts deepen the understanding of the content, which when paired with feedback and self-evaluation of performance, also strengthen candidates' skills in implementing the practices. This four-step model to teacher preparation showcases a systematic approach to training candidates to become highly competent teachers who are capable of addressing the diverse needs of all PK-12 students within inclusive settings.

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Understanding Readiness to Implement as Determinants of Teacher Adoption of Evidence-Based Universal Programs and Practices

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Several universal evidence-based programs and practices (EBPPs) exist to prevent and address social, emotional, and behavioral (SEB) difficulties and promote success-enabling competencies (e.g., prosocial behaviors) in students. However, students with SEB difficulties cannot benefit from EBPPs they do not receive. There is an implementation gap in school mental health characterized by the insufficient adoption and delivery of SEB EBPPs as part of routine practice in schools (Lyon & Bruns, 2019). Critical to initiating successful implementation is establishing *readiness* within the organization and among the people who are expected to lead and implement the EBPPs (Weiner, 2009; Rafferty et al., 2013). When it comes to the delivery of universal EBPPs, teachers are the primary implementers who are expected to adopt and persist towards delivering EBPPs with high fidelity. From a workforce standpoint, there is a need to understand organizational and individual factors that impact teacher readiness to implement.

Readiness is a construct that is intuitive to most people because of its use in various aspects

of our daily lives. For example, we ask our children if they are ready for bed, we ask our loved ones if they are ready to go to our friends for dinner, sports teams contemplate whether they are ready or not for an upcoming game, and we ask ourselves if we are ready to change certain habits to be healthier, more organized, or punctual. When used in these ways, the word *ready* conveys preparedness to do something or take on a task. As Weiner and colleagues suggest (2020), readiness has a behavioral element (e.g., is a person or group or people ready to enact a behavior) and a psychological element (e.g., is a person or group of people cognitively and emotionally prepared to enact a behavior). For instance, educators may consider whether preschoolers are ready to transition into kindergarten, which involves behavioral readiness and some degree of internal cognitive and emotional readiness. Based on colloquial use alone, readiness reflects a level of preparation to enact specific behaviors at a future point in time. When put into the context of implementation, readiness reflects a degree of preparedness to initiate the delivery of an EBPP. When considering the role of the teacher workforce in implementing universal EBPPs, it is essential to create the context and supports that prepare teachers to integrate these practices into their daily routines and workflow. The purpose of this chapter is to provide a review of the literature

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on organizational readiness to change broadly and teacher readiness to implement specifically. In so doing, this chapter provides a synthesis of innovative training approaches and other pre-implementation strategies to enhance teacher readiness to implement, as well as provides specific recommendations to advance school mental health research and practice as it relates to teacher readiness to implement universal SEB EBPPs as the foundation of a multitiered framework of school mental health services.

Framing the Issue

The successful delivery of universal EBPPs to prevent and address SEB difficulties and promote academic achievement is a top priority among researchers and policymakers (President's New Freedom Commission, 2003; Stephan et al., 2007). A number of universal SEB EBPPs have evidence of effectiveness through well-controlled trials, such as tier 1 level of positive behavior interventions and support (PBIS; Horner et al., 2009), social-emotional learning programming (SEL; Durlak et al., 2011), establishment of positive relationships (Garcia-Moya, 2020), and proactive classroom management (Borgmeier et al., 2016). Given the proliferation of universal EBPPs, some researchers argue that the field is saturated, and there is a need to shift the focus away from developing new programs to designing and testing methods and techniques that result in the successful implementation and scale up of EBPPs.

Implementation Gap

EBPPs are often organized and delivered within a multitiered system of support (MTSS; Cook et al., 2010). MTSS involves the delivery of a continuum of EBPPs (universal, targeted, and intensive tiers of support) that are matched to student needs, as well as the use of data to drive important decisions (McIntosh & Goodman, 2016). The MTSS framework only works as well as the continuum of EBPPs that are adopted and delivered with fidelity. Unfortunately, the effec-

tive uptake and delivery of EBPPs in authentic education contexts is limited, reducing their large-scale impact on student mental health outcome (Lyon & Bruns, 2019). Indeed, EBPPs that are unevenly adopted are also unlikely to be delivered with fidelity and sustained over time. For instance, the majority of schools in the country are attempting to implement an MTSS framework, yet evidence suggests that implementation in authentic educational settings is typically absent, inconsistent, or incomplete (Andreou et al., 2015; Evans & Weist, 2004; Ringwalt et al., 2004). These examples are concerning given the demonstrated link between implementation outcomes and student outcomes (e.g., Durlak & DuPre, 2008).

Need for School-Based Implementation Science and Practice

Although implementation science is growing in education, it is lagging behind other disciplines, such as healthcare, child welfare, and public health (Sanetti & Collier-Meek, 2019). Innovative methods are needed to avoid wasting precious resources invested in establishing EBPPs and missing out on opportunities for millions of students to benefit from receiving EBPPs if they were properly adopted and used (O'Connell et al., 2009). Ultimately, no matter how efficacious an EBPP may be, positive outcomes will not be realized unless students actually receive them in the places where they learn and grow (Fixsen et al., 2010).

Stages of the Implementation Process

Over 100 distinct implementation frameworks exist (Tabak et al., 2013; Nilsen, 2015; Moullin et al., 2015) and nearly all of them identify specific stages or phases of the implementation process. For example, the Exploration, Preparation, Implementation, and Sustainment (EPIS; Aarons et al., 2011) is a widely used implementation

framework that not only outlines the essential temporal and dynamic stages of implementation, but also the factors that matter at each stage of the implementation process. The main objective of the exploration stage is to select an EBPP that serves as a solution to a recognized need or problem that exists within the system. The main objective of preparation is to establish organizational readiness for change by preparing the system and securing commitment among the people who are expected to lead and implement the EBPP. The main objectives of the implementation stage are two-fold: initial implementation, which focuses on initiating the successful adoption of the EBPP, and then full implementation, which involves supporting implementers to deliver the EBPP with fidelity and adequate reach. Last, the main objective of sustainment is to maintain successful implementation over time. Initiating successful implementation is dependent on the preparation stage, where ensuring readiness to implement becomes an important prerequisite to the success of subsequent stages of implementation that focus on reaching high fidelity and sustaining that fidelity once supports are withdrawn.

Adoption is the critical implementation outcome that rests at the intersection between preparation and initial implementation. Adoption refers to the proportion of implementers who initiate the delivery of an EBPP after they have received training and there are expectations to start using the EBPP. It has also been referred to as uptake or intention to try in the literature (Proctor et al., 2011). Here is an all-too-common scenario that highlights the importance of adoption. Imagine 20 teachers in a given school receiving training to implement evidence-based proactive classroom management strategies to promote academic engagement and other SEB outcomes. Out of the 20 teachers, only 10 begin adopting the proactive classroom management strategies after receiving training. In turn, of the 10 who adopted the strategies, only 5 of them persisted towards high fidelity. In this scenario, only 25% of students receive the EBPP in a way that it is likely to be beneficial. As conveyed in this scenario, readiness is critical to prevent a

leaky implementation pipeline that begins with subpar adoption and eventually leads to few teachers who deliver practices with fidelity, resulting in the practice failing to reach many students. In addition, critical implementation outcomes such as sustainability are dependent upon upstream constructs such as readiness as sustainability is virtually impossible without an organization and corresponding workforce that is ready for implementation.

Organizational Readiness to Implement

There is consensus in the organizational literature that readiness is an important determinant of change (e.g., Drzensky et al., 2012; Greenhalgh et al., 2004; Weiner, 2009). In fact, it has been estimated to explain over 50% of failed implementation efforts (Weiner, 2009). Despite the importance of organizational readiness to address the science-to-practice gap in education, there has been limited school-based research on this topic, especially as it relates to the uptake and use of school-based mental health services.

Organizational Readiness Theory and Constructs

Weiner (2009) developed a theory of organizational readiness to change that is one of the most widely used theories in the implementation literature. In Weiner's theory, organizational readiness refers to organizational members' *change commitment* and *change efficacy* to initiate, persist, and help others with the implementation of a new program, practice, or intervention. Stated another way, organizational readiness refers to 'the extent to which organizational members are psychologically and behaviorally prepared to implement organizational change' (Shea et al., 2014, p. 1). Organizational readiness to implement is a multifaceted and multilevel construct. First, readiness involves both change commitment, which reflects people's intentions to put in the energy and effort to implement a given EBPP,

and change efficacy, which is people's confidence in their ability to enact the change. Both of these factors predict the quality of a change effort once active implementation strategies (e.g., coaching, protected time for collaboration, and technical assistance) are deployed to support adoption (Klein & Sorra, 1996). Second, readiness involves people across multiple levels and roles within the organization. For example, district leadership includes people who oversee, establish expectations, and are responsible for budgets; site-based leadership includes people at the building level who have authority to make decisions and hold staff accountable through performance evaluations; and staff are those who interface with students and are the designated implementers of EBPPs. It is possible for one group operating at a certain level within the organization (e.g., district leadership) to have adequate change commitment and change efficacy, while another group at a different level (e.g., staff) is not in the same place with regard to their readiness to implement. These are important differences to elucidate to pinpoint strategies that promote organizational readiness to implement among particular groups of stakeholders. Third, organizational readiness is assessed at the person level, but then aggregated across people to serve as a characteristic of the organization, such as a given school building or district (Weiner et al., 2020).

Organizational Determinants of Readiness to Change

Determinants reflect barriers or enablers to implementation success. Readiness has its own subset of determinants that obstruct or facilitate change commitment and change efficacy among those in positions of power who are expected to lead a given implementation effort and those who are the designated implementers of an EBPP. Readiness determinants set the stage for change commitment and change efficacy, which in turn increase the probability of high adoption rates among those who are the designated implementers of an EBPP (e.g., teachers). There is limited research on the determinants of readiness to

implement in the context of school mental health. Thus, it becomes essential to turn to research from other disciplines to examine the determinants of readiness to implement.

An organizational readiness framework that attends to only the organizational readiness constructs—and ignores the determinants—lacks critical diagnostic information to explain why organizational readiness is low. As a result, any intentional, strategic approach to cultivating organizational readiness needs gather actionable data on determinants that can be used to drive decisions to improve readiness (Weiner et al., 2020). There are three conceptual categories of empirically supported determinants during the preparation phase of the pre-implementation process that create the conditions that promote organizational readiness to implement: (a) system-level determinants, (b) social climate determinants, and (c) innovation determinants.

System-Level Determinants

This category of determinants reflects factors at the level of the school system that influence opportunities for implementation and the people within it. Strategic planning is a proactive effort to define the goals of an implementation effort (e.g., promote specific types of SEB outcomes) and detail the process by which those goals will be attained through a deliberate focus on supporting implementation of an EBPP (Elbanna et al., 2016). When stakeholders are aware of and understand the strategic plan and goals, they are more likely to feel committed and efficacious than in a system that lacks a clear plan (Bryson et al., 2009). Resource allocation is another important system-level determinant that inhibits or facilitates organizational readiness for change. If time, money, and professional learning experiences are not allocated at the outset of an EBPP implementation effort, then organizational readiness to implement is likely to be low and subsequent implementation is likely to falter (Minugh et al., 2007). Recent research indicates that time allocation alone is a critical determinant of implementation success as it reflects what a system prioritizes and values, as well as people are able to see that their efforts will be supported with time

devoted to learning, collaboration, and planning. Another system-level determinant represents alignment of the EBPP with other priorities, including developing a way of disseminating this information to stakeholders within and outside the organization. While prioritizing involves creating clear expectations for implementation and articulating the reasons why an EBPP is a priority, aligning involves prioritizing an EBPP and braiding it with other priorities to demonstrate how they work together to achieve specific outcomes of interest (Ghobadian et al., 2007). When these system-level determinants are in place, change commitment and change efficacy among those who are expected to lead and implement the EBPP will be higher (Weiner, 2009).

Social Climate Determinants

This category of determinants represents shared perceptions among the people in an organization regarding the experiences that impact how people think about and feel towards an EBPP. There are three social climate determinants that emerge from the broader implementation literature as important to organizational readiness to implement. The first is psychological safety, which is the shared belief that people are safe to take risk and will not be negatively judged or punished for making mistakes when taking on something new (Edmondson et al., 2016). Psychological safety is an important factor in understanding how people collaborate to achieve a shared outcome (Edmondson, 1999). The second is shared recognition of the need for and benefits of an EBPP, which includes the degree to which educators as whole recognize the EBPP as a solution to a recognized problem or need that exists (Jones & Moss, 2006). The last social climate determinant represents shared perceptions of past experiences with previous implementation efforts. In contexts where people have collectively experienced implementation failure in the past, there is likely to be lower change commitment and efficacy related to future efforts (Ingersoll et al., 2000). On the other hand, in school systems where shared past experiences with implementation were positive, stakeholders are likely to have a

greater sense of change commitment and change efficacy (Bisset et al., 2013).

Innovation-Specific Determinants

This category of determinants reflects specific dimensions of the EBPP itself that impact change commitment and change efficacy. These dimensions are stakeholder collective perceptions of the feasibility, acceptability, and appropriateness of the selected EBPP. These perceptions are formulated based on characteristics of the EBPP and ultimately reflect whether stakeholder groups as whole perceive the EBPP to be usable, satisfactory, and suitable (Weiner et al., 2008). Feasibility, acceptability, and appropriateness are important implementation outcomes that are antecedents to behavioral implementation outcomes, such as adoption, fidelity, and sustainment (Proctor et al., 2011). When people anticipate that the EBPP is feasible, acceptable, and appropriate for use, they are more likely to engage in role-specific implementation behaviors that lead to proximal implementation outcomes, such as adoption, persistence, and implementation citizenship. Because there is no implementation without some degree of adaptation to the EBPP, these determinants are malleable through adapting or providing additional information about the EBPP to enhance educators' perceptions of the feasibility, acceptability, and appropriateness of the EBPP (von Thiele Schwarz et al., 2019).

Teacher Readiness to Implement

Successful implementation ultimately rests with the professionals who are the designated implementers of an EBPP making decisions to initiate the delivery of the EBPP (i.e., adopt) and persist over time to implement it with fidelity. In real-world settings, many practitioners do not adopt an EBPP after receiving training or stop implementing shortly after starting (Stirman et al., 2013). Failure to prepare designated implementers to implement an EBPP is likely to impede well-intended implementation efforts. When it comes to universal EBPPs in schools, teachers

are the primary implementers because they spend the most time interfacing with students.

To understand and influence teacher readiness to implement, researchers and practitioners can turn to two well-established theories of behavior change: the Theory of Planned Behavior (TPB; Ajzen, 1985) and Health Action Process Approach (HAPA; Schwarzer, 2016), which include motivational and volitional phases of behavior change and have increasingly been applied to implementation (Eccles et al., 2007; Godin et al., 2008). These theories map on to the constructs of change commitment and change efficacy. The central tenet of TPB is that the best predictor of behavior is a person's behavioral intentions (Ajzen & Fishbein, 1975), defined as an individual's commitment to exhibit a particular set of behaviors. Behavioral intentions, in turn, are a function of an individual's attitudes (cognitive appraisals of the behavior), subjective norms (perceptions of social pressure to perform behavior), and self-efficacy (perceived behavioral control; confidence about being able to perform behavior). A meta-analysis of 123 TPB interventions showed an average effect size of 0.50 linking mechanisms (attitudes, norms, and self-efficacy) to change in a variety of behaviors (e.g., alcohol, physical activity, adherence to medicine; Steinmetz et al., 2016). Further, the results of an implementation systematic review (Eccles et al., 2006) revealed that the variance in implementer behavior explained by intentions is similar to that found in the aforementioned meta-analysis.

Although behavioral intentions are important to behavior change, there is an intention-behavior gap when people attempt to enact new behaviors as part of their daily routine (Webb & Sheeran, 2006). The ability to predict behavior using the TPB significantly increases with the addition of *volitional strategies* that support individuals to enact the behaviors they are motivated to exhibit (Hagger & Luszczynska, 2014). HAPA articulates volitional strategies including action planning, or specifying the "when," "where," and "how" of a behavior; and problem-solving planning, or articulating how to overcome barriers that interfere with following through with one's action plan (Schwarzer et al., 2011). These two

volitional strategies increase maintenance self-efficacy (beliefs about one's capability to overcome barriers while attempting to enact and maintain behavior) and facilitate the link between intentions and behavior, thus increasing the likelihood of specific implementation outcomes (e.g., adoption, fidelity) (Sanetti et al., 2014).

Teachers vary considerably on their attitudes towards EBPPs, how they perceive social norms about EBPP, and sense of efficacy surrounding delivering EBPPs (Domitrovich et al., 2008). Variation on these factors leads to differential decisions in their intentions to initiate the delivery of an EBPP (Glanz & Bishop, 2010). Variation in intentions to implement is found regardless of whether or not teachers work in settings that demonstrate optimal organizational functioning (e.g., supportive leadership) or receive adequate implementation supports (e.g., training and follow-up coaching support) (DeRousie & Bierman, 2012). For instance, even when provided with high quality training and consultative support, less than half of teachers may adopt an EBPP with sufficient fidelity to produce changes in outcomes (Locke et al., 2019). For this reason, individual characteristics of implementers are recognized as critical in nearly all implementation frameworks (Nilsen, 2015) and are highlighted in numerous school-based implementation studies as barriers or facilitators to EBPP implementation (Cook et al., 2015).

For instance, research on the Good Behavior Game, which is one of the most widely supported universal EBPs, has demonstrated that only 55% of teachers are likely to deliver it with fidelity even after receiving proper training, follow-up coaching, and leadership support (Becker et al., 2013). As such, the uptake and use of universal EBPPs ultimately rests with implementers—most often teachers (Forman et al. 2009)—who make individual adoption and behavior change decisions. Therefore, intervening on malleable individual-level factors that facilitate or impede teacher delivery of EBPPs is especially important to promote readiness to implement to ensure the greatest number of teachers initiate use of the EBPP and persists towards delivering it with fidelity (Cook et al., 2015).

Effective Dissemination to Promote Teacher Readiness

Antecedent constructs of behavior change, such as self-efficacy and intentions to implement (i.e., commitment), represent the potential mechanisms by which teacher readiness to implement comes about. Given this, it is important to focus on the strategies and techniques that influence antecedents of teacher behavior change to cultivate readiness and subsequent adoption of EBPPs.

Effective dissemination represents a broad category of techniques and methods that have the potential to promote teacher readiness to implement. In general, the real-world impact of prevention and clinical sciences is enhanced when the knowledge is communicated in relevant and compelling ways to specific target audiences who can actually do something with the information (McHugh & Barlow, 2010). Dissemination focuses on the purposeful communication of information to specific target audiences. Temporally speaking, effective dissemination is a pre-implementation strategy that occurs before active implementation to ensure that specific target audiences have received important information to eventually act upon to support EBPP uptake and use. Researchers have classified dissemination strategies as those that aim to impact (a) awareness about an EBPP, (b) attitudes toward an EBPP, and (c) intention to adopt through strategic crafting and exposure to information (e.g., persuasive messages) about an EBPP (Baker et al., 2021). Given the focus on readiness to implement universal school-based EBPPs, the main target audience here is teachers. From a teacher readiness standpoint, the aim is for teachers to access relevant and persuasive information that promotes their change efficacy and commitment, which overlaps with dissemination outcomes such as awareness, knowledge, positive perceptions, and intentions to adopt.

There are some general parameters to consider that inform how to go about developing an effective dissemination strategy, including (a) using market segmentation to understand the target audience well enough (values, beliefs, language, ideologies) to tailor the dissemination

approach; (b) incorporating narrative stories, infographics, easy-to-digest figures or graphs that make information engaging and accessible; and (c) understanding where and how target audiences access information (Purtle, 2020). For example, imagine a situation where a school system is aiming to get its teachers ready to take on the implementation of an evidence-based social-emotional learning program, such as Responsive Classroom. It would be important to engage in some market segmentation research with teachers to understand how different groups of teachers cluster together based on ideologies, values, and background knowledge. This information then can be used to craft tailored messages about Responsive Classroom in ways that resonate with each of the different teacher groups. The tailored information, however, needs to be attention-grabbing and engaging, so the use of specific stories where Responsive Classroom has made a difference or infographics that break down the components and outcomes of Responsive Classroom in digestible ways could help ensure that teachers pay attention to and engage with the information. Last, figuring out how to distribute the tailored, persuasive information through specific channels that represent where teachers go for information would help ensure that teachers actually access the information.

There are two broad channels of disseminating information: (1) media channels and (2) social channels. While media channels offer flexibility and increase opportunities for continuous exposure, social channels of communication via trusted, credible, and respected individuals can be more influential to increase readiness to implement (Dearing, 2008). Key opinion leaders, in particular, which are those with high social, can be particularly helpful with disseminating information about an EBPP (Atkins et al., 2008). Media channels of communication can also be impactful through mediums like a shared Facebook page, social media (Twitter, Instagram), websites, newsletters, video recordings, and/or daily or weekly email communications.

When considering all the above in the context of teacher readiness to implement, it hopefully is clear that effective dissemination plays a major

role in establishing teacher readiness to implement and increasing the probability for successful adoption once expectations for teachers to begin implementing happen. Within the broader array of dissemination strategies, we believe that training largely falls under the category of dissemination rather than implementation given that such experiences involve the communication and presentation of information about an EBPP to increase teachers' awareness, knowledge, and motivation to implement a given EBPP. Training is a unique dissemination strategy as teachers are often required to attend and it is the catalyst experience for teachers to learn about and get prepared and ready to 'do' the EBPP. For these reasons, quality training can have a significant impact on teacher readiness to implement and subsequent adoption, especially when combined with effective post-training activities.

Training as a Cornerstone Dissemination Strategy

Training often rests at the critical juncture between pre-implementation and initial implementation. For this reason, the quality of initial training teachers receive is crucial to promoting change commitment and change efficacy. For this reason, initial training has been identified as a key implementation strategy to support the adoption and delivery of EBPPs (Beidas & Kendall, 2010). However, in-service training (hereto after referred to as training), as it is most commonly delivered (i.e., single exposure didactic events), is characteristically ineffective in producing behavior change. For example, estimates indicate that only 10% of what is taught in training is transferred to on-the-job use (Fixsen et al., 2009; Rogers, 2002). Although a large body of evidence indicates that current methods of training are generally ineffective, there is an overall lack of research examining facets of effective training that influence key mechanisms of implementation outcomes, which is a widely cited barrier to successful EBP implementation (Kazdin, 2008; McHugh & Barlow, 2010; Wandersman et al., 2008). Consequently, efforts to identify features

and characteristics of effective training have increased (e.g., Dimeff et al., 2009; Lyon et al., 2011).

Specific approaches and techniques occurring during and immediately subsequent to training have been associated with a variety of training outcomes (i.e., changes in professionals' knowledge, understanding, or skill implementation (Lyon et al., 2011). Components of effective training include academic detailing (i.e., peer-to-peer education), interdependent group collaboration, problem-based learning, behavioral rehearsal, social contracting, motivational interviewing strategies (e.g., ruler questions, eliciting change talk), providing prompts and reminders shortly after training, periodic comprehension checks, and self-regulated learning strategies. In particular, interactive didactics that involve providing trainees with numerous opportunities to actively engage in learning has yielded significant gains in trainee acquisition of knowledge and skills (Markey & Schattner, 2001). Moreover, principles of adult learning can be applied to create effective training that promotes teacher readiness to implement, such as having clear objectives, an agenda or visual schedule, opportunities for reflection to internalize the information, and connecting content to their lived experiences (Mukhalalati & Taylor, 2019). Opportunities to practice and rehearse skills with performance-based feedback are also elements of effective training that enable individuals to feel prepared to initiate the use of certain practices (Cook & Girtler, 2020).

Although there has been an emphasis on the structure and content of training, little attention has been given to the attributes of the trainers themselves. Evidence suggests that particular trainer characteristics may have an influence on trainee knowledge acquisition and behavioral intentions following training. For example, Towler and Diboye (2001) investigated the effects of trainer expressiveness and organization on recall and problem-solving tests immediately and two days following training. Findings showed that participants had the highest recall after receiving training from someone who was expressive and organized than trainers who were weak

in these areas. In addition, Yelon et al. (2004) found through their qualitative work that trainees' intentions to transfer were related to the way trainers treated them and how they felt towards the trainer during instruction.

Boyd et al. (2017) developed and validated a measure of trainer attributes [i.e., the Measure of Effective Attributes of Trainers (MEAT)] and assessed the effects of trainer attributes on intentions to use skills learned through training. In their study, Boyd and colleagues found that the MEAT was composed of two underlying factor structures, which described trainer attributes related to "Charisma" and "Credibility." The first factor, labeled "Charisma," contained items related to characteristics that facilitate a positive personal relationship with the trainee (e.g., friendly, warm), and the second factor, labeled "Credibility," contained items related to characteristics that emphasize the qualification of the trainer (e.g., professional, experienced). Boyd et al. found that the MEAT was a valid and reliable measure. Our team replicated this study (Larson et al., 2022) with teachers receiving EBPP training and found similar results, with trainer characteristics, particularly those related to trainee perceptions of the trainers' internal disposition related to warmth, positive temperament and internal character traits (e.g., Humble, Trustworthy, Able to Listen), were significantly associated with trainees' intentions to implement the trained upon EBPP. This work suggests that *who* delivers the training may be as important as *what* content teachers receive training on.

Volitional Strategies That Complement Training

As discussed above, there is a need to support motivated teachers who express high intentions and a commitment to enact the delivery of an EBPP with planning. Indeed, planning is critical to increase and maintain self-efficacy and increase the likelihood that individuals will follow through with the set of behaviors they are motivated to enact (Shwarzer et al., 2012). From

an implementation perspective, implementation planning is an important activity for teachers to complete once dissemination strategies have successfully promoted readiness (i.e., change commitment characterized by awareness, knowledge, and motivation). However, teachers who lack awareness, knowledge, and motivation are unlikely to engage fully in implementation planning, as they do not intend to initiate the delivery of the EBPP.

Sanetti and colleagues (2014, 2018, 2019) have engaged in some seminal work on implementation planning and have established evidence supporting the use of such an activity post-training. They have conducted several single-case experimental design studies indicating that implementation planning following training effectively increases fidelity for the majority of teachers (e.g., Sanetti et al., 2018, 2019). Moreover, results of their studies indicated that some teachers required additional supports. Based on their findings, they recommend the use of a multitiered framework of supports for teachers to support initial adoption and persistence towards high fidelity (Sanetti & Collier-Meek, 2015). These findings are consistent with our own team's findings that suggest teachers differentially respond to implementation supports and there is a need to tailor supports to teachers based on their responsiveness to prior supports (Larson et al., 2020).

Agenda for Future Research

Thus far, we reviewed the importance of organizational readiness to implement, including the key constructs of change commitment and change efficacy as well as determinants of these constructs. We also situated our discussion on the importance of teacher readiness to implement as an essential objective of the preparation stage of the implementation process that leads to initial adoption, which in turn sets the stage for reaching high fidelity and eventual sustainment. There remains several directions for future research and practice on the topics of organizational readiness and teacher readiness to implement.

Measurement of Teacher Readiness

Like many areas of scientific inquiry within school mental health, there is a need to focus on measurement, as science and practice cannot properly advance without psychometrically sound measures that produce usable, valid information. While there are existing measures of organizational readiness to change (e.g., Organizational Readiness to Change; Lehman et al., 2002), there are currently no established measures of organizational readiness to change and teacher readiness to implement for use in education. Concerns with existing measures include existing tools with unknown psychometrics; lack of theory-informed instruments (e.g., do not capture change commitment and change efficacy); no link to objective behavioral implementation outcomes (e.g., adoption and fidelity); lack of attention to usability of the measurement tools themselves, which limits use in real world contexts. Given the critical role of readiness to implement at both school organization and individual teacher levels, it is imperative that the field establishes usable and valid measures that produce actionable data that implementation stakeholders can use to promote readiness to implement.

Improving Dissemination, Including Quality Training

Effective dissemination is important across all stages of the implementation process, but it plays a particularly critical role during the preparation stage of the implementation process where the main objective is to create readiness to implement among the people who lead and implement the work. Ideally, dissemination temporally precedes implementation, and there is a need for implementation initiatives that thoughtfully plan both an effective dissemination approach to establish teacher readiness to implement and effective implementation supports that support teachers to enact new EBPPs they receive training to implement. As part of the dissemination approach, training is a cornerstone strategy that

rests at the intersection between the preparation and active implementation stages of the implementation process. There is a need to increase the yield of training through more precisely designing experiences to operate on antecedent mechanisms of teacher behavior change, such as attitudes, social norms, and self-efficacy. Case in point, some of our own work on group-based motivational strategies that happen directly before and after EBPP training (i.e., “bookend” EBPP training) have shown that increases in self-efficacy prior to implementation result in higher rates of teacher EBPP adoption (e.g., Larson et al., 2020). Moreover, research should continue to explore how characteristics of the trainers influence teacher readiness to implement.

Adaptive Experiences to Increase Precision

Teachers are a heterogeneous group of providers who are likely to vary on their readiness to implement (Owens et al., 2020). Adaptive interventions take into account differences among people to provide a more precise and likely effective way of receiving intervention (Cook et al., 2019). The notion of precision intervention to create adaptive experiences is needed in both research and practice to ensure that teachers receive the right intervention based on where they are at with regard to their readiness to implement. Researchers need to take into account the heterogeneity among teachers in their readiness to implement. The multi-phase optimization strategy (MOST; Collins, 2018) provides a useful framework for designing efficient and effective adaptive interventions that can be applied to teacher readiness to implement. MOST emphasizes efficiency through careful identification of tailoring variables and the creation of adaptive experiences and optimal sequencing of intervention activities to achieve desired outcomes of interest (Collins, 2018). Through the use of innovative methods, such as sequential multiple assignment randomized trial (August et al., 2018) and single case experimental designs, researchers have the methodological tools to assess what strategies work *with whom* and *why* to

develop adaptive approaches to support teacher readiness to implement.

Teacher Well-Being

There is a need for research and practice stakeholders to attend to teacher social-emotional well-being as an important component of efforts to promote teacher readiness to implement new programs and practices that target the promotion of student mental health. Research consistently documents that teaching is one of the most stressful professions with high amounts of burnout among teachers (Christian et al., 2020). Stress and burnout have been hypothesized as a significant barrier preventing the adoption, use, and sustainment of EBPs (Aarons et al., 2009). Indeed, within a variety of professional contexts, stress and burnout have been linked to workforce issues such as negative attitudes toward organizational change (Tsaousis & Vakola, 2018), turnover (Ahuja et al., 2007), absenteeism (Rauhala et al., 2007), and work-to-family conflict (Bolino & Turnley, 2005) and lower implementation of targeted interventions (Owens et al., 2020). More recent implementation research suggests that there may be a causal relationship between teacher stress and implementation, with stress reduction techniques resulting in improved implementation intentions among teachers (Larson et al., 2018). In addition to stress and burnout, it is important to attend to the social piece among teachers, as their own sense of belonging and connection to the place where they work is likely to impact their commitment to the organization and openness to take part in change efforts (McLeod & Anderson, 2020). While teacher well-being is important for reasons that go beyond implementation, it is critical to ensure that the adults who are expected to implement quality practices for children are well enough to take on learning and integrating the delivery of a new program or practice within their existing workflow. There remains much to be learned about how to support teacher social-emotional well-being at critical junctures during the implementation process including how it influences

readiness to implement and subsequent implementation outcomes.

Teacher Readiness from a Person-by-Environment Perspective

There is a tendency when approaching a topic like teacher readiness to implement to view it from a within-person perspective. Such a perspective involves narrowly focusing on internal, subjective factors among teachers who drive their behavior, such as attitudes, self-efficacy, and behavioral intentions to implement. A within-person perspective fails to acknowledge important contextual factors of the working environment teachers directly experience that influence their readiness to implement a new program or practice. For this reason, future research must adopt a person-by-environment perspective that not only attends to the individual factors among teachers that drive behavior change, but also the contextual factors that enable or inhibit teacher readiness to implement, and the interaction between the two. The organizational readiness to change determinants discussed above provides a useful starting place to understand how context matters when it comes to readiness to implement. Grounding research and practice in the social-ecological model provide an avenue for conceptualizing, studying, and acting on specific environmental and individual-level factors that promote teacher readiness to implement. Increased understanding of the contextual factors that in combination with internal, subjective factors optimize teacher readiness to implement will help inform more comprehensive, multilevel approaches that result in greater adoption and high fidelity delivery of universal EBPPs.

Conclusion

We hope this chapter has demonstrated that organizational readiness to change and teacher readiness to implement are distinct, yet interrelated, constructs that provide a more precise understanding of the core objectives of the preparation

phase of the implementation process. Careful attention to organizational readiness to change from a system standpoint and teacher readiness to implement from an individual standpoint enables school system leaders, intermediary organizations, and researchers to focus on promoting change commitment and change efficacy among (a) those who are expected to lead EBPP implementation and (b) those who are expected to implement the EBPP. We also hope that this chapter has been helpful to frame the importance of dissemination as it relates to teacher readiness to implement, including the provision of high-quality training to increase the likelihood that teachers feel committed to and efficacious in their ability to initiate the delivery of EBPPs and persist towards high fidelity. Last, we hope the research agenda outlined in this chapter provides useful avenues for researchers to pursue to advance understanding of readiness to implement as it relates to teacher adoption and delivery of universal EBPPs.

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Part IV

Innovations in Scaling-up and Implementation Science



Leveraging Implementation Science to Improve the Scale-up of School Mental Health Programming

Catherine P. Bradshaw

The field of school mental health has continued to make great strides to increase the number of effective and research-based approaches for meeting the mental health needs of students in schools (e.g., Weist et al., 2003, 2014). While there is a persistent and strong demand to increase the number of empirically supported programs, often referred to as “evidence-based practices,” a related set of research efforts is needed to support high-quality implementation of those practices in real world and applied settings (Lyon et al., 2019; Tabak et al., 2012). In fact, several studies have demonstrated that evidence-based practices have the potential to improve outcomes for children and youth; however, there has been considerably less attention to the factors that facilitate implementation and the uptake of those programs across diverse school settings (Lyon et al., 2019). It takes multiple high-quality experimental studies with statistically significant results for a practice to be considered evidence-based, whereas research on the implementation system has traditionally been considered as an afterthought, or explored to explain away limited impacts in an efficacy study (Axford et al., 2022). Rather, we contend that there is a paradigm shift in the field, whereby a similar level of effort, focus, and investment is needed on the implementation of

those practices in order to move the needle on infusing evidence-based school mental health programs into routine practice.

A focus on implementation is quite warranted, as many practitioners report facing barriers to implementing evidence-based practices with high fidelity (Domitrovich et al., 2008; Lyon et al., 2019); this highlights a particular pressing and persistent research-to-practice gap in the field (Spoth et al., 2013; Tabak et al., 2012). Moreover, there is a strong push to further disseminate effective practices, but few programs were developed with this end-goal in mind. As a result, many programs require further adaptation or optimization when states and districts ambitiously aim to broadly disseminate or “scale-up” evidence-based practices (Fagan et al., 2019).

As we build on prior volumes (e.g., Weist et al., 2003, 2014) and reflect on the contributions of the current *School Mental Health Handbook*, we concentrate on this research-to-practice gap with the goal of broadly disseminating more evidence-based approaches and programming in schools. Acknowledging there are many complex factors that contribute to the dissemination of evidence-based programming (Fagan et al., 2019), this section of the *Handbook* considers a variety of issues and promising approaches to increasing the use and high-fidelity implementation of evidence-based programming in schools. We do so with careful consideration of strategies for overcoming barriers and reducing burden on

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schools, practitioners, and school systems (Lyon & Bruns, 2019; Proctor et al., 2013). It is our hope that this introductory chapter and the subsequent chapters included in this section provide viable solutions for implementing and scaling evidence-based practices in ways which optimize outcomes and fit with the school setting. The overarching goal of this work is to increase the reach and uptake of research-based approaches in schools, and to do so without undermining the integrity and potential impacts of those programs.

Applying Implementation Science Framework to Increase the Uptake of Evidence-Based Programs

This challenge of promoting adoption of evidence-based programs is not a new one; we have been well-aware for years that there are multiple factors that make it difficult for practitioners to access, much less implement, evidence-based approaches and programming in schools (Domitrovich et al., 2008; Langley et al., 2010; Lyon & Bruns, 2019). Moreover, this concern is not unique to school mental health. Several other fields, such as education, mental and behavioral health, public health, and medicine also struggle to reach broad adoption of evidence-based programs and to ensure high fidelity implementation of those programs when scaled up (see Baumann & Cabassa, 2020; Fixsen et al., 2005; Lewis et al., 2015; Powell et al., 2019; Proctor et al., 2011; Spoth et al., 2013). In fact, much of what we know about implementation has come from fields other than school mental health, leveraging important findings from public health, child welfare, and other health services systems.

The field of implementation science has emerged with the overarching goal of trying to address challenges that contribute to this research-to-practice gap (Fixsen et al., 2005; Proctor et al., 2011; Spoth et al., 2013). By leveraging interdisciplinary and transdisciplinary findings emerging from multiple fields, an implementation science framework has the potential to help bridge this gap in school mental health

(Cook et al., 2019; Lyon & Bruns, 2019). Several of the chapters included in this section apply practices and principles from the field of implementation science to address challenges associated with installing, adapting, and scaling evidence-based programs in schools.

As an illustration of why such research is needed, we take the example of coaching, which is an increasingly common implementation support used in school mental health programming; many of these models and the research behind them are summarized in the chapter by Pas ([this volume](#)). However, when viewed through an implementation science lens, coaching is really a multifaceted strategy *or* implementation intervention; it is a bundle of multiple discrete strategies, such as providing education, reminders, garnering buy-in, providing performance feedback, supervision, motivating change, and helping to problem solve and overcome barriers (Powell et al., 2014, 2015, 2019; Proctor et al., 2013). Yet we know very little about which of these discrete strategies are most critical in affecting change in the coaching process (Johnson et al., 2016, 2018). Moreover, the relational context, such as the alliance between the coach and the implementer, is just now being systematically examined (see for example Johnson et al., 2016). Strategies such as motivational interviewing appear promising in promoting implementation (Frey et al., [this volume](#); Pas & Bradshaw, 2021). It is also important to acknowledge that coaching models are often dynamic and are tailored to meet a variety of individual, contextual, and relational factors. Yet few studies delve into these details and model variation in aspects of coaching, such as dosage, core components of the model, specific strategies employed, or modality (in person vs. remote). In contrast, it is likely that most studies of coaching assume a static model which is consistent across all implementers rather than acknowledging a tailored or tiered approach (see Pas et al., 2015).

As a field of school mental health, we have not sufficiently invested time and resources in preparing a workforce that is ready to implement evidence-based programs with high fidelity or scale those models to reach a wide

audience. Such challenges appear early in the preservice training of practitioners, educators, and clinicians. And once in the school, they struggle to both access and implement evidence-based models with fidelity. Moreover, challenges arise around adaptation, including making cultural and contextual adaptations to optimize fit of the evidence-based program with the target population and setting without compromising fidelity (Hirsch et al., 2023). While implementation is a particular focus of this part of the *Handbook*, other chapters in the *Handbook* also highlight some possible ways to tackle this issue. For example, coaching and technical assistance were the focus of the chapter by Pas and colleagues (this volume, Part III of this *Handbook*); they were noted as helpful strategies for overcoming these barriers to implementation. Related work by Cook et al. (this volume in Part III of this *Handbook*) focused on readiness to implement evidence-based programs, as well as determinants of program adoption in schools. At their core, the approaches recommended in these chapters apply several important findings from the field of implementation science and translate those practices to diverse school and educational settings. The chapters in Part IV build on this work and focus more specifically on how to leverage implementation science frameworks and perspectives to increase the reach and uptake of evidence-based programs.

Overview of Chapters in Part IV

As we consider the papers within this section of the *Handbook* in greater detail, we highlight the opening chapter by Larson and Cook (this volume), which provides a primer on implementation science. They focus on strategies and approaches for supporting implementation of evidence-based practices in schools. In this chapter, the authors describe various models of implementation and fidelity assessment and the link between implementation strategies, determinants, and the outcomes achieved (also see Proctor et al., 2013).

The chapter by Bradshaw et al. (this volume) builds on this work by focusing on how school climate and the organizational context are relevant for promoting high quality implementation of other evidence-based practices. As they contend, schools that have a stronger organizational structure and a positive school climate are better able to leverage data to inform the adoption of other evidence-based programs, as well as to track fidelity and impacts of those programs on climate and other behavioral outcomes. They emphasize the importance of schoolwide Positive Behavioral Interventions and Supports (PBIS) and multitiered systems of support for behavior (MTSS-B) frameworks, which hold promise for optimizing the organizational context for adopting other evidence-based practices (Bradshaw et al., 2009, 2014b). In fact, in many ways PBIS and MTSS-B can be conceptualized as implementation frameworks to support the scale-up of other evidence-based practices, such as social and emotional learning curricula and tier 2 or 3 programming (Bradshaw et al., 2014a). Specifically, they note that the core features of PBIS related to data, systems, and practices serve as the foundation for more sustainable implementation of other evidence-based practices. For example, the essential function of collecting and using various sources of data (e.g., on both targeted outcomes and implementation fidelity) is consistent with many implementation frameworks, as is the emphasis on creating systems and routine practices that are consistently implemented and routinized. Together, these structures provide a solid basis for more successful and sustainable implementation of other evidence-based practices. Such was the focus in a prior *Handbook* chapter by Bradshaw, Bottiani, and colleagues (2014a), which provided an illustration of the integration of PBIS and social and emotional learning programs (also see Bradshaw et al., 2014b).

Frey et al. (this volume) highlight motivational interviewing as a strategy that holds great promise for optimizing implementation of evidence-based practices across various school-based stakeholders, including clinicians and teachers, as well as promoting systems change in

schools. Motivational interviewing was also the focus of a recent special issue of the journal *Prevention Science*, which highlighted several efforts to leverage motivational intervention techniques to improve the implementation of evidence-based practices and optimize the outcomes achieved (see Pas & Bradshaw, 2021). Toward this end, the Frey et al. chapter identifies several aspects of the motivational interviewing process that may help optimize the implementation and adoption process of school mental health programs.

A critical feature of many tiered models is mental health screening as an evidence-based practice, yet many schools struggle to effectively implement screeners. Such efforts are particularly important in light of the widespread mental and behavioral health challenges faced during the COVID-19 pandemic. Screening may prove to be an important aspect in the recovery process, as it helps identify students in need of tier 2 and tier 3 supports. The chapter by Reinke et al. (this volume) focuses on a scalable model for mental health screening in schools, which is not only feasible and acceptable to schools, but also yields data which are incredibly informative for selecting evidence-based interventions to meet student needs; moreover, their screening process and the resulting data have been shown to be valid for both clinical and research purposes.

As we shift the focus to more specific program delivery, the chapter by Harmon et al. (this volume) summarizes a growing movement in the field toward the use of modular approaches to address anxiety, depression, and trauma-related symptoms in schools. They identify several lessons learned from adapting modular approaches for use in schools, as many were originally created for clinical settings. This approach holds great promise as schools strive for implementing evidence-based practices which are more transportable and feasible for implementation, given limited training, resources, and time.

We also include a set of papers that focus on the process of adapting preventive interventions and professional development models for online delivery. This issue has been particularly salient in recent years given the COVID-19 pandemic, as

many researchers and program developers aimed to quickly respond to the demand for mental health programming which can be delivered remotely. While it is incredibly tempting to merely upload program content to the Internet and expect similar outcomes as originally achieved through in-person training models, a more thoughtful adaptation and implementation process is needed to reconfigure, and in some cases, create new content for online delivery. In fact, many programs which were originally developed for in-person training and face-to-face delivery may need to be completely reconfigured, redesigned, or otherwise adapted for remote and online delivery. Specifically, the chapter by Beahm and Bradshaw (this volume) focuses on professional development models for training school staff to deliver evidence-based practices online, whereas the chapter by DeRosier et al. (this volume) focuses on mental health programming delivered directly to youth online. Together, these two chapters outline recommended processes and multiple considerations when adapting or creating programs for online delivery and implementation support structures.

In this part of the Handbook, we feature one of the most extensive scale-up efforts of an evidence-based model in the chapter by Lewis et al. (this volume). This chapter summarizes the extensive network of states, schools, and university partners that have collaborated to promote wide dissemination and high-fidelity implementation of the schoolwide PBIS model. Through a strategic national technical assistance effort, all 50 states have developed an infrastructure to support high quality implementation and broad dissemination of the PBIS model to over 29,000 schools. This work serves as an exemplar for other national scale-up efforts, which may want to similarly leverage the science of implementation to scale their evidenced-based model.

We wrap up this collection of chapters with consideration of some macro factors at the policy level and by high level decision-makers, as these factors have the potential to increase uptake of evidence-based practices (Fagan et al., 2019). Specifically, Lindstrom Johnson et al. (this volume) provide a primer on how to estimate the

cost of implementing school mental health programs and related support services, as such information can help garner additional buy-in from various stakeholders to increase funding of programming, particularly when the returns on investment are considered. Relatedly, one key stakeholder often overlooked in the scale-up conversation is policymakers. The chapter by Stratford et al. ([this volume](#)) provides a number of examples of policy levers which have increased dissemination of evidence-based programs in schools in recent years. Together, this collection of chapters is intended to help move beyond describing and enumerating determinants (i.e., factors at multiple levels that serve as barriers which obstruct or facilitators that enable), to identify strategies and solutions to promote broad adoption and high-fidelity implementation of evidence-based practices in school mental health (also see Proctor et al., [2013](#)).

Future Directions for Optimizing Implementation and Scale-up of Evidence-Based Mental Health Programing in Schools

While the collection of chapters included in this part of the *Handbook* reflect some of the most promising insights on the issue of implementation science in relation to school mental health, this is just the beginning of a much larger research agenda the field must undertake. Some of the most pressing issues are (a) limited infrastructure, funding, and support, (b) limited resources to provide training in how to support implementation, (c) limited preservice training, and (d) little to no access to professional development. Additional resources are needed to advance various lines of research in this area to bridge this gap.

Admittedly, the fields of education and school mental health have lagged behind other fields in prioritizing resources and supports for implementation, often favoring discovery and efficacy research. Only recently had federal agencies like the Institute of Education Sciences (IES) dedicated resources for implementation research and

training. Relatedly, there are few training programs in higher education, or even specific courses, which focus on implementation science in school mental health or even education more generally; as such, we need additional opportunities for on-the-job training and dissemination of information on implementation while we work to update our preservice training models. One such innovative and timely model is the Research Institute for Implementation Science in Education (RIISE) training program, which characterizes implementation as the “last mile” problem in which education research fails to reach the individuals for whom it was intended (Gaias et al., [2022b](#); Rendle & Beidas, [2021](#)). The IES-funded RIISE institute provides training to education researchers across several fields, including social and behavioral programs, related to implementation determinants, implementation strategies, implementation outcomes, and equitable community partnerships. This is a promising start to help increase the number of education researchers needed to create a momentum shift toward implementation science in school-based research.

A related opportunity for the field of school mental health is the sharing of tools and strategies to track implementation and promote high quality installation of evidence-based practices (see for example Lewis et al., [2015](#)). The PBIS National Technical Assistance Center, as described in the chapter by Lewis et al. ([this volume](#)), is one exemplar with regard to the creation of a suite of tools for assessing and monitoring implementation fidelity, and decision-support strategies to promote use of these data and improve implementation. But additional work is needed to more broadly share these and other measures, tools, and technologies to track the implementation of school mental health programming. Relatedly, the open science, transparency, and reproducibility movement also holds promise for greater sharing of tools, as well as data related to implementation (see Grant et al., [2022](#)). A core feature of the open science movement is greater documentation of various aspects of study design, including the pre-specification of implementation supports and preregister of study and implementation designs, which increase the

likelihood of reproducibility. Through these efforts, the open science movement may further benefit research on scale-up by documenting core features, not only of the intervention model, but its implementation support system. This in turn may produce more generalizable knowledge about what works for whom, under what implementation conditions (Grant et al., 2022).

There are several innovative research designs that hold promise for improving the quality of research on implementation in school mental health. One relatively recent study design gaining traction in health-related fields is referred to as hybrid designs, which attend to both efficacy and implementation questions (Landes et al., 2019). Specifically, the type 1 hybrid design focuses largely on the effectiveness outcomes of the intervention while also examining the “implementability” of the program. Researchers employing a type 2 hybrid design are interested in both the effectiveness and implementation outcomes, as this design simultaneously tests the implementation strategy within the context of the effectiveness trial. A type 3 hybrid design is largely focused on the implementation outcomes, while also collecting effectiveness outcomes in relation to data on implementation fidelity. Other research designs, such as a Sequential Multiple Assignment Randomized Trial (SMART), hold promise for helping to tailor implementation supports in ways which map onto a set of prespecified tailoring variables and participant responsiveness (Collins et al., 2007). Related work on the Multiphase Optimization Strategy (MOST) may help program developers and those with particular interest in implementation supports unpack the “black box” of implementation supports (Collins et al., 2007). For an overview of other designs commonly used in implementation and dissemination research, see Brown et al. (2017).

Moreover, the broader contextual aspects of implementation require additional consideration. Many of the implementation frameworks, such as Exploration, Preparation, Implementation, Sustainment (EPIS) (see Moullin et al., 2019) and Consolidated Framework for Implementation Research (CFIR) (see Damschroder et al., 2009),

acknowledge the inner organizational context/setting as well as the outer system/setting, along with individual characteristics. Although the wording varies slightly across these two widely used implementation frameworks, generally speaking, they characterized a variety of proximal and distal factors, together with the characteristics of the individual implementing the strategy and the intervention characteristics, influence the implementation of the model (for more school-based examples, see Domitrovich et al., 2008; Fixsen et al., 2005; Larson & Cook, [this volume](#)). While much of the focus in the field has been on the adoption, implementation, and sustainment processes, there is also a need to consider issues related to de-implementation, whereby efforts are made to help practitioners, schools, and systems stop using ineffective or potentially iatrogenic school-based programs (e.g., D.A.R.E). As such, de-implementation is an area ripe for further investigation in school mental health.

There is also a growing interest in the concept of equitable implementation (Galaviz et al., 2020; Rendle & Beidas, 2021), as issues of inequity are replete when it comes to the implementation of evidence-based programs (Baumann & Cabassa, 2020). Schools, communities, and children often most in need of mental health programming may demonstrate less readiness to adopt models (Larson & Cook, [this volume](#)), face structural inequities and barriers, or occupy low-resource settings where it is more challenging to adopt programs or reach high fidelity implementation. If we systematically avoid research or implementation in these settings, we likely increase the disparities by limiting access to evidence-based interventions. Yet, stakeholders in these settings are perhaps the most likely to benefit from such supports; therefore, they should not be overlooked because it is simply “too hard” to implement programs in such settings, or with constituents that “lack readiness” for the model. Such a deficit-oriented perspective hinders advancement of both science and practice of evidence-based programming.

As Rendle and Beidas (2021) recently stated, although in relation to cancer treatment,

regarding equitable implementation of evidence-based intervention: “[equitable implementation] means not only identifying and assessing strategies that work to decrease persistent inequities in cancer outcomes and reach all patients equitably, but also developing effective strategies that directly target drivers of inequities including medical discrimination, mistrust, unequal access to education and wealth, and structural racism” (p. 1984). This is also the case in school-based mental health (Gaias et al., 2022a), as we need to ensure that we create programs that reduce inequities and optimize implementation supports to equitably reach all end-users. We need to optimize implementation supports that directly target and address drivers of inequities in schools (e.g., unequal access to resources, inexperienced staff, mistrust, structural racism). Thus, an equitable implementation frame is needed to advance the field of school mental health and address disparities and structural inequalities; without such insight, we may potentially exacerbate these inequities and disparities by favoring implementation in high resource settings that may reflect greater readiness and/or means to support implementation. Finally, none of this work can be done without strong research practice partnerships, which reflect commitments to team science and community-based participatory research. Such approaches require that researchers attend to the needs of the various stakeholders and end-users, first and foremost, rather than as an afterthought.

Conclusion

In conclusion, it is our hope that this collection of chapters inspires readers to not only attend more closely to issues of implementation in their own work and scholarship, but design for it when creating new school mental health programming. Both the implementation support system and program content should receive considerable attention at the design stage, for if we have scale-up as the goal, rather than efficacy, we would likely develop very different interventions than what is currently available to schools. As we are faced

with chasing down the “last mile” (Gaias et al., 2022b; Lyons & Bruns, 2019), the implementation insights yielded from other fields, while occasionally needing some cross-walking of terminology and jargon, hold great potential for improving the science of implementation in the field of school mental health.

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Supporting Implementation of Evidence-Based Practices in Schools: A Focus on Linking Implementation Strategies, Determinants, and Outcomes

Madeline Larson and Clayton R. Cook

Locating and delivering quality mental health services in the main settings where children and adolescents naturally function are part of our nation's agenda to promote access to needed support (Fixsen et al., 2013). The school continues to be one of the primary settings in which youth access mental health services (Doung et al., 2020). Specifically, school mental health (SMH) overcomes logistical barriers to accessing care and decreases the stigma of seeking mental health services, which in particular increases access to care among minoritized youth (Bringewatt & Gershoff, 2010). In recognition of the value of providing SMH services, policies and programs that focus on the integration of mental health services into schools have emerged over the past 20 years, and research continues to demonstrate the positive impacts of SMH on educational and mental health outcomes of youth (US Department of Health and Human Services, 2000; New Freedom Commission on Mental Health, 2003).

Due to the strong push among researchers and policymakers to advance SMH as a way of increasing mental health service access among children and adolescents, efforts have focused on

strategically increasing the availability of evidence-based practices and programs (EBPPs; programs, interventions, and curriculum with defensible research or practice-based evidence) as part of routine service delivery in schools to increase both access to and quality of care young people receive (Owens et al., 2014). As such, researchers have developed and evaluated numerous EBPPs that span multiple tiers of intervention (universal, targeted, and intensive) for implementation in schools (Cook et al., 2015; Lochman & Wells, 2002; Morina et al., 2016). Despite the large number of EBPPs that exists to improve the quality of SMH programming, education, and mental health fields struggle to successfully scale up the adoption and delivery of these EBPPs to produce a robust public health impact. Thus, SMH is confronted with a research-to-practice gap, with the insufficient adoption, fidelity, and sustainment of EBPPs as part of routine service delivery, limiting the return on investments made to produce beneficial effects on youth outcomes (Lyon & Bruns, 2019; Owens et al., 2014). The purpose of this chapter is to lay out a model to guide school mental implementation research and practice that involves linking implementation strategies to specific determinants and mechanisms in the service of promoting implementation outcomes that increase the probability of achieving positive youth mental health outcomes.

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Research-to-Practice Gap

Research-to-practice gaps, characterized by the discrepancy between what services research indicates works and what actually gets delivered, are pervasive and not unique to SMH. Seminal work across health professions has documented that it takes 17 years for just 14% of original research to benefit practice (Balas & Boren, 2000). In schools, even when EBPPs are strategically disseminated through training, they are infrequently adopted and implemented with fidelity or sustained over time (Ringwalt et al., 2004). It has been estimated that roughly two-thirds of well-intended implementation efforts fail to achieve desired change (Damschroeder et al., 2009), and nearly half have no effect on outcomes of interest (Powell et al., 2014). This is problematic given the demonstrated link between high-quality implementation and changes in educational and mental health outcomes (St. Peter Pipkin et al., 2010).

Fortunately, in response to these issues, a transdisciplinary field focused on supporting effective implementation has emerged to address the pernicious, longstanding research-to-practice gaps that exist in every service sector. The field of implementation, which includes both science and practice components, emerged to address this research-to-practice gaps by studying the factors, processes, and strategies across multiple social-ecological levels (e.g., individual practitioners, school building, district, and state) that influence the uptake, use, and sustainability of EBPPs in community service settings, such as schools (Baumann & Cabassa, 2020). Implementation research has advanced beyond its early stages to create conceptual clarity between core implementation concepts that are used by researchers, while also providing usable knowledge for stakeholders engaged in supporting real-world SMH implementation efforts. Specifically, implementation researchers articulate how core constructs of implementation are distinct, yet related by clear causal relationships. The increased clarity paves the way for deeper conceptualization and

understanding of “when, where, why, and how” to support successful implementation in the service of promoting positive youth outcomes in schools (Powell et al., 2019). These key implementation constructs include (1) implementation determinants; (2) implementation strategies; (3) mechanisms of action; and (4) implementation outcomes. Lyon and Bruns (2019) outline a causal model for conceptualizing the interconnection between these constructs to guide both implementation research and practice in SMH. Below, we review each of the key implementation constructs, and the connection between them, drawing on specific examples applicable to SMH that may inform implementation research and practice in SMH. Table 28.1 is also available at the end of this chapter, which outlines widely used models, frameworks, and taxonomies associated with each construct.

This simplified model for implementation success featured in Fig. 28.1 outlines the key constructs that are essential to inform both implementation research and practice in SMH. Overall, this model suggests that through strategic and thoughtful linking of implementation strategies to determinants and their associated mechanisms of action, there is an increased probability of achieving important implementation outcomes. In turn, it is through implementation outcomes that youth mental health outcomes are likely to improve. We begin first with a discussion of implementation strategies, which determine how successful implementation is likely to strategically and intentionally come about. After defining and describing the guiding principles of implementation strategies, we discuss the importance of accurately and efficiently identifying and targeting implementation determinants and associated mechanisms of action. Last, we describe what successful implementation is all about—the achievement of implementation outcomes—which serve as metrics regarding whether or not youth who need and can benefit from a particular EBPP are receiving it, and in particular, in a way that it has been shown to be effective (i.e., fidelity).

Table 28.1 Models, frameworks, and taxonomies associated with key constructs within the simplified model for implementation success

Name	Acron.	Description	Citation
Implementation strategy taxonomies			
Expert recommendations for implementing change	ERIC	Established taxonomy of implementation strategies, providing information regarding strategies hypothesized to be likely feasible and effective in influencing implementation outcomes.	Waltz et al. (2015)
School implementation strategies, translating ERIC resources	SISTER	While ERIC includes strategies that may be relevant across a range of public services settings, SISTER is tailored specifically to the school context and may be most useful for selecting strategies for school-based implementation research and practice.	Lyon et al. (2019)
Implementation determinant frameworks			
Consolidated framework for implementation research	CFIR	A list of constructs that can be used to guide diagnostic assessments of implementation context, evaluate implementation progress, and help explain findings in research studies or quality improvement initiatives. Overall, the goal of CFIR is to provide consistent taxonomy, terminology, and definitions on which a knowledge base of findings across multiple contexts can be built.	Damschroder (2009)
Exploration, preparation, implementation, sustainment framework	EPIS	A widely used implementation framework that not only outlines the essential temporal and dynamic stages of implementation (i.e., exploration, preparation, implementation, sustainment) but also the factors that matter at each stage of the implementation process and level of the implementation context (i.e., inner setting and outer setting).	Aarons et al. (2011); https://episframework.com/
Models of strategy design and tailoring			
Community-based participatory research	CBPR	Approach that involves co-creating strategies with stakeholders for whom they are intended to benefit, aiming to create equitable research processes by joining with school-based stakeholders, including those who have been left out of the decision-making process, to identify and co-create the strategies that are perceived as most important and relevant by stakeholders to support effective change.	Stalker et al. (2020)
User-centered design	UCD	Approach that grounds the development of a product in understanding the needs and preferences of people who will use it, and iteratively seeks input and feedback to ensure the strategy is usable and likely to be effective.	Lyon et al. (2020)

(continued)

Table 28.1 (continued)

Name	Acron.	Description	Citation
<p>Implementation outcome taxonomy Taxonomy of implementation outcomes</p>	<p>n/a</p>	<p>Taxonomy outlining and defining eight main implementation outcomes of interest that constitute the desired endpoints of implementation efforts. These include: Acceptability, feasibility, appropriateness, adoption, penetration/reach, fidelity, cost, and sustainability</p>	<p>Proctor et al. (2011)</p>

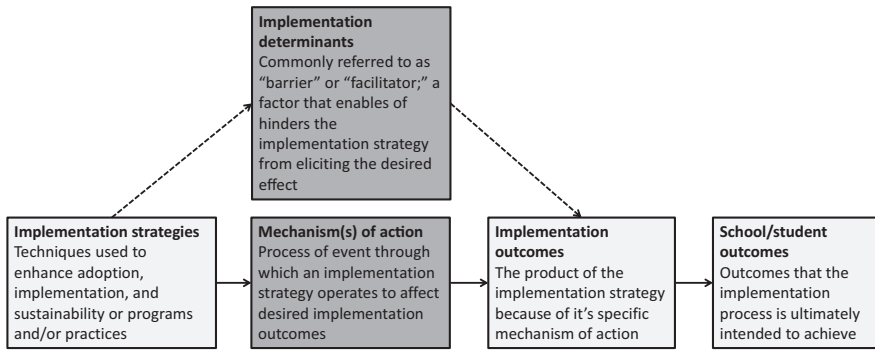


Fig. 28.1 Causal model for applying implementation strategies. (Note: Adapted from Lyon & Bruns, 2019 and based on Lewis, 2017)

Implementation Strategies

Just as there is an ever-growing intervention science that has generated EBPPs across different tiers of prevention and intervention, the science of implementation has identified a number of implementation strategies that target improving the uptake and delivery of EBPPs across a range of service settings, including schools (Cook et al., 2018). While mental health services represent the interventions that students receive, implementation strategies are the interventions that are ultimately designed to support adult behavior change and organizational improvement, and ultimately bring about changes in implementation-relevant outcomes. One of the most straightforward definitions of an implementation strategy is that they are approaches, methods, or techniques deployed to increase the adoption, delivery, sustainment, and scale-up of innovation (e.g., EBPP; Proctor et al., 2013, Powell et al., 2019). When viewed in this way, the strategic planning and use of implementation strategies are essential to implementation success. Implementation strategies vary widely and may be designed to impact multiple levels of a school system, including the individuals expected to implement the EBPP (e.g., via training and coaching), aspects of the inner school setting (e.g., via selecting or preparing school leaders to strategically support implementation climate), aspects of the outer setting (e.g., via policy changes), or specific characteristics of the intervention (e.g., via increasing usability by system-

atically adapting the intervention for the setting or population). Implementation strategies can be single-component “discrete” strategies (e.g., disseminating educational materials, reminders, and audit and feedback); however, most are multifaceted and multilevel, involving the combination or bundling of discrete strategies to address different aspects of the organizational context and people within it.

Because implementation strategies constitute the “how to” component of changing practice, they have unparalleled importance in implementation and scale-up efforts. Just like EBPPs are to be delivered with fidelity to exert an effect, so too are implementation strategies. The use of implementation strategies tested in research settings are optimized when they are operationally defined, theoretically informed, and include operational manuals or steps to guide their use. With this in mind, Proctor et al. (2013) recommended carefully identifying and describing specific features of implementation strategies including the: (1) actor(s) who will use the strategies, (2) the specific action(s) that will be undertaken, (3) the targets of the actions (i.e., those who are the focus of the strategy), (4) the temporality of the strategy including the timing and sequencing, (5) the proper dose of it to have an effect, (6) detailing of the specific implementation outcomes likely to change, and (7) the theoretical, empirical, or pragmatic justification for the strategy. These criteria can be utilized to better track implementation strategies so that we can better understand when, where, and how they

exert an effect on implementation outcomes. These criteria can be particularly useful for tracking and evaluating implementation strategies when used in conjunction with existing compilations, such as those developed through the Expert Recommendations for Implementing Change (ERIC) project and, for schools specifically, the School Implementation Strategies, Translating ERIC Resources (SISTER) project.

The ERIC project initially produced a seminal resource that established a taxonomy of and common nomenclature for implementation strategies (Waltz et al., 2015). The ERIC project yielded 73 unique strategies (Powell et al., 2015), which through a concept mapping process resulted in nine conceptual categories of strategy types: (1) Engage Consumers, (2) Use Evaluative and Iterative Strategies, (3) Change Infrastructure, (4) Adapt and Tailor to Context, (5) Develop Stakeholder Interrelationships, (6) Utilize Financial Strategies, (7) Support Clinicians, (8) Provide Interactive Assistance, and (9) Train and Educate Stakeholders. Cook et al. (2019) adapted the ERIC strategy compilation for use in schools via an iterative process of review and revision by a panel of experts in implementation and SMH. The SISTER project (Cook et al., 2019) reviewed the 73 ERIC strategies, made surface-level changes (i.e., changes to wording or terminology) to 52 strategies, made deeper modifications (i.e., adaptations that changed the core meaning) to 5 strategies, deleted 5 strategies due primarily to contextual inappropriateness, and added 7 new strategies. Deep modifications and deletions were most common in the Financial Strategies category, which has previously been identified as incongruent with standard organizational practices in educational settings (Lyon et al., 2018). No other categories required as much strategy adaptation, suggesting greater applicability in the education context. The resulting 75 SISTER strategies were adapted to increase their relevance to implementation research and practice in schools.

While the resulting SISTER taxonomy is helpful alone, the selection and tailoring of these strategies can be further supported by the prioritization of strategies to highlight those that are

likely feasible and viewed as important to delivering EBPP in schools. As an extension of the SISTER project, Lyon et al. (2019) examined school-based practitioners' perceptions of implementation strategy feasibility and importance. Their work revealed that out of the 75 strategies there was a subset that was perceived as feasible to deploy and likely to have an impact on implementation success. For example, the following 12 strategies, in particular, were found to be feasible and important: (1) conduct ongoing training, (2) dynamic, engaging training, (3) provide ongoing consultation/coaching, (4) monitor the progress of the implementation effort, (5) improve implementers' buy-in, (6) build partnerships (i.e., coalitions) to support implementation, (7) involve students, family members, and other staff, (8) model and simulate change, (9) develop and organize a quality monitoring system, (10) facilitation/problem-solving to overcome specific barriers, (11) fidelity audit and provide feedback, and (12) create a professional learning collaborative.

Implementation Strategy Selection and Tailoring

While existing compilations of implementation strategies are needed to understand the wide range of techniques and methods that can be used to drive successful implementation, as well as the more narrow list of those that may be both feasible and effective, lists of strategies do not outline *how* to select and design effective implementation strategies that are tailored to a given school system's needs at a given point in time. "Tailored implementation," or the tailoring of implementation strategies to the specific individual and contextual needs of a particular setting (Lewis et al., 2018b), is touted as essential to implementation success, as research has shown that one-size-fits-all approaches are largely ineffective to produce change (Powell et al., 2017). Below we outline four guiding principles for selecting and designing tailored implementation strategies that increase the probability of successful implementation.

Establish Temporality The first guiding principle when selecting and designing implementation strategies is to locate where a given school system is in the implementation process. Many implementation frameworks outline specific temporal stages or phases of the implementation process, which can be used to conceptualize the most important objectives to achieve that operationalize what implementation success looks like. For example, the Exploration, Preparation, Implementation, and Sustainment (EPIS; Aarons et al., 2011) is a widely used framework that not only outlines the essential temporal and dynamic stages of implementation but also the factors that matter at each stage of the implementation process.

The main objective of the exploration stage is to select an EBPP that serves as a solution to a recognized need or problem that exists within the system. The main objective of preparation is to establish organizational readiness for change by preparing the system and securing commitment among the people who are expected to implement the EBPP. The main objectives of the active implementation stage are (1) initial implementation, which focuses on initiating the successful adoption of the EBPP, and then (2) full implementation, which involves supporting implementers to deliver the EBPP with fidelity and adequate reach. Last, the main objective of sustainment is to maintain implementation once certain resources and supports are withdrawn.

Certain implementation strategies become more salient during specific stages of the implementation process. For example, during the active implementation phase, fidelity audit and feedback become an essential element of supporting continuous improvement towards attaining high-fidelity delivery of the EBPP. On the other hand, efforts to improve implementers' buy-in is an essential strategy to use in the preparation phase of implementation to promote readiness for change. Last, during the exploration phase conducting a local needs assessment is critical to facilitate data-driven decision-making to aid in the selection of an EBPP that addresses a well-defined need within the school system.

Strategy Design and Tailoring Approach/Method The second guiding principle is to determine the best approach to inform the design and use of the implementation strategy. There are different approaches that can be used such as a community-based participatory research (CBPR) approach that involves co-creating the strategy with the stakeholders for whom it is intended to benefit. A CBPR approach aims to create an equitable research process by joining with school-based stakeholders (i.e., staff, parents, and members of community-based agencies), including those who have been left out of the decision-making process, to identify and co-create the strategies that are perceived as most important and relevant by stakeholders to support effective change. CBPR methodology provides researchers and practitioners seeking to design implementation strategies with a variety of methods, such as focus groups (Kamberelis & Dimitraidis, 2005), semi-structured interviews (Fontana & Frey, 2005), participatory mapping (Kane & Trochim, 2007), photo-elicitation (Collier, 1957), and digital storytelling (Gubrium, 2009). Relationship building is critical to forming partnerships that enable the thoughtful co-design of implementation strategies.

Related to CBPR, is a human-centered design (HCD) approach that grounds the development of a product in understanding the needs and preferences of people who will use it, and iteratively seeks input and feedback to ensure the strategy is usable and likely to be effective (Lyon et al., 2020). HCD involves paying close attention to specific "human factors" (i.e., human capabilities and limitations) that offer insight to improve the usability of implementation strategies among the people who will use them and the user experience of those who are on the receiving end of implementation strategies (Kasdaglis & Stowers, 2016). Other approaches to strategy selection and design involve pre-packaged implementation strategies, such as prescriptive consultation models (e.g., Classroom Check-Up; Reinke et al., 2011) or leadership supports (Leadership for Organizational Change and Implementation; Aarons et al., 2011).

Identify Key Implementation Determinants

The third guiding principle is to select and design implementation strategies to address context-specific determinants in a given school system. Given the considerable variation in the EBPPs being adopted and factors associated with the contexts in which those EBPPs will be implemented, implementation strategies must be tailored to address the unique needs of a given system (Lewis et al., 2018a; Powell et al., 2017). The selection of an implementation strategy should therefore be informed by an assessment of implementation determinants present within a given school system that represent the barriers and facilitators that are likely to have an influence on the uptake and delivery of quality SMH services. This type of needs assessment is a critical starting point to develop, tailor, and plan the use of implementation strategies in a given school system. Data from the needs assessment then spur decisions with regard to the design of implementation strategies that target specific determinants that are likely to make or break implementation success. Such thoughtful approaches increase the probability that stakeholders' deliberate implementation efforts are able to produce changes in EBPP implementation outcomes (e.g., adoption, fidelity, and reach). In turn, changes in implementation outcomes reflect that youth are accessing higher-quality services that increase the likelihood they will experience improvements in mental health outcomes.

Specify Mechanisms of Action The fourth general principle is to design implementation strategies that target precise mechanisms of action. Efforts to specify and target mechanisms of action have begun to yield critical information about effective implementation strategies and strategy tracking methods (Boyd et al., 2018; Bunger et al., 2017) and have even facilitated emerging work surrounding the mechanisms through which strategies impact implementation outcomes (Lewis et al., 2018a, b). For example, to design a strategy that aims to increase SMH providers' buy-in to implement an EBPP, like Coping Power (Lochman & Wells, 2002), focusing on specific theoretically precise

mechanisms of actions such as self-efficacy, attitudes, and social norms increases the probability of securing buy-in that leads to initial adoption and subsequent persistence towards high fidelity (Larson et al., 2021). This guiding principle and the one before it on determinants are discussed in greater detail below as they are essential elements of the model for successful implementation.

Implementation Determinants

The successful implementation of mental health services in schools is impacted by key implementation determinants occurring or not occurring in a given system (Lyon & Bruns, 2019). Implementation determinants, also commonly referred to as "barriers" or "facilitators," are factors that facilitate or inhibit successful implementation and can obstruct or enable the effects of implementation strategies on outcomes. Consistent with many fields of scientific inquiry, implementation researchers made a concerted effort to identify factors that explain why implementation gaps exist by uncovering over 600 unique determinants (Flottorp et al., 2013). These 600 implementation determinants are described across over 100 implementation frameworks (e.g., Tabak et al., 2012), such as the Consolidated Framework for Implementation Research (CFIR; Damschroeder, 2009).

Across frameworks, there is relative consensus about the levels of influence at which implementation determinants operate (Lyon & Bruns, 2019). These levels are consistent with the social-ecological model and frequently include: (1) the outer setting, which reflects the larger political, social, and economic context in which implementation occurs, including the school district and beyond; (2) the inner setting, which constitutes the immediate organizational context in which implementation occurs; (3) characteristics of the individuals who are expected to implement the EBPP; and (4) features of the EBPP itself, including intervention complexity or intervention-setting fit. Implementation processes often play out across each of these levels

of social-ecological influence, and evidence suggests that implementation strategies that address more than one of these levels are more effective than those targeting a single level (Beidas & Kendall, 2010). Within the SMH context specifically, implementation is influenced by determinants at each of the aforementioned levels, and without deliberate attention to each of these levels of influence, successful implementation is unlikely to occur. While conceptual frameworks provide knowledge of the range of determinants that could inform many aspects of implementation research and practice, lists of determinants alone are insufficient to guide efforts focused on identifying the specific barriers and facilitators present within a given school system that are likely to make or break implementation success.

Notwithstanding the important contributions of work cataloging barriers and facilitators, the sheer number of determinants espoused to impact implementation creates an information management problem for practitioners who attempt to keep stock of all this information and use it in actual implementation practice (Grimshaw et al., 2012). There is a need for guidance about *how* school systems, mental health agencies, and intermediary organizations should go about: (1) identifying the most influential and salient determinants in a given context; and (2) accurately and efficiently tailoring or linking particular implementation strategies to the salient determinants identified in a given context (Chambers et al., 2017; Powell et al., 2017). Without a dedicated process regarding *how* to identify the most influential and salient determinants within a given setting, and accurately tailor implementation strategies to determinants, adoption and delivery of EBPPs will remain a “hit or miss affair,” with limited impact on implementation (e.g., adoption, fidelity, and reach) and student outcomes being unpredictable and inadequate. Thus, there is a need in both implementation research and practice to develop and test *methods* to (1) distill and prioritize the “vital” implementation determinants most likely to impact implementation success or failure; and (2) accurately and efficiently link strategies to determinants that are

defined with sufficient specificity that they can inform practice.

Methods to Identify Vital Determinants in a Given Setting

Not all determinants are created equal. Indeed, the considerable variation in the types of EBPP, the contexts in which implementation will take place, and the outer context that engulfs the process of change has implications for identifying the most “vital” determinants impacting implementation success at a particular point in time. For example, when working with a school district rolling out the implementation of a given EBPP to address increased concerns of impairing anxiety among students, each individual school context may present unique barriers to implementation that should be addressed. School A may struggle with leadership support and staff buy-in to integrate mental health services within the school day; while school B may have a supportive inner context (e.g., supportive leadership and staff buy-in) but a clinician who has low self-efficacy in delivering the new EBPP gave their background knowledge and training or other competing demands. While both systems have barriers present, their presentation as well as the approach to addressing the implementation concern will vary greatly. Moreover, the relative impact or salience of each determinant identified prior to or at the beginning of an implementation endeavor is likely to change over time as the implementation process unfolds. Using the example of schools A and B, school A may overcome their initial barrier of unsupportive leadership and staff buy-in by engaging in system-wide professional development sessions and consensus-focused activities during the pre-implementation stage to create readiness for implementation and continue such activities as an implementation of the EBPP unfolds to create an inner setting context that is conducive to EBPP implementation. Later on, during implementation, SMH clinicians in School A may discover that they have resource allocation problems, such as limited space to consistently meet with students, that impede the

consistent delivery of therapy sessions to students. School B would involve an alternative approach to provide coaching support, consultation, or clinical supervision and potentially restructuring staff roles and responsibilities (i.e., taking other tasks off the SMH clinicians' plate) so the SMH clinician feels confident in their ability to adopt the new EBPP.

The first step to activate a continuous improvement process that involves selecting and tailoring implementation strategies to address site-specific determinants is to conduct an initial assessment of implementation determinants that influence implementation processes and outcomes. Assessment of determinants should then be completed in a formative fashion, as barriers to implementation will continue to unfold as implementation takes place and ideally moves towards sustainment (Khan et al., 2019). Consistent with the above categorization of determinants, assessment can be organized according to the characteristics of the EBPP itself, characteristics of the school building where implementation will take place, factors of the district or regional setting that represents the outer context, characteristics of involved stakeholders (e.g., clinicians, school staff, leadership; Damschroeder, 2009).

Numerous resources can guide the assessment of implementation determinants (Flottorp et al., 2013; Wensing & Grol, 2005). Variables such as time, resources, the expertise of team members, the number and type of informants, and the purpose for which data will be used may determine the approach to engage in an efficient and effective information-gathering process to assess and diagnose implementation barriers in a particular school system. For example, a state-wide effort to study the scale-up of a modularized approach to cognitive behavior therapy (CITE) in schools will likely require a different set of assessment tools and resources than a focus on a single school's effort to initiate the use of Coping Cat (Kedall & Hedtke, 2006) in that setting. For smaller-scale efforts, semi-structured interviews, focus groups, and observation are methods to collect data on a few cases; while questionnaires,

focus groups with select stakeholders, and observation can be used to assess the relevance of determinants in a wider scale.

After the initial collection of data is completed, it is then necessary to select and prioritize factors from the likely large number of identified factors. Methods such as Pareto charts (i.e., a type of chart that contains frequency values for each factor that is used to identify the approximately 20% of the factors have an 80% weight in terms of likely impact on outcomes; e.g., Gwandzinska, 2011), brainstorming (Krause et al., 2014), rating and ranking systems (Lewis et al., 2018b), and/or structured group consensus processes (e.g., nominal group technique; Delbqec & Van de Ven, 1971; Potter et al., 2004) can be used to support this process of honing in on the vital determinants.

As a secondary step to prioritization, one could consider the extent to which a factor is malleable and feasible to intervene upon given current resources, personnel, and/or environmental constraints, as some factors may be important but not feasible to address (e.g., district academic initiatives that are creating competing demands). In small groups, visual methods (e.g., matrices or graphs) used in conjunction with structured or unstructured consensus processes can be used to achieve consensus regarding perceived feasibility and malleability; while data on feasibility and malleability from large groups may require the distribution of surveys or qualitative inquiry.

While selecting the process for determinant identification, stakeholders should examine the method(s) selected to assess whether they are efficient enough to be utilized in a formative and ongoing fashion, as implementation determinants are likely to change over time as the implementation process unfolds. To provide stakeholders with resources to capture reliable data that can be analyzed and acted upon quickly, methodologists have engaged in the study of rapid turn-around methods for EBPP implementation, which deliver valid and timely findings and have become increasingly popular in implementation practice and research (Hamilton & Finley, 2019; Palinkas et al., 2019; Taylor et al., 2018). Rapid turn-around

methods are a subset of mixed (i.e., combination of quantitative and qualitative; Creswell & Plano Clark, 2011) or qualitative methods. While mixed and qualitative methods have become a mainstay in implementation research because they provide a comprehensive, detailed, and rich understanding (Robins et al., 2008; Waitzkin et al., 2008), they often require untimely and unreasonable data collection and analysis processes that can be rather costly to complete, require significant expertise, and result in sometimes irrelevant and often unactionable findings for stakeholders. Rapid turn-around methods guard against many of the pitfalls of these methods while maintaining their rigor, reliability, and validity (Hamilton & Finley, 2019; Taylor et al., 2018).

Rapid turn-around methods often include rapid alternatives to traditional qualitative or mixed-method approaches. For example, Taylor et al. (2018) outlined four broad areas where time can be saved within these approaches, including: (1) reducing data collection time, for example, by allowing less time between data collection episodes (C. Vindrola-Padros & B. Vindrola-Pedros, 2018); (2) reducing data management time, for example, by relying on untranscribed audio recordings, notes, summaries and mind maps (Beebe, 2003; Burgess-Allen & Owen-Smith, 2010; Neal et al., 2015); (3) minimizing the time spent analyzing data by summarizing as opposed to formally coding (Burgess-Allen & Owen-Smith, 2010; U.S. Department of Veteran Affairs, n.d.); and (4) limiting the time spent on analysis by using a “one sheet of paper” summary to explore a sample of a large precoded dataset (Ziebland & McPherson, 2006). Training in rapid turn-around methods for implementation research and practice can be accessed through the U.S. Department of Veterans Affairs, Human Services Research & Development Website (https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=780) as well as through the University of North Carolina, Odum Institute, Qualitative Research Summer Intensive (<https://odum.unc.edu/qrsi2020/>).

Linking Implementation Strategies to Vital Determinants

While the discovery of vital determinants is enlightening, it is insufficient to impart change. Using structured and valid methods to identify and narrow determinants down to those that are most salient in a particular setting sets the stage for the important process of tailoring implementation strategies to the identified determinants of implementation (Powell et al., 2019). Tailored approaches (i.e., those that accurately link strategies to vital determinants of implementation) have been shown to be more effective than no strategy or a strategy not tailored to barriers that may be present in a setting (Baker et al., 2015). Unfortunately, no specific method of tailoring or linking has been proven superior over any other, and even those that are currently used to select implementation strategies are not described with enough detail to effectively replicate in practice (Baker et al., 2015). Because of their potential effectiveness, there is a need to use systematic methods that guide the process of selecting and tailoring implementation strategies to site-specific determinants (Colquhoun et al., 2017; Powell et al., 2019).

A number of methods have been suggested to aid in selecting, designing, and tailoring implementation strategies, including Intervention Mapping (Bartholomew et al., 2011), concept mapping (Kane & Trochim, 2007) conjoint analysis (Farley et al., 2013; Lewis et al., 2018a) and system dynamics modeling (Hovmand et al., 2014), and very in terms of complexity and feasibility; however, each of the over 15 identified methods that have been identified to support the tailoring process share four common steps that can be replicated in a variety of ways: (1) identification of barriers; (2) linking barriers to the selection of specific strategies; (3) use of theory to understand how and why strategies are likely to address barriers; and (4) and user engagement. Overall, using a systematic method for each step of the process has the potential to make tailoring implementation strategies to barriers more effi-

cient and effective (Powell et al., 2017); however, more research is needed in this area to develop pragmatic methods that are both feasible for use and likely to yield positive effects on implementation outcomes.

Leveraging Mechanisms of Action

One method outlined for designing and linking strategies to determinants is one that relies on leveraging causal theory that describes the specific mechanisms of action through which certain implementation strategies exert their effect on a determinant (Lewis et al., 2018b). Mechanisms represent how and why changes in a particular outcome come about and are intentionally activated by an intervention (i.e., an action taken to improve a situation or outcome). Implementation strategies represent the intervention, while the mechanism represents the precise target of the intervention that aims to bring about changes in important implementation-related outcomes. Thus, while understanding which determinants are likely impacting the process of implementation, determinants themselves may not be specific enough to effectively link strategies to barriers in a way that leads to improved implementation outcomes.

Like determinants, mechanisms operate at different levels of influence in relation to implementation outcomes, such as at the intrapersonal level (e.g., learning and motivation), interpersonal level (e.g., sharing), organizational level (e.g., leadership and climate), community level (e.g., advocacy and restructuring), and macro or policy level (e.g., governing and guiding; Weiner et al., 2012). For implementation to be successful, chosen strategies should be compatible with and able to act on specific determinants via one or more mechanisms of action. For example, when engaging in an effort to support school social workers to deliver the Cognitive-Behavioral Intervention for Trauma in Schools (CBITS; Jaycox et al., 2018), the implementer's habit (determinant), which is counter to the delivery of CBITS, may

be addressed with clinical supervision and ongoing consultation (strategies) via self-reflection (a mechanism) and feedback (strategy) to elicit cognitive dissonance (mechanisms) that supports adoption (outcome).

While not all strategies will have a substantive literature base that can be leveraged to support tailoring, certain strategies have robust or growing literature bases that can offer theoretical and empirical insights about which mechanisms might be underlying the functioning of implementation strategies that could be selected. Indeed, health behavior change theories, such as the Health Action Process Approach (Schwarzer et al., 2011), can be used as a basis to develop tailored implementation strategies that target individual-level factors (e.g., self-efficacy, outcome expectancies, and risk perceptions) when the outcome of interest is adoption or fidelity. Moreover, theories of effective leadership (e.g., Avolio & Yammarino, 2013) can elicit strategies and associated mechanisms targeting a salient determinant in the inner context. When possible existing theories should be used to drive tailoring. Methods such as rapid reviews (Tricco et al., 2017) can be used to accomplish this in a timely and reliable fashion.

When the literature does not offer sufficient guidance, hypothesizing variables that may have causal influence is a viable option. This process can be embedded into other structured linking or selection methods described above (e.g., Intervention Mapping and conjoint analysis). In addition to its utility as a linking method, leveraging causal theory in the tailoring stage supports the field's increasing effort to focus on establishing the processes and mechanisms by which strategies exert their effects rather than simply establishing whether or not they were effective (National Institutes of Health, 2016). This approach moves scientists beyond a broad identification of determinants to articulate why, for whom, and under what condition implementation strategies exert an effect on proximal implementation outcomes and more distal youth mental health outcomes (Lewis et al., 2018b).

Implementation Outcomes

One of the great achievements in the field of implementation has been the identification and concrete operationalization of implementation outcomes (Albers et al., 2020; Lewis et al., 2015). Implementation outcomes are defined as “the effects of deliberate and purposive actions to implement new practices, programs, or interventions” (Proctor et al., 2011, p. 65). Implementation outcomes have important functions that are distinct from service system outcomes (e.g., effectiveness, timeliness, and equity) and client-level outcomes (satisfaction, functioning, and symptomatology), as they are: (1) indicators of the implementation success; (2) proximal indicators of implementation processes; and (3) key intermediate outcomes (Rosen and Proctor, 1981) in relation to the service or client-level outcomes of which service providers hope to ultimately achieve. Without data on implementation outcomes, stakeholders may be unable to distinguish whether implementation failure was due to an implementation or intervention problem. Since EBPPs will not be effective if they are not implemented as intended, implementation outcomes serve as necessary preconditions for desired changes in the quality and type of services being delivered in schools that youth ultimately receive and benefit from. Implementation scientists have deepened work in the area of implementation outcomes in several ways to address gaps in the research. In their seminal paper, Proctor et al. (2011) developed a taxonomy of these implementation outcomes, offered conceptual definitions, and addressed their measurement challenges. Others, like Mettert et al. (2020), have begun identifying, evaluating, and creating pragmatic and rigorous approaches to measure implementation outcomes, an area in desperate need of continued research.

Overall, implementation scientists have generally come to a consensus on eight main implementation outcomes of interest that constitute the desired endpoints of implementation efforts. These include acceptability, feasibility, appropriateness, adoption, penetration/reach, fidelity, cost, and sustainability (Proctor et al., 2011).

While each is distinct, implementation outcomes are interrelated in dynamic and complex ways (Repenning, 2002; Hovmand & Gillespie, 2010) and are likely to change throughout any particular implementation process. For example, certain implementation outcomes can be most salient at different points in time or to different stakeholders. Thus, a range of stakeholders and priorities should be represented throughout the implementation process to ensure salient outcomes are captured given the overarching goals of any specific research or practice project. Moreover, implementation outcomes are considered either latent/perceptual or manifest/observable variables, meaning some may be more appropriately assessed or inferred in terms of attitudes, opinions, and intentions, or reported in terms of observable behaviors (Proctor et al., 2011). Below, we discuss each outcome with applicable SMH examples.

Implementation Outcomes for SMH

Acceptability, Appropriateness, and Feasibility Acceptability is the perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory. Appropriateness is the perceived fit, relevance, or compatibility of the EBPP for a given practice setting (e.g., school), provider, population, or particular issue/problem. Feasibility is defined as the extent to which a new EBPP can be successfully used or carried out within a given setting (Karsh, 2004). While acceptability, feasibility, and appropriateness appear similar, they remain conceptually distinct. For example, a program may be appropriate for a service setting—in that it is compatible with the setting’s mission or service mandate, but may not be feasible due to resource or training requirements. An EBPP, such as the Good Behavior Game (Kellam et al., 2011), might be considered a good fit (i.e., appropriate) for positively and proactively addressing and preventing student behavior difficulties but its features (e.g., rigid protocol and particular language used) may render it unacceptable to

teachers and increased demands on teachers may yield it unrealistic to implement (unfeasible).

As shown in the example, acceptability, appropriateness, and feasibility are perceptions among stakeholders. Because they are perceptual by nature, ratings of each may be different when taken at the outset of an effort during preparation and again in later stages of implementation as stakeholders become more familiar with the EBPP chosen for implementation. Most frequently, acceptability, appropriateness, and feasibility, are assessed during the preparation stage when an implementation strategy is being developed or an EBPP is being selected for implementation. For example, it may be wise to assess SMH clinician's perception of appropriateness and feasibility for Trauma-Focused Cognitive Behavioral Therapy (Cohen et al., 2012) prior to signing a contract for training, as low appropriateness or feasibility signal some "pushback" to the implementation effort, as can be seen when providers feel a new program is a "stretch" from the mission of the setting, or is inconsistent with their current skill set, role, or job expectations, which may cause problems for adoption and implementation in future stages (Proctor et al., 2011). On the other hand, if TF-CBT is determined to be an essential intervention to make accessible within the setting, there is significant work to be done to improve clinician's perceptions that it is indeed an acceptable, appropriate, and feasible intervention for them to implement as part of their routine practice.

Adoption Acceptability, appropriateness, and feasibility are all predictors of *adoption* (also referred to as "uptake"), which is the intention, initial decision, or action to try or employ an evidence-based practice or program. Adoption could be assessed from the level of the provider or the organization, as well as either a perceptual or behavioral outcome depending upon when and how it is assessed (e.g., during the preparation stage where intent to adopt may be measured, or in later implementation when the action initial adoption can be observed). Adoption is helpful to assess in the early stages of implementation (e.g., shortly after training) to understand which imple-

menters may need additional follow-up support. Insufficient adoption puts a ceiling on the number of clinicians who are able to persist toward high fidelity. For example, a school that recently provided training in a Tier 1 prevention program, such as Second Step (Frey et al., 2000), may want to engage in brief classroom observations to assess whether teachers across the system have adopted the intervention to engage in follow-up data collection about barriers to adoption that can inform the delivery of tailored consultative supports. They may find that only 10 out of 20 teachers who received training initiated the adoption of the Second Step. This would suggest there is a need to follow up with teachers differentially depending on whether they began implementing Second Step or not.

Fidelity Fidelity is the most common implementation outcome to be assessed and is defined as "the degree to which a program or practice was implemented as it was intended in the original protocol by the program developers" (Dusenbury et al., 2003). Fidelity is often assessed during the active implementation phase when implementers have begun implementing the EBPP with some regularity. While the literature identifies five fidelity dimensions overall (i.e., adherence, quality, adaptation/differentiation, dose, and participant responsiveness/involvement), fidelity is typically measured across one or more of the following subconstructs: (1) adherence to the program protocol, (2) dose or amount of program delivered, and (3) quality of program delivery. To date observational measures of adherence specifically are considered the "gold-standard" in integrity measurement (Sanetti & Kratochwill, 2009; Sutherland et al., 2013); however, this approach to integrity assessment is not well-suited for implementation research or practice (Sanetti et al., 2020).

McLeod and colleagues (2021) outline several features of existing observational measures that limit the feasibility of use in schools. First, it is costly and time intensive to gather integrity data with observer-rated measures, particularly when efforts are part of locally-managed implementation projects (Schoenwald et al., 2011). For

example, an elementary school with 18 teachers that requires two 60-min integrity observations per year would result in 36 h of observation. Second, assessments of adherence should be ongoing to continuously improve and inform decision-making in real time. In their current form, observational measures are not suited for this purpose (Hogue et al., 2017). The cost and time required to use observational measures limit the frequency with which they can be used. As a result, they capture a smaller sample of implementer behavior (i.e., fewer occasions) and may miss important information (e.g., changes related to coaching; Hogue et al., 2013) that can spur targeted action via tailored implementation. For these reasons, pragmatic integrity measures that are practical, brief, easy to use, acceptable, and technically adequate are necessary to improve data utilization in school implementation efforts (Hogue et al., 2013; Stanick et al., 2021).

In addition to capacity factors that limit routine fidelity assessment in schools, a lack of measures for additional facets of fidelity prevents schools from accurately tailoring implementation strategies to individual-level determinants of implementation. Currently, most measures of treatment integrity lack companion tools that assess important factors significantly influencing the adherence-outcome relationship. For example, when looking at the root causes of intervention failure in a longitudinal study, Weck and Colleagues (2014) found that the collaborative and affective bond between an implementer and intervention recipient (i.e., therapeutic alliance; Luborsky, 1984) acts as a prerequisite for adherent and competent implementation. Additionally, client responsiveness, engagement, and motivation have been hypothesized as important mediators of intervention success even when interventions are delivered with high adherence. As such, adherence alone may not constitute the sole, or even most influential, “delivery factor” that effects intervention success, and additional measures are needed to support accurate and efficient delivery of implementation supports.

Penetration/Reach Penetration, or reach, is an observable construct thought of as the integration

of a practice within a service setting defined by: (1) the number of eligible service recipients who actually receive the service, or (2) the number of trained implementers who actually adopt and utilize a particular practice or program (Glasgow et al., 1999; Proctor et al., 2011). Several methods for calculating reach exist and can occur later in the active implementation and sustainment phases. For example, service reach to eligible service recipients can be calculated by dividing the number of eligible people who use a service by the total number of people eligible for the service. Implementation reach can be calculated by dividing the number of practitioner who delivers a given intervention divided by the total number of practitioners trained in or expected to deliver the service. Reach is an important and helpful implementation outcome to monitor, as it can highlight differences or similarities that better equip stakeholders to tailor strategies that improve dissemination and implementation outcomes, such as client awareness and engagement or intervention adoption and implementation.

Sustainability Sustainability is the extent to which a newly implemented intervention is maintained or institutionalized within a service setting’s ongoing stable operations (Proctor et al., 2011). Although it is arguably the end goal for implementation, sustainability remains one of the least understood and most vexing issues for implementation research. Sustainability in particular has been difficult to understand due to unique methodological challenges and a lack of consensus in the field regarding operationalization, conceptualization, and measurement approaches (e.g., different metrics and observation periods). While sustainability can be assessed retrospectively via self-report or prospectively through observation, sustainability is rarely studied as part of implementation efforts, especially in the area of SMH.

To date, sustainability as a concept is more frequently discussed in conceptual papers, and empirical articles measuring the sustainability of EBPPs are lacking (Proctor et al., 2011). This could occur because grant funding stops before sustainability data can be collected or because systems get stuck in “the flavor of the month”

problem, characterized by rapid adoption and abandonment of programs or practices. Sustainability is also dependent upon other implementation outcomes that temporally precede it, such as adoption and fidelity, and often adoption and fidelity are too low to enable sustainability. Thus, implementation efforts should be planned with sustainability in mind at the outset, with an understanding that insufficient adoption and fidelity and overall implementation infrastructure will lead to sustainability issues.

Ultimately, a lack of sustainability means a failure to produce a return on investment. The most advanced understanding of sustainability comes from the work by McIntosh et al. (2015) on factors that influence the continuance of Positive Behavior Interventions and Supports once school systems have reached full fidelity. One of the main takeaways from this research is the critical role of teams in buildings that involve formal and informal leaders who work together to use a range of implementation strategies to maintain EBPP implementation through ongoing efforts to gather data and provide feedback, address turnover, and provide ongoing learning opportunities. While this research elucidates important findings, there is a need for future research to conceptualize how best to measure sustainability and identify the essential implementation strategies that target vital determinants of successful sustainability.

Conclusions

In order to make quality mental health services consistently accessible in schools, there is a need to focus on the implementation of research and practice that aims to reduce the research-to-practice gap and ultimately provide students with mental health services that outcomes. As discussed above, implementation success often rests on the implementation strategies that are utilized to address determinants and target mechanisms of action that influence implementation outcomes of interest. By increasing our ability to efficiently

and effectively select implementation strategies that target the most vital and salient needs in schools, the likelihood of promoting specific implementation outcomes goes up. Thus, there is a need for SMH researchers to contribute to the field of implementation by addressing existing gaps in research and practice, including the development and testing of: methods to identify and prioritize implementation determinants; systematic approaches to tailor or link strategies to determinants, and specify their hypothesized mechanisms of action; and measures of implementation outcomes. Through continued commitment to implementation research and practice, SMH is more likely to have a significant impact on public health outcomes for youth.

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Improving School Climate to Optimize Youth Mental Health: Implications for Increasing the Uptake and Outcomes of Evidence-Based Programs

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Improving School Climate to Optimize Youth Mental Health: Implications for Increasing the Uptake and Outcomes of Evidence-Based Programs

The social-ecological model highlights the significance of school settings for a range of positive behavioral, academic, and mental health outcomes for youth. There has been growing interest in the intersection of school contextual factors, like school climate, and school mental health. Several studies and policies have emphasized the importance of school climate, both as an outcome of interest and as a predictor of a range of positive academic and behavioral outcomes for students (Thapa et al., 2013). As a result, it has become a common focus of school improvement and behavioral health efforts. Yet a number of gaps exist regarding how to most efficiently collect school climate data, and utilize it to inform the implementation of evidence-based practices. Many school leaders and school mental health pro-

fessionals are encouraged to use school climate data to inform the selection of other evidence-based programs and monitor the impact of both school-wide and more targeted prevention efforts. As such, there is much to be gained from taking a more integrated approach to school-based prevention and mental health programming, in an effort to improve students' mental and behavioral health.

This paper highlights school climate as a critical factor to address when aiming to improve behavioral and mental health outcomes for students. Toward that end, we review the research on school climate, which conceptualizes school climate as including issues related to safety, student engagement, and the school environment. We consider a variety of issues related to measurement and the use of school climate data to inform the adoption and implementation of other evidence-based programs in schools. In this review, we leverage several frameworks and models, such as social and emotional learning (SEL) and the multi-tiered system of supports (MTSS) model, as they may be helpful approaches for schools to use when selecting and implementing evidence-based practices to improve a range of behavioral, academic, and mental health outcomes for students.

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Definitions and Models of School Climate

Over the last 40 years, researchers and practitioners have recognized several complex and inter-related elements that contribute to the quality and character of “school climate” (Cohen et al., 2009b; National School Climate Council, 2015). There is not one universally agreed-upon definition of school climate. In fact, a range of terms, such as *atmosphere, feelings, tone, setting, milieu, culture, or conditions for learning* of the school, have been used to characterize it. School climate can also be defined as “the quality and consistency of interpersonal interactions within the school community that influence children’s cognitive, social and psychological development” (Haynes et al., 1997, p. 322). It is important to consider both the objective facets of school life, as well as the subjective nature of school climate (see Cohen et al., 2009b; Thapa et al., 2013).

The United States Department of Education (US DOE, 2016) proposed a model of school climate that “reflects how members of the school community experience the school, including interpersonal relationships, teacher and other staff practices, and organizational arrangements. School climate includes factors that serve as conditions for learning and that support physical and emotional safety, connection and support, and engagement” (US DOE, 2016, p. 1). Operationally, the US DOE recommends that three facets or broad factors be measured: Safety, Engagement, and the Environment. The US DOE delineates a set of key tasks that define an effective and iterative improvement process, including planning, data collection, engaging stakeholders (e.g., educators, students, parents/guardians, and community members), implementing, and then evaluating improvement efforts (US DOE, 2016). There has been growing empirical support for the US DOE’s three-factor conceptualization of school climate, with a series of psychometric studies validating the model and its measurement (see Bradshaw et al., 2014c), including studies that document measurement invariance across race/ethnicity, gender, and grade level (e.g., Lindstrom Johnson et al., 2019; Waasdorp et al.,

2019). The DOE also funded the National Center of Safe Supportive Learning Environments to develop and make available a range of free surveys and detailed guidelines to support building and district-wide school climate improvement efforts aligned with the three-factor model (<https://safesupportivelearning.ed.gov/edscls>).

The second conceptualization of school climate can be traced back to some of the early work on Positive Behavioral Interventions and Support (PBIS). PBIS is designed to provide universal student support (tier 1), and scale-up systems to support the implementation of preventive interventions and practices at the more advanced tiers (i.e., tiers 2 and 3). These efforts occur with the goal of reducing risk for challenging behaviors, improving behavioral and academic outcomes for students, enhancing school climate and school safety, and optimizing conditions for learning that benefit all students (www.pbis.org/about/about). PBIS emphasizes behaviorally informed and measurable outcomes and data-driven decision-making, as well as integrating a multi-tiered system of supports (MTSS) to guide the implementation process (see Sugai et al., 2016; www.PBIS.org). It also serves as a framework for supporting the quality implementation of other evidence-based practices (Bradshaw et al., 2012). Developers of the PBIS framework also disseminated a number of free school climate surveys for students, school personnel, and parents through the National Technical Assistance Center for PBIS (La Salle et al., 2018). With significant support and investment from the US DOE’s Office of Special Education and Office of Elementary and Secondary Education, PBIS has gained wide-scale dissemination as a multi-tiered, comprehensive, behaviorally informed school improvement effort. Moreover, there is a growing body of empirical support for PBIS, including documenting significant improvements in school climate through PBIS implementation, in addition to a range of safety and behavioral outcomes (e.g., Bradshaw et al., 2009, 2012), summarized in greater detail below.

Another model of school climate was put forward by the National School Climate Council,

which was formed in 2006 as a partnership involving the Education Commission of the States and the National School Climate Center. The Council (2007, page 5) defined school climate as “the quality and character of school life and reflects norms, goals, values, interpersonal relationships, teaching, learning and leadership practices, and organizational structures.” The Council also recommended that school leaders use scientifically sound school climate surveys that recognize student, parent, and school personnel “voice” regarding a range of safety, relationship, engagement, and environmental issues. The National School Climate Council (2009, 2012, 2015) also underscored how surveys can be used to engage school community members and leverage their intrinsic motivation to be co-learners and co-leaders in an iterative improvement process. Moreover, the Council’s definition of school climate and related recommended school climate standards (2009) have had a significant impact on state-level policy and practice guidelines (Cohen & Espelage, 2020). It also made a number of recommendations about an effective and sustainable improvement process (2012) as well as essential prosocial (e.g., social and emotional learning [SEL], character education, mental health promotion, and school climate) improvement goals that shape sustainable and helpful improvement efforts (2015). This model has gained considerable reach and recognition (e.g., distributed by the US DOE to all *Safe and Drug-Free* coordinators), yet few state-level school climate policies today focus on concrete systemic, instructional, and relational improvement steps that support a sustainable school/district improvement process, as suggested by the Council.

The Association Between School Climate and Student Behavioral and Mental Health Outcomes

For decades, theories such as social control theory, social learning theory, and social-ecological frameworks have situated schools as an important contextual influence on student behavior. Schools provide youth with the environment,

interpersonal relationships, and academic instruction to regulate their own behaviors and form strong connections with others that deter the development of aggression and other deviant behaviors that compromise school safety (Hirschi, 1969). Yet, when students experience a positive school climate, problematic behaviors are minimized through the promotion of safe environments and supportive/positive relationships, facilitated through classroom- and school-wide norms that support safety and promote respectful interactions among students and staff (Cohen, 2017). Additionally, if students have a positive perception of the school climate, they are less likely to engage in externalizing or aggressive behaviors, and more likely to seek help and support from trusted individuals in their school community (Espelage et al., 2014).

As a result of this robust and growing body of research, there has been significant interest in school climate improvement efforts (Berkowitz et al., 2017; Cohen & Espelage, 2020). Much of this emphasis on school climate has been predicated on research suggesting it is connected to a range of behavioral, mental health, and academic outcomes (Thapa et al., 2013). More specifically, school climate has been linked with multiple behavioral outcomes such as academic achievement, absenteeism, truancy, dropout, suspension, drug use, and aggressive behavior (Berkowitz et al., 2017; Cohen et al., 2009b; Thapa et al., 2013; Wang & Degol, 2015). Students’ perceptions of connectedness to each other, to teachers, as well as to the school more broadly have been shown to be associated with fewer behavioral disruptions in the classroom and lower levels of bullying (see Thapa et al., 2013; Waasdorp et al., 2011). Conversely, youth who feel a greater connection to school are more willing to help other youth who are bullied or otherwise victimized by peers (Barhight et al., 2017; Waasdorp et al., 2011). However, the specific mediators at play in this association are not well understood; moreover, several questions remain regarding causality and the directionality by which school climate leads to these outcomes (Berkowitz et al., 2017).

In reviewing the literature on school climate, we draw upon recent meta-analyses and

systematic reviews. These and other experimental studies highlight significant associations between school climate and school violence-related outcomes (Steffgen et al., 2013). These findings were consistent across multiple school climate dimensions assessed, including relational (e.g., school belonging), cognitive-affective (e.g., school fear), and organizational (e.g., school management, and school security). Another meta-analysis by Reaves et al. (2018) highlighted cross-sectional and longitudinal associations among school climate indicators and problem behaviors across 13 studies. The strongest effects were found between two dimensions of school climate—safety and interpersonal relationships—and self-reported delinquency. Institutional environment (e.g., school connectedness and school environment) significantly predicted all forms of problem behaviors. Together, these and other studies suggest that school climate, particularly the institutional environment, is an important correlate of externalizing problems and a range of school safety and violence indicators. Relatedly, several federal agencies, such as the Centers for Disease Control and Prevention (2009), the National Institute of Justice, and the US DOE have allocated considerable funding to school climate promotion, as well as specific school-based models, such as PBIS and SEL these models have become increasingly focused on and informed by work on school climate over the last two decades.

Strategies for Measuring School Climate

School climate measurement practices have largely focused on school climate surveys; these approaches generally recognize student, parent/guardian, and school personnel “voice” about a range of safety, relationship/engagement, teaching and learning, and environmental issues. The majority of the empirical work is based, however, on student reports (Waasdorp et al., 2011). Even within student populations, there are some important differences in perceptions of school climate not attributable to construct measurement

(Lindstrom Johnson et al., 2019; Waasdorp et al., 2019). For example, high school students typically perceive their school climate less favorably than middle school students (Waasdorp et al., 2019). Similarly, Black students tend to feel less connected and less safe compared to White students (Bottiani et al., 2016a, b). Importantly, both Black and White students are adept at detecting inequity in schools (Debnam et al., 2014), particularly regarding the use of discipline strategies, like suspension, and feelings of connectedness (Bottiani et al., 2016a, b; Fan et al., 2011).

There are also some disconnects between the way students perceive the climate relative to the school staff. As an illustration, the issue of bullying is often more salient to students than staff, with many teachers failing to detect bullying and intervene effectively (Bradshaw et al., 2007; Kochenderfer-Ladd & Pelletier, 2007). This discrepancy in perceptions leads many students to perceive that the staff condone the bullying. It also erodes the trust between students and staff, and students’ sense of connection, which in turn can undermine their perceptions of climate and engagement in school (Higgins et al., 2020).

Only recently have scholars examined how school climate perceptions held by staff in schools impact students’ attitudes and behaviors using multi-informant approaches. For example, Espelage et al. (2014) assessed perceptions of school climate in a sample of over 3600 middle school youth and over 1500 school staff across 36 schools. Their findings suggest that staff concerns about school safety were associated with students’ reduced willingness to intervene to help other students being victimized. Yet when staff felt that they were supported by their administration to address violence, the students experienced a lower risk for violence. Together, these and other studies highlight the importance of multiple perspectives on bullying and the value of triangulating school climate ratings, thereby recognizing the voice of multiple stakeholders (Bottiani et al., 2019; Cohen, 2006; Devine & Cohen, 2007).

While much of the research on school climate has focused on safety and relationship aspects of school climate, the physical environment of the

school also plays a key role in shaping perceptions (Barrett et al., 2013). For example, the Crime Prevention Through Environmental Design (CPTED) model highlights four features of the environment that potentially impact perceptions and behavior: space design, space use and circulation patterns, territorial features, and physical deterioration (Jeffery, 1977). Originally based on theories and research on community violence, the CPTED model also has relevance to schools (Bradshaw et al., 2015; Vagi et al., 2018). For example, positive signs of school ownership or school pride, as well as negative indicators like physical deterioration, trash, and disorder (e.g., graffiti and broken windows) contribute to perceived investment in the school and to social norms that support appropriate behavior as compared to deviant behavior (Plank et al., 2009).

Research has also demonstrated that unsupervised spaces within a school are perceived as less safe and can contribute to an increase in the likelihood that problems and violent behaviors will occur (Astor et al., 1999; Lindstrom Johnson et al., 2018; Plank et al., 2009). One tool that has been helpful in assessing these and other physical aspects of school climate is called the School Assessment for Environmental Typology (SAfETy). Based on the CPTED theoretical model, the SAfETy can be used by external observers to assess the physical aspects of the school environment and its climate. A series of studies have documented that the SAfETy provides unique information about school climate, and is helpful in identifying schools with challenges related to substance use, violence, and behavior problems (e.g., Bradshaw et al., 2015; Lindstrom Johnson et al., 2016). The SAfETy is currently under development as an app that school principals and leaders can use to assess the school environment and report data to a variety of stakeholders to inform school improvements and enhancements related to student safety.

Improving School Climate

Many of the existing school safety intervention approaches focus primarily on adults as interventionists. These approaches include for example

school staff who deliver mental health supports, teachers and paraprofessionals who engage students in anti-bullying or school climate improvement practices, and parents who work with teachers to promote their students' success. These approaches may be powerful levers for improving student-teacher relationships and other relational dimensions of school climate. However, many of these approaches minimally involve students, as they are often passive recipients of these interventions despite research showing that teachers, compared to students, tend to underestimate the frequency of safety threats (Booren et al., 2011). Students, especially at the high school level, may be more knowledgeable than adults about violence precursors occurring within a school's population (National Threat Assessment Center, 2019). In addition, fostering student engagement is a foundational goal that promotes learning and healthy development. Thus, it is critical to understand how to promote student disclosure and staff-student communication.

A review of more than 60 school climate promotion and prevention programs by Voight and Nation (2016) identified common components across the programs, including classroom SEL curriculum, teachers providing support and structure in the classroom, one-on-one student/staff contact, giving students a voice in school decision-making, clean and inviting school buildings and grounds, partnerships with the outside community, incorporating school climate into school policy and mission, and social events and groups. Emerging best practices for school climate intervention suggest that interventions are best conceptualized as a multi-stage process. The National School Climate Center (Cohen et al., 2009a; Cohen & Pickeral, 2009) proposed a "roadmap" for intervention that involved developing a school's capacity for planning, implementing, and evaluating school climate intervention. This roadmap and a linked readiness tool are freely available for school leaders as well as researchers who may be interested in cross-cultural school climate studies (Cohen et al., 2021). Similarly, the National Center for Safe and Supportive Learning Environments (Yoder et al., 2017) proposed activities that schools

should engage in to develop school climate improvement programming. Both models indicate that three distinct processes are important for successful intervention: (a) careful assessment, (b) selecting and implementing effective interventions, and (c) monitoring implementation and evaluating progress.

Three strategies or frameworks have emerged as the predominant approaches to school climate improvement. One focuses on whole-school interventions that are norms-based and designed to change the school environment by addressing the school rules and expectations related to student behavior, such as PBIS (Horner et al., 2009) and the Olweus Bullying Prevention Program (Astor & Benbenishty, 2018; Limber et al., 2018). Randomized controlled trials of PBIS have found significant improvements in school climate among adults (Bradshaw et al., 2008, 2009) and students (Horner et al., 2009). Although earlier tests of the Olweus Bullying Prevention program in the United States did not consistently demonstrate positive impacts on school climate, more recent studies in the United States are showing promising effects on bullying and safety (Limber et al., 2018; for studies outside the United States, see Olweus et al., 2018). It is noteworthy that these programs have had more consistent effects on teacher/adult ratings of climate than students. Also, these programs have frequently been implemented primarily to address bullying and other student discipline problems, and school climate has often been a secondary focus of the intervention or proposed mediator of the program's effects on student behaviors.

A second intervention strategy has leveraged skill-focused interventions that involve efforts to build students' SEL competencies in ways that might have implications for school climate and safety. The Collaborative for Academic, Social, and Emotional Learning (CASEL; see Durlak et al., 2011) has identified SEL competencies that help students manage the social and academic demands of classroom and school environments. Controlled studies of an array of SEL interventions, including social skills (see Durlak et al., 2011), conflict resolution (e.g., Durant et al., 2001), and bullying and violence prevention pro-

grams (e.g., Frey et al., 2005) have found positive effects on school climate-related outcomes. A systematic review of 213 of these programs found that they consistently yielded positive student and academic-related outcomes (Durlak et al., 2011). However, in relation to school climate outcomes, the program effects are targeted, such that few impact all the dimensions of school climate. In addition to these intervention strategies, other practices, such as small group sessions for students with behavior problems, one-on-one time with teachers and staff, and incorporation of students' voices in decision-making, can be helpful in enhancing the school climate (Voight & Nation, 2016).

Finally, there is emerging research focused on the environment which has demonstrated promise at improving school climate. These strategies address aspects of the physical environment and school security measures to address school climate and safety (Sprague & Walker, 2010). While interventions targeting the physical environment could involve a number of school improvement efforts focused on enhancing the school's facilities, aesthetics, and cleanliness, the interventions have concentrated heavily on target hardening security measures including metal detectors, video cameras, and school resource officers. It may surprise some to learn that research on these target hardening measures has documented few positive effects on student behavior (Tanner-Smith et al., 2018), but may in fact decrease perceptions of safety (Lindstrom Johnson et al., 2018; Perumean-Chaney & Sutton, 2013) and engagement (Mowen & Manierre, 2017).

Implications for the Selection and Implementation of Evidence-Based Practices

These and other compelling findings on the importance of school climate emphasize the important role it plays in a comprehensive approach to school mental health. School leaders are increasingly interested in research-based approaches for promoting a supportive and engaging climate for academic success, but may

also benefit from the resulting enhancements in support for students' behavioral, social, emotional, and mental health (Jones & Kahn, 2017). Moreover, staff experience benefits from working in schools where the climate is favorable, and in turn, are likely to engage more with students in these settings, and be more sensitive to their needs (O'Brennan et al., 2014). There is an emphasis on the use of "evidenced-based interventions" to address, and hopefully, enhance mental and behavioral health outcomes for students. Data on school climate may be helpful in informing the selection of specific improvement goals and programs to implement, as well as monitoring the outcomes achieved (Bradshaw et al., 2014b). Multiple studies, such as those focused on MTSS, have shown that effective prevention efforts need to be coordinated with universal programs designed to promote organizational competencies through universal school environment improvement approaches, such as those improving school climate, in conjunction with individual mental health outcomes.

There is also growing interest in school climate-informed readiness, process, and community measures (Cohen et al., 2017, 2021; Dymnicki et al., 2014). In fact, school climate-informed readiness measures and process measures can be used by various stakeholders, including building leaders and/or leadership teams to guide school improvement and implementation efforts (Cohen et al., 2017, 2021; Dymnicki et al., 2014). Yet the extant school climate research has rarely considered the emerging knowledge related to implementation science regarding how program implementation is tailored to specific schools, and whether/how program data are used to modify program implementation over time. A series of important findings have been emerging from the field of implementation science in relation to school climate and the fidelity of implementation of evidence-based programs (Blase et al., 2013). School leaders can use school climate data as a source of readiness and process information to support engagement, fidelity, and sustainable school improvement efforts. Moreover, there is

substantial empirical evidence that school climate can be a factor influencing the implementation fidelity of school-based prevention programs, as well as a potential moderator of program outcomes (see Blase et al., 2013; Domitrovich et al., 2008).

Conclusions and Future Directions

While the empirical research on school climate improvement efforts is growing, some of the causal findings are somewhat mixed, suggesting a need for additional evidence of models that are effective at improving school climate. More work is also needed to test the theory of change process by which climate impacts mental health-related outcomes. There is compelling evidence of the significance of school climate in relation to a range of student and staff outcomes, yet the direction of these associations and the causal mechanisms are not well understood. For example, a recent quasi-experimental study of 718 public schools by DiGirolamo et al. (2021) showed that schools that implemented school-based mental health programs actually had a more supportive school climate compared with those not implementing these models. Additional intervention studies, especially with experimental designs, are needed to advance the field of school climate research, particularly in relation to mental health impacts. For example, it may be helpful to explore the extent to which implementing a program within the context of a climate-focused framework, like MTSS, translates into higher implementation and stronger student outcomes, in contrast to a setting without such an emphasis (Bradshaw et al., 2014a). Finally, there is a great need for improved measures, which balance the need for efficiency with validity, incorporate multiple perspectives and the various facets of school climate (Lindstrom Johnson et al., 2019), and are sensitive to change over time. Such approaches can also be particularly helpful for informing the selection of evidence-based programs using data dashboards and tools to support decision-making by school leaders and teams (Bradshaw et al., 2014b).

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Optimizing Implementation of School-based Programing by Leveraging Motivational Interviewing

Andy J. Frey, Elise T. Pas, Keith C. Herman, and Jason R. Small

Introduction

Schools are an essential context for the prevention and treatment of mental health problems and the promotion of behavioral health in children and youth. Though education research has received increased attention and achieved greater rigor over the last two decades, schools' use and adequate implementation of evidence-based interventions and practices, hereafter referred to as evidence-based practices (EBPs), are still lacking (e.g., Durlak & DuPre, 2008). This gap is best described as an issue of translation, whereby interventions are developed, tested, and shown to be effective, but do not translate into real-world settings (Spoth et al., 2013). Implementation science focuses on factors related to translation, including dissemination, adoption, high-fidelity implementation, and sustained use (Pas & Bradshaw, 2015).

The process by which a school and educators may come to adopt and implement any EBP with

fidelity is complex and nuanced. Implementation is a multilevel process that occurs over time; involves a range of stakeholders (e.g., administrators, teachers, and parents); moreover, it necessitates numerous decisions, actions, and adjustments along the way (National Research Council and Institute of Medicine, 2009). More specifically, the successful translation of EBPs is propelled by the presence of competency drivers (e.g., strategies and methods for selecting staff, training, coaching, and monitoring fidelity), organizational drivers (e.g., institutional supports such as policies, procedures, data systems, and feedback loops), and leadership drivers (e.g., technical and adaptive skills (Fixsen et al., 2005). Motivational interviewing (MI) has been introduced as a possible strategy to address gaps in translational school-based research and practice (Frey et al., 2015; Pas & Bradshaw, 2021).

To help these gaps in translational school-based research, this chapter focuses on optimizing the implementation of EBPs that address mental health and social, emotional, and behavioral concerns in school settings using MI (Miller & Rollnick, 2012). Herein, we define MI and discuss its relevancy to implementation science. Next, we highlight several pioneering efforts that paved the way for the field of education to use MI as an approach to support implementation. Then, we describe the mechanisms believed to make MI work, including a summary of the empirical evidence demonstrating the effective-

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ness of these mechanisms in school-based settings. We conclude by highlighting several aspects of MI practice and research that are important to consider as educators and researchers continue to use this promising approach to support the translation of EBPs by optimizing implementation efforts.

Motivational Interviewing and Implementation Science

Motivational interviewing is a “collaborative conversational style for strengthening a person’s own motivation and commitment to change” (Miller & Rollnick, 2012, p. 12). Building on the work of Miller and Rose (2009) and Magill et al. (2014) highlighted three core ingredients that make MI effective: the *technical component*, the *relational component*, and [the avoidance of] *MI inconsistent behavior*. The technical component refers to the practitioner’s ability to shape the conversation, and evoke participant change talk (i.e., language that supports a shift from the status quo) of greater depth, strength, and frequency; while acknowledging but not reinforcing sustain talk, or language that supports the status quo (Miller & Moyers, 2017). This shaping is done by intentionally and strategically utilizing core MI consistent skills, which are represented by the acronym OARS (i.e., open-ended questions, affirmations, reflections, and summaries) to strengthen the participant’s motivation for change. MI-inconsistent behavior are behaviors to avoid and involve the use of confrontation (e.g., lecturing, shaming, coaxing, arguing) and persuasion (e.g., being overly directive with the participant or offering unsolicited advice or advice without permission). The relational component is comprised of accurate empathy, respect for participant autonomy, and egalitarian collaboration. These three active ingredients, used in combination in the context of overlapping and recursive processes that include *engaging, focusing, evoking, and planning*, should be central to any definition of MI quality.

Increasingly, MI is recognized as an important intervention across multiple fields (e.g.,

child welfare, education, health, behavioral health, mental health, and social work) and has been applied to address numerous problems, including alcohol use, smoking cessation, illicit drug use, sexually transmitted infections, unplanned pregnancy, HIV, diet, heart disease, exercise, obesity, oral health, depression, ineffective parenting practices, school dropout, academic failure, and challenging behavior or social-emotional development (Miller & Rollnick, 2012; Sanci et al., 2015). Despite application to a variety of problems, to our knowledge, the field of education is the first to apply MI within the context of implementation science, or as an approach to optimize the implementation of existing EBPs (Larson et al., 2021; Pas et al., 2021).

Use of MI (i.e., the technical and relational components, and avoidance of MI inconsistent behavior) within the context of the four MI processes (i.e., engaging, focusing, evoking, and planning) relates directly to competency drivers within the implementation science literature. Competency drivers include the offering of support and guidance to school-based implementers who may not want to, have the knowledge or skills to, or feel they have time to engage with identified programming (Domitrovich et al., 2008) and are essential for ensuring an intervention or practice is implemented as intended—referred to as *implementation fidelity* (Pas & Bradshaw, 2015). Motivational interviewing can also be viewed as an implementation strategy related to organizational drivers, although the relevance to this driver is narrower. Specifically, because MI practice places a premium on values, it can be effective for increasing buy-in among educators tasked with implementing a given EBP (Rogers, 2002). In this respect, MI might be useful in the process of getting information about EBPs to large numbers of educators (i.e., *dissemination*) and getting them to commit to and initiate the use of EBPs (i.e., *adoption*; Brownson et al., 2017). Next, we provide an overview of some of the pioneers who paved the way for MI as an approach for optimizing implementation in the context of school-based research and practice.

Intervention to Implementation Support

To our knowledge, the earliest MI-informed school-based intervention was the Family Check Up (FCU; Dishion et al., 2003). Modeled after the Drinker's Check Up (Miller et al., 1988), the FCU was designed as a brief motivational enhancement intervention delivered in family resource rooms in schools. The FCU focuses on gathering ecological data about family and child adjustment, especially malleable aspects of the family context that are known to influence youth development and provides caregivers with detailed feedback about their strengths and potential areas of improvement. The initial interview and feedback sessions are delivered using an MI style focused on evoking change talk in the caregiver(s) and moving them to goal setting and action steps to address any areas of concern. Although the FCU has since been adapted for delivery in other settings including community clinics and hospitals (see Stormshak & Dishion, 2009), Dishion and Stormshak originally developed it for use in schools as part of a multi-tiered system of support for families (Dishion et al., 2003; Stormshak et al., 2011). At the universal level, family resource rooms provide education and information support (e.g., pamphlets, videos, and books) that are available to any family regardless of need. The FCU is delivered by trained staff members as an indicated support for families with concerns about their child. A nod should also be given to Patterson and Forgatch's seminal studies on family consultation that influenced Dishion's leanings toward MI. In the mid-1980s, they reported a series of studies demonstrating a functional relationship between therapist speech and the subsequent language used by families (Patterson & Forgatch, 1985).

The Classroom Check Up (CCU) was borne of the same types of observations (Reinke et al., 2008). Reinke, a student of Dishion, noted similar barriers to change in the context of teacher

consultation to improve classroom management. Like Dishion, she identified leverage points in classroom management and developed efficient objective measures of these domains. She then created a teacher interview and feedback session that would fit within the context of schools. The CCU can be delivered as universal support for all teachers and/or as a selective or indicated support for teachers struggling with classroom management. Consultants meet with teachers to gather information about their background, current classroom management strategies, and prior consultation experiences. The consultant then conducts a series of structured classroom observations using direct observation tools such as the Brief Classroom Interaction Observation- Revised (BCIO-R, Reinke et al., 2015) and Student-Teacher Classroom Interaction Observation (ST-CIO; Reinke et al., 2016). Prior to the second meeting with the teacher, the consultant compiles the results of these observations into a single feedback form. The feedback form includes several domains of effective classroom management practices (e.g., ratio of positive to negative behavior management, and opportunities to respond). The consultant reviews the feedback in a teacher meeting using an MI style, co-develops a menu of options based on teacher choice, and helps the teacher select a specific goal and action plan for improving their classroom management. Ongoing progress monitoring and feedback are provided, and the plan is altered as needed. Evidence supports the efficacy of the CCU (Reinke et al., 2008, 2011).

It is noteworthy that, while both the FCU and CCU have procedures that mirror the MI processes (engaging, focusing, evoking, and planning) and promote an interaction style similar to the relational component of MI for moving caregivers and teachers in the direction of change, neither model measures MI proficiency as an indicator of implementation fidelity nor considers the mediating role of change talk within their logic models.

Coaching as an Implementation Support

As MI applications in school-based settings advanced, so too did the field of education's awareness of barriers to the translation of EBPs into schools and coaching being studied as a promising solution to optimize implementation efforts. Denton and Hasbrouck (2009) described coaching as a professional development practice in which a person with specialized knowledge works collaboratively with a teacher to change current teaching or management practices as a competency implementation driver. Comparing and contrasting coaching with traditional school-based consultation, Erchul (2015) suggested both involve indirect service delivery, a systematic problem-solving process, and prevention and remediation. An important distinction, he noted, involves the teacher's choice to participate. In the *consultant-teacher dyad*, the teacher typically initiates the relationship, and the goal(s) of the intervention are developed collaboratively—if not driven by the teacher. In the traditional *coach-teacher relationship*, however, teachers often have little choice, as they are typically required to implement an EBP that has been chosen at the building, school, or state level for system-wide implementation (e.g., coaches to support school- or district-wide behavior or academic initiatives).

Early reviews of the coaching literature suggested the practice was an efficacious implementation support strategy. For example, Driscoll et al. (2011) found teachers were 13 times more likely to implement mandatory interventions when they had access to a coach. Other reviews yielded similar results (Forman et al., 2009; Ransford et al., 2009; Wenz-Gross & Upshur, 2012; Stormont et al., 2015). These reviews suggested several activities including assessment, performance feedback, and planning are key elements of coaching. While these syntheses identified coaching as important implementation support and noted consistency in the processes that comprise the process, scant attention was provided to quality control measures related to coaching. For example, the studies treated coach-

ing as an independent variable with implementation serving as the dependent variable; yet the coach training, coaching procedures, and defining and measuring of fidelity—particularly the quality of coaching—were often not described and were rarely measured. Thus, while coaching appears beneficial, how it was done and the mechanisms or active ingredients that made it effective are still unclear.

Motivational Interviewing to Inform Coaching

The only formal and well-established school-based applications of MI used in school settings as of 2011 were the FCU and CCU, with the exception of Blom-Hoffman and Rose (2007), who proposed the general use of MI in school-based consultation. Building on the pioneering work of Reinke (CCU) and Dishion (FCU), Frey et al. (2011) conceptualized multiple uses of MI in school-based practice and research. Specifically, these authors suggested that in addition to stand-alone interventions, MI could be used (a) informally in conversations with students, parents, and teachers; (b) to encourage teachers or administrators to adopt existing EBPs; and (c) to increase the fidelity with which EBPs are implemented. Extending each of these MI applications, Reinke et al. (2014) further distinguished between MI as a framework to guide stand-alone interventions and the use of adapted versions of the FCU and CCU procedures with existing interventions to optimize implementation by improving caregiver/teacher engagement in the intervention process. Following this work, Frey et al. (2015) proposed the Motivational Interviewing Navigation Guide (MING). Procedurally, the MING is very similar to the FCU and CCU interventions, as well as coaching models that did not specifically invoke MI, in that all embrace similar processes: engagement, assessment, performance feedback, and intervention planning. An important distinction of the MING, however, is that it considered MI fidelity, derived from Miller and Moyer's (2006) eight strategies for learning MI, as a prerequisite for

using the model to support the implementation of existing EBPs and identified the mediating role of change talk within its logic model.

With increased attention to implementation science and coaching to improve adoption and implementation of EBPs, several research groups leveraged the CCU as a coaching model. The CCU provided an organization and structure to increase motivation to adopt new EBPs. Thus, the CCU evolved from a framework to use MI and provide personalized feedback to evoke teacher readiness to change and implement effective classroom management practices, to an organizational platform to support implementation in other ways. Evidence supporting the efficacy of several recent CCU adaptations include improving teacher implementation of social-emotional curriculum (Reinke et al., 2012), culturally responsive practices (Bradshaw et al., 2018), and the First Step to Success program (Frey et al., 2013). Additionally, CCU adaptations have been used to reduce bullying behavior (Pas et al., 2019) and disproportionality (Gion et al., 2022).

Recently, Owens and colleagues incorporated techniques from MI and cognitive-behavioral therapy, as well as structural components from the CCU and the broader consultation literature, into a multi-component consultation framework designed to support teachers working with students with, or at risk of developing, Attention Deficit Hyperactivity Disorder (ADHD) (Coles et al., 2015; Owens et al., 2017). This multi-component consultation model targets teacher knowledge, skills, and beliefs with the intent of improving the implementation of general classroom management strategies and targeted intervention supports such as the Daily Report Card. Their model utilizes MI-informed strategies to increase perceived acceptability, self-efficacy, agency, and motivation and in turn improve implementation quality. Owens et al. (2017) implemented their consultation model with 58 teachers in 8 schools and found that, although the skills of teachers across both conditions improved, the multi-component model utilizing MI proved most beneficial to teachers whose knowledge, skills, and beliefs served as barriers to implementation integrity.

Another recent study conducted by Lyon et al. (2019) utilized MI as part of a brief, group-based, multi-component pre-implementation strategy designed to improve the implementation of existing EBPs by targeting factors (e.g., attitudes, subjective norms, and perceived behavioral control) associated with an individual's intent to implement an intervention or practice. In this study, Lyon and his colleagues used the Beliefs and Attitudes for Successful Implementation in Schools (BASIS) strategy to improve the implementation of the Cognitive Behavioral Intervention for Trauma in Schools (CBITS) intervention. BASIS consists of three components: strategic education, social influence, and MI. Program facilitators use of MI during a 3–4 h interactive, pre-implementation training session to increase participants' change talk and enhance self-efficacy during delivery of group-based activities focused on (a) affirming participants' values; (b) identifying and addressing anticipated barriers to implementation; and (c) exploring participants' beliefs in their ability to implement evidence-based practice. Twenty-five school mental health clinicians were randomly assigned to a BASIS or an attention control condition. The feasibility study demonstrated greater clinician openness to implementing the CBITS intervention and intentions to implement it for those assigned to BASIS. However, no differences in actual implementation were observed. This study did not describe how clinicians were trained in MI nor did it include MI fidelity measures. BASIS has also been feasibility tested to support the implementation of the Good Behavior Game (Larson et al., 2021).

Finally, Chen and his colleagues (2018) recently developed a novel group-based implementation model to help school leadership teams with the adoption, installation, and implementation of School Wellness Integration Targeting Child Health (SWITCH), an evidence-based obesity-prevention program. The implementation process, which was designed to support the uptake and delivery of the SWITCH intervention, includes (a) an in-person, 6-h school wellness conference, (b) a 1-h follow-up webinar to support the setup of the program's content

management system, and (c) monthly MI-infused, capacity building, and quality improvement webinars. SWITCH targets school leadership teams and focuses on building school capacity, promoting “autonomy and ownership of change,” and “building the capacity of school leaders to lead school wellness programming” (p. 2; Chen et al., 2018). Data collected in eight schools as part of a small feasibility study indicated that participants demonstrated moderate to high levels of adherence to the SWITCH intervention’s quality elements and demonstrated high levels of compliance with the program’s best practice elements.

Motivational Interviewing Training

The unique skills associated with MI-based coaching were synthesized by Lee et al. (2014) and Herman et al. (2014), both of whom described not only the process and relational components but also the technical component of MI. They suggested a substantial need for coaching models that clearly and comprehensively specify: (a) the conversational skills coaches need to successfully influence teacher implementation of effective practices; (b) the scope and sequence of professional development systems capable of equipping coaches with these requisite conversational skills; and (c) skill-based proficiency standards. The Motivational Interviewing Training and Assessment System (MITAS) was designed to address these needs (Frey et al., 2017).

The MITAS is a comprehensive professional development system that closely matches training procedures used to train skilled practitioners to use MI in the field of substance and alcohol use. As depicted in Fig. 30.1, the MITAS consists of a multi-session workshop series, a simulated practice routine, authentic practice, and a learning community. All professional development scenarios are contextualized to represent situations school-based interventionists might encounter when working with caregivers, teachers, administrators, or adolescents. The simulated and authentic practice components can include up to three individualized sessions each, in which par-

ticipants receive performance feedback on their use of MI. Finally, the learning community component includes monthly consultation groups, or professional learning communities, in which school personnel come together to discuss conversations they have had with teachers, parents, or adolescents; as well as to reflect on successes and challenges of implementation.

As demonstrated in this section, the early efforts to bring MI into school-based prevention efforts were stand-alone interventions that utilized processes consistent with the MI approach and were grounded, primarily, in the relational component of the practice. While multiple lines of practice and research have evolved from these efforts, our focus in this chapter has been on MI to improve the implementation of existing EBPs delivered by teachers. Toward this end, we have documented how the initial work of the CCU has been adapted to inform multiple coaching models and frameworks, which vary in the extent to which MI skills are considered a required component of training and a formal measure of implementation fidelity, as well as a professional development model (i.e., MITAS). In the next section, we highlight several efforts that isolate MI as a change mechanism for optimizing the implementation of EBPs.

Mechanisms of MI in Schools

Although the outcomes associated with MI are impressive overall, inconsistent effect sizes (i.e., variability) in trials evaluating MI effectiveness in multiple fields have prompted efforts to develop a more nuanced understanding of how MI produces behavior change (Miller & Rollnick, 2014; Miller & Moyers, 2015). Magill et al. (2018), referencing several experts in the field, stated “our understanding of exactly how MI works remains elusive, and this is particularly concerning given the pervasive dissemination of MI into community-based settings” (p. 141). As noted throughout this chapter, several lines of research currently focus on MI as an implementation strategy to optimize the implementation of EBPs in school settings (Frey et al., 2020; Pas &

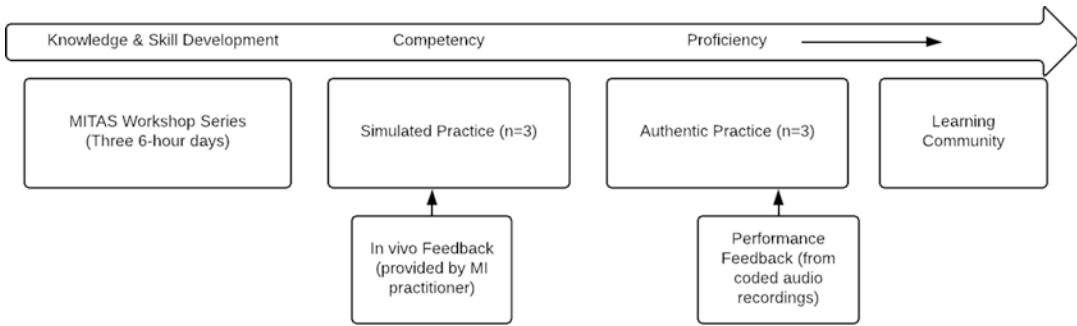


Fig. 30.1 The motivational interviewing training and assessment system

Bradshaw, 2021). However, only a few studies have applied quality control measures, or provided descriptions of training procedures and MI fidelity measurement, which are foundational to better understand the unique contribution MI makes to the coaching literature. Recently, Frey et al. (2020) incorporated training as an ongoing process of skill development and acquisition into the existing two-path framework (Magill et al., 2014; Miller & Rose, 2009) used to understand how MI works to achieve its desired effects. Frey et al.'s (2020) expansion of this framework involves the addition of a path (referred to in Fig. 30.2 as a link) between initial training and fidelity in simulation—referred to as competency—and a link between competency and fidelity in practice—referred to as proficiency—which is where Magill and colleagues' two-path framework begins (see Fig. 30.2).

As can be seen in Fig. 30.2, link 1 represents the association between MI skills training and competency. Link 2 emphasizes the association between competency and proficiency. The technical component, the relational component, and [avoidance of] MI inconsistent behavior represent distinct mechanisms in the initial training to competency (link 1) and competency to proficiency (link 2) links. Frey et al. differentiate fidelity or the degree to which providers deliver an EBP according to its standards and critical ingredients (Bond & Drake, 2020), uniquely in the two contexts. *Fidelity in Simulation* (Competency) is assessed in simulated contexts and *Fidelity in Practice* (Proficiency) is assessed in practice conditions with participants.

Competence and proficiency align with previous models in the MI literature (Hartzler et al., 2010; Moyers et al., 2014). Namely, Hartzler et al. (2010) suggested the development of MI competency is a multi-stage process with initial skill development occurring in contrived settings and proficiency, which is defined by the application of these skills within authentic intervention settings, is developing in the context of authentic practice.

Link 3, which is identical to Magill et al.'s (2014) path *a*, depicts how proficiency within applied intervention delivery/treatment impacts participant talk about change (described previously). Finally, link 4, which is identical to Magill and colleagues' path *b*, illustrates how participants' talk about change impacts their actual behavior change. In the context of using MI as an approach to optimize the implementation of EBPs, behavior targeted for change is a behavior associated with high-quality implementation. The thicker arrows in Fig. 30.2 represent greater levels of evidence within each link. Understanding the mechanisms of MI, particularly in the context of implementation science, is imperative. Next, we highlight a few empirical efforts that are beginning to help the field understand these mechanisms.

School-Based Motivational Interviewing Fidelity Outcomes

Although many school-based mental health researchers have not described training

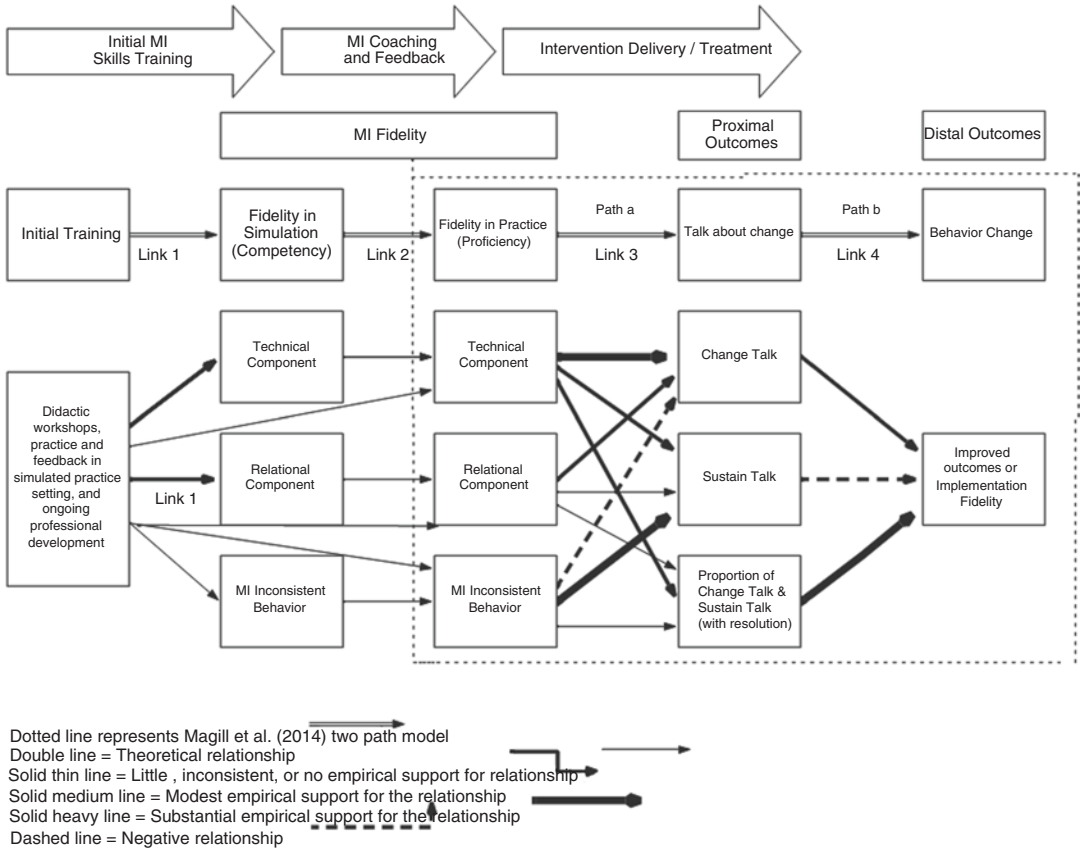


Fig. 30.2 Mechanisms of motivational interviewing conceptual framework. (Reprinted with permission (not yet) from Prevention Science)

procedures or measured MI quality as a critical aspect of fidelity, this trend has also been observed in other fields. For example, Hall et al. (2016) conducted a review of MI training and competency literature in the field of substance abuse and found that only 15 of 400 studies assessed proficiency at follow-up. Of these 15 studies, only two reported that interventionists reached a 75% proficiency standard following initial training. Weisner and Satre (2016) further noted that “it is striking how little research has focused on the effectiveness of training in MI skills and their stability in practices” (p. 1155). The absence of measuring MI quality is particularly concerning given Mitcheson et al.’s (2009) observation that MI is intuitive and can be misleading given that the difficulty of the practice is often obscured by what appears simple. Although not frequently studied, there is quite a bit of lit-

erature about the acquisition of MI skills from research conducted outside of school-based contexts. For example, in the field of addictions, Dunn et al. (2015) noted that neither experience nor professional background predicted MI skill acquisition. Several experts have anecdotally observed baseline empathic listening may be the best predictor of MI learning readiness (Miller & Moyers, 2015). Additionally, it is well established that to use MI competently (i.e., in contrived practice settings) and proficiently (in authentic practice settings) requires 8–15 h of context-specific, didactic training *and* individualized practice in a simulated setting (Miller & Mount, 2001).

There have been a few studies that have explored the effectiveness of training school-based personnel with varying degrees of success. For example, Lyons et al. (2017) investigated a

Motivational Coaching Model via a “semi-randomized” waitlist control study with 38 experienced teachers who functioned as instructional coaches, providing less experienced teachers with mentoring and coaching. These instructional coaches participated in 3 days of coursework (18 h). The training included content on core MI competencies, classroom instruction, and classroom management. Before and after the training, the instructional coaches delivered MI through a “mock consultation” session, providing support to a novice teacher based on a hypothetical class (i.e., standardized patient) with three disruptive students and a teacher. For their study, Lyons et al. audio recorded the first 10 min of each consultation, coded the recordings using The Motivational Interviewing Treatment Integrity (MITI) tool (Moyers et al., 2014), and analyzed the raw number of MI-consistent and inconsistent utterances. Lyons et al. reported that 84% of the instructional personnel’s statements were coded as MI-inconsistent and that there were no statistically significant differences between treatment and control conditions on the frequency of MI-inconsistent speech after training. These findings, however, must be interpreted with caution given that they did not adhere to the MITI developers’ procedural guidelines. Specifically, the guidelines indicate a random 20-min audio segment be selected for coding, and that coding includes counts for each of the ten behavior categories (e.g., simple reflections, complex reflections, affirmations, questions, and MI inconsistent) and a global rating for each of four global dimensions. Further, the behavior counts should be used to calculate five proficiency summary scores. As per the author’s note, their lack of findings suggested the content and structure of their training model requires revisions given that teachers participating in the training did not develop skills in MI sufficient to distinguish them from comparable control teachers. Perhaps more than anything, this study demonstrates well Mitcheson et al.’ (2009) observation that MI is intuitive and can be misleading given the difficulty of the practice.

In another study, Frey et al. (2013) evaluated the MI proficiency of interventionists trained

using the MITAS training model to implement a modified version of the CCU in the context of the First Step to Success early intervention program. Specifically, interventionist training consisted of three, 4-h workshop series (12 h total), simulated practice with feedback being provided on two occasions, authentic practice within the context of intervention delivery, and weekly learning community meetings. The MITI was used to evaluate MI proficiency for three coaches. Fifteen of the 30 digital recordings of conversations with coaches and teachers were externally coded using the MITI. A trained coder used the MITI to review a random 20-min audio segment within a single pass, tallying counts for each of the ten behavior categories. After listening to the audio segment, the coder provided a global rating on a 5-point scale for each of the four global dimensions. In this study, coaches exceeded the MITI competency criteria for the Global Spirit Rating ($M = 4.47$, $SD = .50$). Coaches met the Beginning Proficiency level for the Reflection-to-Question ratio with a mean ratio of 1.81 ($SD = 1.67$) and for Percent Open-ended Questions with an average percent of 58 ($SD = 22$) across the 15 audio-recorded sessions. This study provided the first empirical evidence to suggest the existing, clinical proficiency thresholds from the MITI are feasible in school-based practice.

Next, Frey et al. (2017) implemented the MITAS with 12 early childhood resource teachers who were working with teachers to improve their classroom management skills. In this study, the *Written Assessment of Simulated Encounters-School Based Applications* (WASE-SBA) and the *Video Assessment of Simulated Encounters-School Based Applications* (VASE-SBA) were used to evaluate change from pretest to post-test standardized feedback sessions (see Small et al., 2014). The WASE-SBA measures a person’s ability to generate reflective responses whereas the VASE-SBA utilizes three video-recorded vignettes, and respondents are prompted to generate written responses consistent with the MI skills. The measure contains four subscales: open-ended questions, affirmations, reflections, and summaries. This study documented encouraging gains (i.e., large effect sizes) in participants’

use of reflections; as well as their use of open-ended questions, affirmations, reflections, and summaries from pre- to post-test. All participants showed improvement on both measures. Similar findings have been observed with a much larger sample of school-based mental health providers outside the context of coaching to optimize the implementation of EBPs (Small et al., 2021).

Motivational Interviewing Proficiency and Talk About Change

As noted earlier, when MI is leveraged to optimize the implementation of EBPs, talk about change (i.e., change talk, sustain talk, and the proportion of change to sustain talk) has been shown to mediate the association between MI skill (i.e., fidelity) and change in behaviors that are indicators of high-fidelity implementation. Importantly, and as can be seen in Fig. 30.2, evidence from other fields suggests the technical component and [absence of] MI inconsistent behavior may be more influential than the relational component for impacting talk about change, and the proportion of change to sustain talk may be the most important mechanism for impacting behavior change- in this case, implementation fidelity. To date, only a single school-based MI application has examined this association between MI fidelity and talk about change empirically, and no studies have examined the association between talk about change and implementation fidelity. Specifically, Pas et al. (2021) conducted a sequential analysis to examine the relationship between coach MI proficiency and teacher talk about change. Data were collected from eight coaches and 87 teachers in 16 elementary and middle schools randomized in a trial testing the Double Check preventive intervention (see Bradshaw et al., 2018). Audio-recorded coaching feedback sessions were coded using an adapted version of the Motivational Interviewing Sequential Code for Observing Process Exchanges (MI-SCOPE). Sequential analyses indicated that specific coach and teacher language were significantly more likely than chance to occur consecutively. MI-consistent lan-

guage and change talk were significantly linked as Teachers' sustained talk was more likely to occur consecutively with coach MI-consistent language and teacher change talk. MI-inconsistent language was rarely used and its occurrence was only associated with more MI-inconsistent language. This novel school-based study illustrated how MI consistent language evoked teacher change talk related to the use of an existing EBP. A limitation of the study is that the MI-SCOPE was modified substantially; in turn, additional evidence is needed to support the reliability of the modified coding system and the validity of the measure with respect to coaches' MI proficiency and teachers' change talk. Nevertheless, this study represents the type of rigorous analysis, aligned with the theoretical tenets of how MI works, that is required to advance the field.

Future Directions

Taken together, there is a robust evidence base to support the use of MI in multiple fields, however, there is a growing line of research illustrating how MI complements and can support the adoption of existing initiatives in schools (Pas & Bradshaw, 2021). MI can be used to support efforts to guide administrator, teacher, or parent perceptions and actions through informal conversations, encourage teachers or administrators to embrace existing EBPs (i.e., adoption), and to implement stand-alone school-based interventions for which MI skills are helpful prerequisites (e.g., FCU and CCU) and when MI skills are critical indicators of implementation fidelity (e.g., homeBase (Frey et al., 2019), Student Check-up (Iachini et al., 2018), Motivation, Assessment, and Planning (Suldo et al., 2018), Supporting Teens' Autonomy Daily (Sibley et al., 2016)). It is important to note, however, that empirical examination of the unique impact of MI on the implementation of EBPs is critical, both because school-based applications are distinct from traditional applications in clinical settings, and because MI applications to improve the implementation of EBPs are novel. The

following three areas should be prioritized to improve our understanding of MI to optimize the implementation of EBPs: teaching and learning MI, measuring MI fidelity, and evaluating MI mechanisms of change.

Teaching and Learning Motivational Interviewing

As noted by Herman et al. (2020), reinforced throughout this chapter, and articulated for decades in non-school-based applications of MI (Miller & Rollnick, 2014); learning MI does not occur by happenstance; it is critical for those using MI to be sufficiently trained and to document fidelity of implementation. At the very least, implementing MI with fidelity requires school-based interventionists to participate in didactic workshops, individualized feedback, and ongoing support to promote reflection and improved implementation. It is clear from research in other fields that learning MI must involve skills related to both the relational and the technical components of the practice, as well as strategies to help practitioners avoid MI-inconsistent behavior. It is important to note the pioneering efforts that have generated promising outcomes within schools conceptualize MI narrowly, largely aligning with the relational component.

The field would benefit from studies comparing various levels (e.g., none, light, and intense) of MI training. While a substantial evidence base is beginning to emerge that demonstrates the MITAS (Frey et al., 2017) is effective for developing MI competency and proficiency (Frey et al., 2019; Iachini et al., 2018; Suldo et al., 2018), it is possible other MI training models, including some that are less resource intensive, could be efficacious. When other models are used, they should be described and evaluated using established MI fidelity tools. This line of research would help to identify the resources needed to promote competency among school-based interventionists similar to those standards used to train MI practitioners in other fields.

Since multiple school-based efforts have embraced primarily the relational component of MI (Reinke et al., 2012; Bradshaw et al., 2018; Gion et al., 2022; Lyon et al., 2019; Owens et al., 2017), it is critical future efforts describe any MI training provided and consider MI skill as a marker of implementation fidelity, even if it is only the relational component. It is also important for these relational component-only applications to attempt to isolate MI as a mechanism within their framework. Specifically, it would be helpful to know what impact MI has above and beyond business as usual or compared to MI that includes all aspects of the practice (i.e., relational component, technical component, and in MI inconsistent). While research in non-school-based settings has demonstrated the technical component of MI is more impactful on talk about change (Magill et al., 2018), it is possible this dynamic is different within the context of a school. However MI is used, future school-based MI efforts must not only describe how MI is infused into the model or practice but also report the procedures used to train interventionists.

Measuring Motivational Interviewing Fidelity

In addition to framing MI proficiency as a critical marker of implementation fidelity, it should be formally measured. There is an extensive literature base on MI fidelity and therefore researcher or practitioner-created measures to assess MI competency or proficiency (either through self-report or direct assessment) should be viewed with great caution, especially in the absence of strong theoretical support and at least some evidence of reliability and validity. Using established psychometrically-sound measures or adaptations of established measures such as the MITI or MI-SCOPE (see Frey et al., 2021; Pas et al., 2021), allows for comparisons of proficiency to well-regarded, albeit clinically based standards. That said, multiple fields (e.g., child welfare, education, health, behavioral health, mental health, social work) would benefit from the creation of less intensive measures with

strong evidence of reliability and validity to evaluate indicators of the technical component, the relational component, and MI inconsistent behavior in simulated settings (i.e., competency). Similarly, further development of, and research on, measures that can be used within practice (i.e., and not just in research studies) are needed.

Mechanisms of Change

More research is needed within and across all four links describing the mechanisms of MI, as outlined in Fig. 30.2 (Frey et al., 2020; Magill et al., 2018). For example, with regard to Link 1, while the school-based literature is developing, we need to develop a better understanding of what methods are useful for minimizing participant's use of MI-inconsistent behavior. To date, no school-based studies have directly examined the relationship between competency and proficiency and therefore this relationship requires additional research. There is very little evidence to support the hypothesized relationship between MI proficiency and talk about change (Link 3) and none to date that supports the relationship between talk about change and improvements in implementation fidelity. This area is ripe with possibilities, and additional information related to these causal relationships would benefit school-based applications of MI and advance the MI literature base generally.

Conclusion

A coaching framework based on the MI approach (Lee et al., 2014), a training and assessment system (Frey et al., 2017), three books (Herman et al., 2014, 2020; Rollnick et al., 2016), as well as two special issue journals (i.e., *Advances in School Mental Health Promotion*, volume 7, 2014; *Prevention Science*, 2021) have solidified interest in MI as a promising approach for optimizing the implementation of school-based preventive interventions and practices addressing mental health specifically, and social, emotional, and behavioral concerns more broadly.

Applications of MI in educational contexts have been used to support interventions targeting social-emotional development (e.g., Dishion et al., 2003; Frey et al., 2015; Reinke et al., 2011), health (Bogart et al., 2016; Pfeiffer et al., 2019) and academic performance (Iachini et al., 2018; Strait et al., 2012; Suldo et al., 2018; Terry et al., 2013). Continued refinement of MI applications in schools and evaluations of these efforts holds promise for increasing and improving the implementation of high-quality interventions that will positively impact student learning and development.

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Scaling-up Screening of Students' Behavioral and Mental Health Needs

31

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Increasingly schools have adopted tiered models of prevention and intervention in efforts to effectively support students. Examples of these models include Positive Behavioral Interventions and Supports (PBIS; Sugai & Horner, 2002), Response to Intervention (RTI; Fuchs et al., 2007), and more recently Multi-tiered System of Supports (MTSS; McIntosh & Goodman, 2016). These tiered models of support include universal supports which are provided to all students. When implemented well, universal supports will be all that is needed for approximately 80% of students to be successful (Stormont et al., 2012; Sugai & Horner, 2002). For those students in need of more support, selective (e.g., group-based interventions) and indicated (e.g., individualized interventions) can be provided. Though both the RTI and PBIS frameworks have been shown to improve social and academic outcomes under optimal conditions (Burns et al., 2012; Bradshaw et al., 2012; Horner et al., 2009) the well-documented reality is that most schools struggle to implement these practices as intended (Reynolds & Shaywitz, 2009). Among the many barriers to properly implementing an effective PBIS, RTI or MTSS model includes the lack of use of reliable and valid screening tools and procedures (Christ & Hintze, 2007). Importantly, a

basic tenet of these tiered models of support is that universal screening and supports are needed to identify which students might benefit from selective or indicated supports. Given most youth spend a considerable part of their days in school, universal screening within the context of schools is an efficient and effective approach to identifying problems early so that prevention and intervention efforts can be selected accurately and based upon the screening data collected (Burns & Rapee, 2016; McIntosh et al., 2010). The purpose of this chapter is to discuss the use of universal social-emotional and behavioral (SEB) screening within a tiered framework in schools to support student mental health. We will also describe the process for scaling up screening efforts to prevent and intervene with student mental health issues. Lastly, we will describe lessons learned from a large-scale project using universal SEB screening over the past 5 years and efforts to use these lessons to inform future practices.

Need for Universal SEB Screening

Universal SEB screening is integral to any model to support youth mental health. Within the United States, as many as 1 in 5 youth experience SEB problems (Centers for Disease Control and Prevention [CDC], 2013). Despite our knowledge of these existing mental health problems, as few as 20% of youth with mental health concerns

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are unidentified and do not receive adequate care (Kataoka et al., 2002; Merikangas et al., 2010). This is unfortunate because most mental health problems respond well to intervention and prevention efforts (National Research Council and the Institute of Medicine, 2009). Children and youth with unidentified or untreated mental health problems are likely to experience a host of deleterious outcomes, including academic underachievement and school failure (Patterson et al., 1992), peer rejection, delinquency, substance abuse (Copeland et al., 2007; Dishion et al., 2010; Reinke et al., 2012), underemployment and adult mental health problems (Arnett et al., 2014; Côté, 2014).

Many SEB problems are interrelated and compound one another (Darney et al., 2013; Herman et al., 2007; Reinke et al., 2008, 2012). As a result, mental health problems constitute a significant societal problem. In fact, between 2010 and 2020 the estimated cumulative economic loss due to mental illness was \$16.3 trillion dollars worldwide (Trautmann et al., 2016). As a society, we need to give more attention to prevention and early intervention to mitigate these personal, social, and economic costs. Universal SEB screening is a key component to enacting this forward progress.

Universal SEB Screening in Schools

Schools are an ideal setting to identify, prevent, and treat youth mental health problems (Herman et al., 2019; Kilgus et al., 2015). The use of universal SEB screening in schools can help to identify youth who would otherwise go unserved. Having mental health prevention and intervention services tied to universal SEB screening data that are embedded within tiered models of school-based supports can increase youth access to needed supports. In fact, youth are more likely to seek mental health services when they are available in schools (National Association of School Psychologists [NASP], 2016). The key feature of well-functioning tiered models of support is the systematic use of universal screening. Universal screening assists school decision-

makers in efficiently identifying at-risk students and placing them in appropriate interventions. To achieve this, schools need easily accessible, efficient screening measures that accurately identify students in need of supports across social, emotional, and behavioral areas of functioning.

Without reliable and valid assessment of all students in a school building many students who might benefit from additional supports may go unidentified. However, the data collected and so often used by schools to inform the actions ensconced within an effective school-wide PBIS, RTI, or MTSS model often do not account for or include screening tools to collect data on the contextual, individual, and social factors that are predictive of poor student outcomes (Olson et al., 2007). For instance, the National PBIS Technical Assistance Center provides a list of “systematic screening resources” to assist school staff who are developing a data-driven PBIS or MTSS in a school (see www.PBIS.org). However, many of the data sources listed on the site are actually indicators of behavioral problems that are already in place (e.g., office referral types and counts, suspension data, attendance data) and not reliable and valid screening tools that systematically collect data on student SEB risk factors predictive of challenging behaviors at school. There are several limitations to this approach. First, these types of data are reactive. That is, if we wait until students are being referred to the office or suffer a suspension or other exclusionary form of discipline for a preventable infraction, then our data are not predictive of an emerging problem but rather a measure of how serious the problem already is. Similarly, if we use attendance data to identify students who are missing school regularly, then the problem we are looking to prevent is already in place. Screening data, on the other hand, can provide data on other social, emotional, and behavioral health predictors associated with downstream discipline and attendance problems.

Decades of research tell us with a good deal of accuracy not only what these social and environmental factors are, but that these factors trigger problems as predictable points in the development of a person’s life course. As such, if we are able to detect the occurrence or presence of these

predictors, then we may be able to prevent the early indicators of discipline problems and attendance issues as well as downstream and subsequent negative outcomes such as school dropout, arrest, and under-employment or later serious mental health issues (Case & Katz, 1991; Malecki & Elliot, 2002; Malecki & Demaray, 2007; Pritchard & Wilson, 2003).

When universal screening is not used to identify youth who would benefit from supports, many students in need may be left out. For instance, a recent study examined differences in the number of students who would be identified for intervention services when a universal SEB screener was used within a tiered model of support (Splett et al., 2018). In a sample of 3744 students in grades 1–5 from six schools, the use of a universal SEB screener detected an additional 679 (18.1%) students who would benefit from supports than those without screening. This represented a 180% increase in students identified with SEB risk and need for mental health supports. In comparison to those students identified by the school without the use of the screener they were more likely to be male and have a higher level of academic and behavioral risk than those identified by the screener. This is an indication of the point made earlier that relying on ODRs or school archival data alone finds those students already exhibiting significant risk. The use of universal SEB screening can help identify students before they have high levels of risk, proving to be more preventative in nature.

Limitations of Universal SEB Screeners Preventing Widescale Uptake

Despite the push and need for universal SEB screening, very few schools actually utilize the practice. For instance, studies have found that only 2–13% of schools reported conducting universal screenings (Bruhn et al., 2014; Romer & McIntosh, 2005). Universal SEB screening measures exist. However, the persistently low rates of universal screening by schools suggest they have not overcome the principal barriers to their

use in schools. One notable barrier to the wide-scale uptake of universal SEB screeners is the significant cost to schools. For example, commonly used screeners such as the Behavioral and Emotional Screening System (BESS; Kamphaus & Reynolds, 2015), Social Skills Improvement System (Gresham & Elliott, 2008), and Systematic Screening for Behavioral Disorders (SSBD; Walker et al., 2014) cost about one dollar per protocol, not counting the hundreds in start-up costs (manual, scoring programs, etc.). When you multiply the cost per student across multiple administrations per year, it is easy to see why many schools do not conduct screenings. Even screeners originally developed under the public domain are eventually sold to publishing companies for widespread dissemination. Further, many of the currently available screening measures are lengthy and time-intensive. Time is a precious resource. School personnel tends to not have the resources or infrastructure to score, interpret, and apply the findings from existing screening tools. Unless this time is built into current practices and the culture of the school, many school personnel feel this as a burden rather than an important aspect of their job (Moore et al., 2020).

Another concern expressed by school personnel is that many available universal SEB screeners identify too many children as needing services (Volpe et al., 2010). Having large numbers of students identified as having SEB concerns places a huge burden on schools because resources are often limited. Many universal SEB screeners rely on national samples to identify statistical cutoffs to determine what is normative, leaving higher-risk school districts at a loss for how to intervene with the large numbers of student identified. Although the practice of using national norms follows conventional measurement development procedures, these scoring practices fail to take into account local norms (Levitt et al., 2007). The use of local norms takes into account for the context of the school and allows schools to know who are the highest-risk students in their building. Further, it guides areas for universal preventive work so school personnel is not left to intervene with one child at a time.

Other potential barriers to wide-scale scaling up of universal SEB screeners, include teachers being concerned that their referrals to problem-solving teams will be ignored if these students are not identified by the screener (Adelman & Taylor, 2006), that students who are identified for additional supports may feel stigmatized (Adelman & Taylor, 2006), and that school personnel may not be trained or feel qualified to conduct SEB screening or in using the data to make informed decisions (Walter et al., 2006). Lastly, it is not uncommon for youth to experience risk across an assortment of problem areas. Some screeners are limited in that they focus on a small number of risk areas, offering less information than ideal for truly intervening in a wholistic manner. For instance, many youths who experience externalizing problems also demonstrate risk for internalizing problems (Reinke et al., 2012). Further, some screeners may not offer input from more than one reporter (e.g., teacher report only). This can be problematic in that youth may be better reporters of internalizing problems than teachers, whereas teachers are often better reporters of externalizing and attention problems (Atzaba-Poria et al., 2004; Hartman et al., 2017). Having multiple reporters can increase the relevance and utility of universal screening data. The following describes the development of a universal SEB screener designed with the intent to overcome many of these barriers to scaling up universal SEB screening with a multi-tiered framework of prevention and intervention in schools.

Early Identification System (EIS)

The EIS was developed to be a scalable screener that increases schools' capacity to identify students who are experiencing SEB problems (Thompson et al., 2021; Herman et al., 2021). The EIS was designed to overcome many of the existing challenges in school-based SEB screening, and be easily scaled to multiple schools across multiple states. Specifically, the EIS accounts for the fact that many SEB problems occur together. For instance, more than one in

three school-aged youth with anxiety, depression, and behavior disorders have another co-occurring mental health concern (Ghandour et al., 2018). However, many existing screeners are limited in scope and focus on a few related areas of risk (e.g., internalizing and externalizing problems). The EIS is designed to assess students' risk across multiple areas of functioning in which we know that deficits in these areas lead to mental health problems (Huang et al., 2019). According to the developmental cascades theory (Patterson et al., 1992), SEB problems can interfere with adaptive functioning. Failures in adaptive functioning can lead to symptoms in other areas (Darney et al., 2013; Herman et al., 2007; Reinke et al., 2008) and as symptoms accumulate, they can contribute to a cascading of negative outcomes (Patterson et al., 1992). For instance, early disruptive behaviors and/or attention problems often precede and contribute to problems with peers and teachers which may lead to learning problems, school disengagement, and ultimately internalizing symptoms (Herman et al., 2007, 2008).

The pervasiveness and harmful effects associated with childhood SEB and academic difficulties were the driving force in the development of the screening items for the EIS. Items tapping risk for externalizing behaviors, social skill deficits, difficulties with peer relationships, internalizing behaviors, inattention, and problems with academic competence were developed due to their co-occurrence with challenging social behaviors and academic failure (Reinke et al., 2008). Indicators of being bullied were also included due to the association between bullying and serious negative outcomes, including suicide attempts and death (Gini & Espelage, 2014).

The EIS is part of a system that includes both student and teacher reports (i.e., the EIS-Teacher Report [EIS-TR] and the EIS-Student Report, [EIS-SR]). Students in grades third through twelfth grade complete the EIS-SR. Teachers report on students in grades Kindergarten through twelfth grade. Having a common assessment across grades has utility in that students can be monitored over time longitudinally. Further, the data can be aggregated in meaningful ways

within school buildings, districts, or when used widely across wider populations such as counties (see Reinke et al., 2018a, b; Thompson et al., 2017). This aggregated information allows for the monitoring of trends in problem areas and has implications for prevention, intervention, and policy. As noted earlier, having multiple reporters is also useful when identifying multiple areas of risk.

The EIS-SR has been found to be valid and reliable across elementary (Reinke et al., 2022), middle (Herman et al., 2021), and high school (Thompson et al., 2021). For instance, using a sample of over 5000 students from grades 3 to 5, the EIS-SR demonstrated adequate factors loading across the seven subscales (internalizing problems, externalizing problems, peer relationship problems, emotion dysregulation, school disengagement, relational aggression, attention, and academic issues). Further, the EIS-SR demonstrated measurement invariance across grade level, gender, and between Black and White students. The concurrent validity of several subscales was confirmed, and the subscales administered in the fall of the school year were predictive of important outcomes in spring, including attendance, disciplinary data, bully victimization, and academic achievement (Reinke et al., 2022).

The EIS-TR has been less studied to date. However, in a sample of elementary students receiving a universal social-emotional learning intervention, the EIS-TR subscales demonstrated sensitivity to intervention. The EIS-TR has a total of 41 items and six subscales, including attention and academic competence issues, peer relationship problems, bullying behaviors, emotion dysregulation, externalizing problem, and internalizing problems. Research is currently being conducted to evaluate the validity of the EIS-TR.

The EIS is feasible and efficient for school personnel to administer. This is important because time is a resource and the ever-increasing demands placed on educators' and students' time can interfere with academic instruction. Unlike other measures that are lengthy and time-intensive (e.g., Social Skills Improvement System

[SSIS]; Gresham & Elliott, 2008), the EIS was designed to be brief and easy to administer and complete. For instance, the EIS-SR takes students between 5 and 15 min to complete. Whereas, the EIS-TR, is administered by having teachers check a box if a student in the classroom exhibits a problem item. Depending on the number of students a teacher has in the classroom, it can be completed in as little as 10 min or 30–40 min with teachers who have multiple classes of students (e.g., middle school teachers). Regardless, teachers are able to complete the assessment in an extremely efficient manner and find the information very useful.

Both the EIS-TR and EIS-SR are administered through a web-based system. These assessments are automatically scored with easily interpretable reports immediately after screening is completed in a school. The reports generated provide school personnel with scores that are color coded as red, yellow, or green. If an area on a report is red, this indicates an area of concern. If an area is yellow this is an area that shows some risk. If the area is green, this is a strength and does not warrant intervention.

These reports are provided at the school level, grade level, classroom level, and individual level. School problem-solving teams can look at school-level areas of risk. For example, a school report that shows that peer relationship problems are red at the school levels is indicating that more than 20% of the school are having issues with peer relationships. Rather than review individual student data to see who has peer relationship problems (i.e., intervening one student at a time) it is a better use of resources to implement a school-level social skills intervention that focuses on building peer relationships (see Fig. 31.1 for example of a school level report). Furthermore, problem-solving teams can review individual student data to determine areas of risk for students. What can be particularly useful is to see where some students may have risk in multiple areas (e.g., externalizing problems, internalizing problems, and peer relationship problems) so that supports are provided across all areas. For instance, a team may choose to not simply focused on reducing disruptive behaviors in the



Fig. 31.1 School level report provided by EIS system

classroom by developing a behavior support plan, but also having the student involved in a social skills group to support building prosocial skills that may lead to improvements in peer relationships and lead to improvements in internalizing symptoms.

Linking Data to Interventions

An important aspect of using universal SEB screening is to be able to effectively link these data to the appropriate prevention and intervention supports. Disappointingly, many schools gather universal screening data but may fail to use these data within a problem-solving context (Silva et al., 2020). School personnel may not have the skills to use data from universal SEB screening or the knowledge of evidence-based interventions that can be used by school-based mental health personnel to support students who are identified by universal SEB screening data. Thus, it is important to help schools in (1) knowing how to use the data within a problem-solving process, (2) being aware of evidence-based prevention and intervention supports that are available, and (3) understanding how to link the data to these evidence-based supports and practices.

Problem Solving Teams

A vital component to scaling up universal SEB screening is to support schools in the use of problem-solving teams. Without an infrastructure to use the screening data, it is unlikely that the data will be used. If schools do not have a problem-solving team, step one is setting this up. While we cannot go extensively into how to set up and run effective problem-solving teams within a multi-tiered framework (see Reinke et al., 2018a, b for a detailed review), we will provide a few basic necessary processes. First, the team composition needs to be taken into account. Ideally, teams are composed of six to eight school personnel members, who include an administrator, a general education representative, special educator, school psychologist, and other school mental health providers such as a school counselor. Ensuring that individuals with both behavioral and academic intervention expertise are useful, particularly given the common co-occurrence of behavioral and academic problems for students who struggle (Reinke et al., 2008). While problem-solving teams are collaborative in nature, having a strong facilitator is key. Successful facilitators should have administrative support, knowledge of general problem-solving processes, understanding of specific school or

district MTSS and problem-solving processes, extensive understanding of the use and interpretation of data, and good organizational and communication skills.

The roles and functions of team members vary across problem-solving models. Ideally, universal screening data help to identify problem areas at the universal level (school level) and at the student level. Teachers may also bring cases to the team to review based on specific data they gather in the classroom. These cases are then reviewed within the context of the problem-solving process, with the facilitator guiding the process. Some teams utilize timekeepers and note-takers to support the process. Effective teams use data to identify the problem(s), assign team members to gather additional data, facilitate monitoring of student progress, and suggest or implement interventions. Action plans for who will be responsible and what will be accomplished are completed with a specific plan for a follow-up to determine whether the plan was effective for the student and what modifications are needed.

Unfortunately, many problem-solving teams can be highly inefficient and focus on the wrong problems (Burns & Symington, 2002). Having a structured model for how to use data, identify problems, determine solutions to the problems, and monitor whether the problem is solved using data can be useful. Problem-solving models that provide more explicit guidance in the process may be needed. One example of such a model, aptly named "PST 1-2-3" (www.pst123.com) for its three-meeting cycle used to execute problem-solving processes, was developed to provide explicit guidance to teams with inefficient or ineffective problem-solving processes. Schools may develop their own processes and forms to help guide the problem-solving process as well. Importantly, building problem-solving teams that are efficient and use data to inform interventions and progress monitor the effectiveness of these interventions are needed if we are to effectively scale up universal SEB screening initiatives.

Evidence-Based Interventions and Practices

Data are only useful if it is used to guide interventions. Interventions that do not target the area of risk or which are ineffective in ameliorating risk because they are not scientifically or theoretically sound can lead to schools feeling that gathering and using universal data has little utility. Importantly, selecting an intervention that is not evidence-based (EBPs) or which is not aligned with the area of risk can result in null or negative outcomes. Thus, supporting schools in being aware of EBPs and how to select appropriate EBPs is needed if scaling up of universal SEB screening is to occur.

School personnel often have to sort through all of the available options while confronting internal and external pressures to adopt particular programs without needed data to inform these decisions (Williams & Cole, 2007). Making schools aware of EBPs and giving them tools to link data to the correct EBP is needed if schools effectively use universal SEB screening data (Levitt et al., 2007; Maras et al., 2014). Further, even when school personnel and decision-makers express favorable attitudes about empirically supported programs, they may lack the scientific literacy skills needed to make informed decisions about which programs are best (Williams & Cole, 2007). School districts would benefit from guidelines for identifying best practices and for developing criteria that can be used to select the best programs. Finally, school districts would benefit from assistance in evaluating the effectiveness of interventions to be sure they are having the intended impact. Ongoing data collection is needed in order to better understand the full impact of EBP activities in schools (Adelman & Taylor, 2000; Greenberg, 2004). It is also essential that evaluation and monitoring tools are used to determine the effectiveness of the process (Biglan et al., 2003).

EIS Model for Scaling-up Universal SEB Screening Within a Tiered Model of Prevention and Intervention

A comprehensive framework that includes practical tools that schools can use to identify areas of need, support the selection of appropriate EBPs, monitor the implementation fidelity of EBPs, and progress monitor effectiveness are needed. Such models for school mental health may reduce the gap between research and practice. A model has been developed and used over the past 5 years based on our experiences in using universal SEB screening data within a multi-tiered framework. This section describes the EIS model for scaling up universal SEB screening.

The EIS model was developed in response to a collaboration between six school districts and the University of Missouri researchers. The school districts were interested in employing a systematic process for preventing and intervening in youth SEB problems. As such, a process for conducting universal SEB screening was developed. The EIS universal screening system described earlier was developed alongside school practitioners. The EIS items and subscales were identified as areas that schools found to be important. Further, school personnel supported the development of the screener by utilizing and providing feedback on the measure itself and the process. Both the student report and teacher report of the EIS were implemented three times a year, to gather data at the start, middle, and end of the year on all students across the districts. A total of approximately 25,000 students were thus screened three times per year. These data were then used to guide school-level prevention interventions (e.g., universal social-emotional learning interventions; suicide prevention efforts) as well as inform group-based and individual student supports. In addition, the data provided guidance for areas of professional development that would be helpful to school personnel. For instance, in a school where large numbers of students were reported to have externalizing problems can be indicative of the need to support school personnel in training to learn effective

classroom management practices and de-escalation training.

To support the use of the EIS data within a problem-solving context, each school is assigned a trained mental health professional to provide technical assistance to schools. These mental health professionals, called regional coordinators in the model are assigned to multiple schools. They meet with problem-solving teams (and in some cases lead these meetings) to review the data following each EIS administration. The data are readily available in computer-based reports that are easily interpreted (see Fig. 31.1). Regional coordinators help guide intervention supports and to provide direct services to youth in need of group and individual supports.

Linking data to the correct interventions is vital. As such, a manual of evidence-based interventions and practices aligned with each subscale of the EIS screener is available for use by schools. This manual was developed to represent current EBPs in the areas of attention and academic competence issues, internalizing problems, externalizing problems, emotion dysregulation, peer relationship problems, bullying, school engagement, and suicide prevention. These EBPs are contextualized to indicate the age appropriateness of the supports for elementary or secondary schools. In problem-solving meetings, the manual is utilized to ensure that data are directly tied to interventions that will impact outcomes on areas of risk. For instance, if school-level reports indicate that 20% or more of the student population would benefit from improving peer relationship skills, an evidence-based social-emotional learning curriculum that teaches prosocial and peer relationship skills (e.g., Second Step) is identified. Once the intervention is selected, the school develops plans for training staff, implementing the rollout of the intervention, provision of coaching to support teachers with implementation (offered by regional coordinators), monitoring of fidelity to the intervention, and evaluation of the impact of the intervention on student outcomes over the course of the school year. Similarly, students who would benefit from a group-based intervention and individual behavior support planning, individual therapy, and

community supports are identified using the data and linked to evidence-based supports.

As part of the EIS model, a measure to evaluate the fidelity to the comprehensive school mental health model was developed. The fidelity measure is completed by the regional coordinator and school staff from each building. Items on this measure are directly related to specific activities that each school should be doing to be implementing the model with fidelity. The measure evaluates school-level fidelity across three key areas: (1) data collection and review of universal screening data, (2) intervention planning and implementation across universal, selective, and indicated level, and (3) progress monitoring and evaluation of the effectiveness of interventions. The measure has a total of 34 items. Items include questions such as, "Did the school use school-level data to determine if universal school-level or grade-level interventions were needed?," "Did the identified Tier 2 supports match the needs identified by the data?," "Did the school gather progress monitoring data for Tier 3 supports?," "Did the school use pre-post data to determine if the intervention was effective?" The purpose of the measure was to highlight areas for improvement with regard to fully implementing the model.

A recent study by Reinke et al. (2021) investigated the association between fidelity to the model and student outcomes was conducted. The purpose of this study was to investigate patterns of youth SEB risk over time among third through twelfth-grade students and the association of these risk patterns with fidelity to the comprehensive school-based mental health model. Longitudinal findings indicated that the overall growth of SEB problems declined over a 3-year period. Growth Mixture Modeling was used to determine classes of student risk. Four classes of students were identified: (1) students with high levels of problems, (2) students with decreasing problems, (3) students with increasing problems, and (4) students with stable, low levels of problems. These growth trajectories were associated with fidelity to the model, in that trajectories where students with higher or increasing problems were more likely to be from schools with

lower fidelity (Reinke et al., 2021). These findings indicate that for tiered models of supports to be effective in systematically reducing student SEB risk over time, fidelity to a model that uses universal SEB screening, links data to EBPs, monitors implementation, and evaluates the outcomes of EBPs is important. Models such as the EIS will likely be impactful when schools are able to adopt the use of universal SEB screening and do so with fidelity.

Lessons Learned and Recommendations for Practice

Despite the evolution and wide-scale implementation of MTSS and related multi-tiered frameworks, one missing ingredient to their impact is the lack of universal screening of the SEB health of students. Very few schools administer such screeners and instead rely on blunt and reactive indicators such as ODRs or attendance problems (Bruhn et al., 2014; Romer & McIntosh, 2005). Until most or all schools are using efficient and technically adequate measures for screening the social and emotional well-being of students, MTSS will not make a dent in the large and growing number of youth experiencing mental health concerns in the United States.

The non-use of universal SEB screeners in schools is not due to a lack of such measures. For instance, there are screeners that are freely available (e.g., the Student Risk Screening Scale for Internalizing and Externalizing Behaviors; Lane et al., 2015, 2016) and commercially available (e.g., Behavioral and Emotional Screening System; Kamphaus & Reynolds, 2015). Indeed, many behavior screeners have been developed and evaluated with most demonstrating acceptable technical adequacy. The problem it seems as demonstrated by the long list of barriers described previously is that most existing measures lack utility or contextual fit with schools. Cost, infrastructure challenges, and concern about the overburden of intervening with identified youth are chief among these concerns.

We designed the EIS to overcome many of the implementation barriers associated with existing

screeners. In particular, we set out to develop a tool that not only had adequate technical qualities but also achieved higher levels of construct validity as articulated by Messick (1995). These include the relevance, utility, and social consequences of a measure. To accomplish these goals, we believe that screeners should not be developed in isolation from the intervention contexts or systems where they will be used.

To maximize relevance, EIS measures each of the most commonly experienced SEB factors that are known risks for negative social and academic outcomes. We also developed the EIS to be an online tool that automatically calculates scores and presents the information back to users in functional ways that they can act upon. In particular, each risk condition examined by the EIS is malleable and can be prevented or treated by existing school- and evidence-based interventions.

From the outset, we were concerned about the values implications associated with SEB screening and set out to undo problematic views of mental health perpetuated by most screeners. For instance, the common use of national norms for making screening decisions about risk implies the problem is static and within the child regardless of context. Instead, local norms, which the EIS uses, clearly communicate that the problem is intimately tied to the social environment that surrounds it. An additional advantage of local norms is that they are more consistent with MTSS frameworks which have used local norms to identify student academic risk for decades (see Vaughn et al., 2003). Local norms overcome the usability concern that too many youth will be identified by national norms for a school to provide services to by holding constant the number of youth identified as having risk (e.g., 5% will be identified as having high risk within a school building). The EIS and the reporting and intervention system that surrounds it further communicate the situational nature of risks by how the data are reported; school teams see not only individual students at risk but also school and grade level risks as indicated by excessive percentages of youth experiencing particular types of problems.

Finally, we spent considerable time reflecting on the social consequences of universal SEB screeners as we developed the EIS. Some primary indicators of positive social consequences of using the EIS are whether a school administers it to all youth, whether youth identified as being at risk receive services, and whether educators change their own behaviors in response to EIS reporting about the social context of SEB concerns. We now have data showing that schools across developmental contexts administer the EIS to all or nearly all youth in a building, both student and teacher ratings, three times per year; that the vast majority of youth identified as needing services receive it; and that schools administering the EIS implement more universal prevention intervention and provide professional development training to staff based on the EIS data (Herman et al., [in press](#)).

Conclusion

Schools urgently need tools that they can use to meet the growing demand for mental health supports among their students. Although many tools exist, most fail the usability test. The EIS provides an alternative for schools to use to proactively, efficiently, and accurately screen youth with a high contextual fit and modest burden. Continue use of the EIS and like measures within complementary systems of support hold promise for reducing the societal prevalence and burden of youth mental health concerns.

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MATCHing Treatment to the School Context: School-Based Implementation of Transdiagnostic, Modular Psychotherapy

32

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Introduction

Schools are a common point of entry into the mental health system, and according to some experts, the most common context for delivery of mental health care for young people (Farmer et al., 2003; Green et al., 2013). However, experts have noted a major gap in the effective use of evidence-based treatments (EBTs) in these settings (Evans & Weist, 2004). In our work, we have tried to address this gap. Along the way, we have identified some aspects of EBTs that pose a challenge to effective implementation in real-world community settings, as well as aspects of the infrastructure and support system available in schools that may complicate efforts to implement empirically supported treatments. In this chapter (a) we note some of the challenges of school-based mental health that we aimed to address in our work, (b) we describe the treatment program

we used and how its design seemed to offer a way to address those challenges, and (c) we describe our experience when we actually implemented the treatment in schools.

Challenges in School-Based EBT Implementation

Implementing EBTs in schools poses some distinctive challenges, relative to clinics and other settings that are designed for clinical care (Fazel et al., 2014). One challenge is that the young people who are referred for school-based care often present with multiple emotional and behavioral problems, sometimes quite diverse, and this may conflict with the more narrowly and precisely focused treatment design that is common in standard EBTs. Another challenge is that school clinicians face many competing demands, including a need to cope with unpredictable events that can impact the regularity and duration of treatment sessions. This contrasts with the design of many EBTs that are structured with the implicit expectation of multiple, regularly scheduled treatment sessions of similar duration, often 50–60 min. In a recent meta-analysis of 447 youth psychotherapy trials spanning more than 50 years, the mean number of prescribed sessions was 16.54 (Weisz et al., 2017). In contrast,

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school-based sessions—constrained by school calendars and schedules, school clinician caseloads, and the inherent unpredictability of events in the school clinician’s workday—are typically much fewer in number, and much shorter than would be the case in an outpatient clinic (Lyon et al., 2011). In the best case, school clinicians may struggle to break down an hour’s worth of content into the shorter length of a typical class period; but in many cases, much less time is available, and sometimes a 10-min check-in is the only available option (see Beidas et al., 2012).

In addition to their clinical duties, school clinicians are often tasked with academic advising and other administrative tasks unrelated to providing mental health services (e.g., Strein et al., 2003). This may limit their ability to meet consistently with their young clients. School clinicians also face the challenge of aligning their clinical objectives with the goals of the school system. To illustrate, a completely understandable scheduling barrier sometimes faced by school clinicians is teachers’ reluctance to allow students to leave class for therapy (Langley Nadeem et al., 2010), particularly in the case of students who are not doing well in the subject matter being covered. In such situations, school clinicians may opt to see students during school breaks (e.g., lunch and recess), which may reduce both session length and students’ motivation to attend and engage in sessions. Thus, in several respects, the timing, length, and frequency of sessions in schools may not be an ideal fit for the rather standardized design of traditional EBTs, which we will discuss below.

School clinicians may also face challenges related to the infrastructure of their school’s mental health program (Evans & Weist, 2004). These may include limited opportunities for training and clinical supervision, administrative support, session planning, and other resources that may be needed to successfully implement evidence-based approaches (Eiraldi et al., 2015; Graczyk et al., 2003). Clinicians may also have limited physical space in which to do their jobs. The demand for offices may exceed the supply, and clinicians often have to exercise creativity and resourcefulness to address a lack of space.

Sometimes sessions may have to be held in an unused classroom, or even a supply room. Our research team encountered an instance in which a child received a therapy session while his classmate took a timeout in the corner of the same room. These challenges may be exacerbated in lower-income school districts, where resources have to be stretched, and staff turnover also tends to be higher (Mellin & Weist, 2011).

Clinicians’ and administrators’ attitudes about EBTs may also influence implementation, and so may their views about which student problems should be prioritized for mental health care. In some settings, conduct problems may be prioritized because of their potential to disrupt classroom activity; in other settings, internalizing problems such as depression and anxiety, may be prioritized because they are deemed more appropriate for school-based counseling, relative to problems perceived as being more severe and requiring intensive treatment (e.g., trauma) or those exceeding the clinician’s ability to effectively manage in the school setting (e.g., conduct problems; Corteselli et al., 2020). Another complication is that students with more severe emotional and behavioral needs often show lower levels of engagement in school-based services, reflected in inconsistent attendance and premature discontinuation of services, sometimes after attending just one session (Atkins et al., 2010). In contrast, students with less severe emotional and behavioral needs often show greater treatment engagement and continue receiving services for months on end (Bruns et al., 2016), and this may further limit access for students with more severe problems.

A significant implementation barrier identified by both school administrators and clinicians is the crisis-driven nature of the school environment (Langley et al., 2010). For example, Evans and Weist (2004) noted that during implementation of a social skills group in a Baltimore high school, the focus of a number of groups was derailed due to crises in the lives of the participants, including suicidal thoughts and the shooting of a friend. We can attest to our own experiences as clinicians and consultants in under-resourced school settings when plans for

sessions were changed from a skills-focus to emotional support due to crises in students' lives, including the death of a friend and the incarceration of a parent.

The design of most EBTs may not be ideal for addressing the challenges noted here. While EBTs represent a significant advance in mental health care, and they often outperform usual clinical care (Weisz et al., 2006, 2013), most of them have two design features that can limit flexibility: they are focal and linear. Most standard EBT protocols focus on a single disorder or homogeneous problem cluster (e.g., anxiety-related disorders), and treatment content is expected to be delivered in a relatively fixed sequence of sessions. In contrast, as noted above, youths referred for treatment in schools often present with multiple, sometimes quite diverse co-occurring problems (Weisz et al., 2015), requiring broader reach than most EBTs permit. Also in contrast to the linear and rather prescriptive design of many EBTs, the most pressing concerns and problems of students in treatment can shift markedly from week to week, requiring flexibility and agility on the part of the clinician, and perhaps a treatment program designed to accommodate shifts throughout treatment in the problems addressed and the goals pursued when they are addressed. Ideally, the flexibility of such a treatment approach might include accommodating marked variability in session duration, thus accommodating the variations in available time to which we referred previously.

Transdiagnostic, Modular Interventions

Treatments that are transdiagnostic and modular may offer a way to retain the use of EBT content while offering the breadth, flexibility, and personalizability that may be needed for treatment in the school context (Ng & Weisz, 2016). Spanning multiple diagnostic categories and problem types can boost the breadth of coverage for students whose challenges and needs can be quite diverse. Modularity offers additional advantages. Modular treatments are organized around separable treat-

ment components, or *modules*, each focused on a specific therapeutic strategy (Chorpita et al., 2005). Similar to more standard EBTs, modular interventions comprise evidence-based therapeutic strategies, but in contrast to standard EBTs, the sequence of these strategies is not adherent to standard order. Instead, modules may be included or excluded for any specific youth and administered in an order tailored to fit that youth, often guided by decision aids, such as flowcharts. Transdiagnostic, modular treatment approaches may be particularly well-suited to school-based mental health care (Lyon et al., 2014), maintaining some of the benefits of standard manualized EBTs while also offering a flexible framework for tailoring treatment components to fit the needs of students and characteristics of the school environment.

The transdiagnostic, modular treatment we have used in the school context is *Modular Approach to Therapy for Children with Anxiety, Depression, Traumatic Stress, or Conduct Problems* (MATCH; Chorpita & Weisz, 2009). The remaining sections of this chapter describe the MATCH model and our experience using it within school mental health systems in the context of a multi-site randomized controlled effectiveness trial. Specifically, we describe MATCH, summarize how we implemented it in schools, and highlight some challenges faced and lessons learned.

The MATCH Protocol and Evidence of Effectiveness

Overview of MATCH

MATCH was developed to address challenges associated with implementing EBTs in community settings, by accounting for characteristics frequently observed among clinically referred youth in community settings (Weisz et al., 2015). MATCH was designed to efficiently address four broad problem areas of anxiety, depression, traumatic stress, and conduct. MATCH consists of 33 modules, each detailing a specific therapeutic strategy derived from common elements of

EBTs for youth anxiety, depression, post-traumatic stress (i.e., cognitive-behavioral therapy; CBT), and conduct problems (i.e., behavioral parent training). An illustration of this modular treatment design appears in Fig. 32.1. Each module provides a detailed rationale and instruction for implementing the associated treatment procedures. MATCH also includes a series of flowcharts displaying an empirically informed default sequence of modules for each problem area, with alternative pathways to guide clinical

decision-making when changes in treatment focus or therapeutic strategies are warranted. MATCH’s transdiagnostic composition may help school clinicians address the heterogeneity and comorbidity of their caseloads (Deighton et al., 2019). MATCH’s flexibility regarding session content allows clinicians to adjust in response to changes in students’ needs, which—as noted previously—tend to shift during the course of treatment (Chorpita et al., 2005; Weisz et al., 2015).

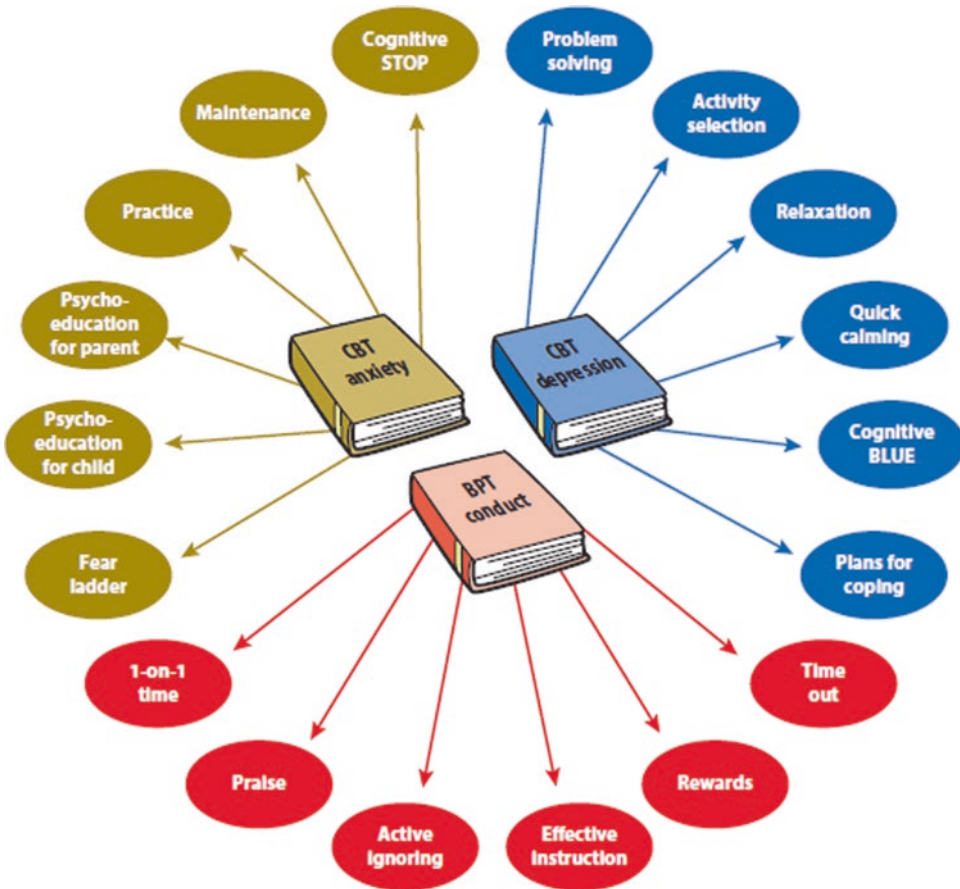


Fig. 32.1 An illustration of the design of the transdiagnostic *Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems* (MATCH; Chorpita & Weisz, 2009). MATCH is composed of 33 modules—brief descriptions of intervention procedures—derived from evidence-based treatments for various problem categories. The modules form a menu from which the clinician chooses those deemed to fit the needs of each individual client. CBT cognitive-behavioral

therapy, BPT behavioral parent training, BLUE an acronym representing four patterns of negative thoughts associated with depression: Blaming myself; Looking for bad news; Unhappy guessing; and Expecting bad things to happen. (Figure reproduced with permission from John Weisz and reproduced with permission from the Annual Review of Clinical Psychology, Volume 11 © 2015 by Annual Reviews, <http://www.annualreviews.org>)

Research on the Effects of MATCH

In two of the early randomized controlled effectiveness trials (RCETs), MATCH was found to significantly reduce youth mental health problems in various community settings, and to a greater degree than alternative treatments. The first RCET (Weisz et al., 2012) included 174 youths (aged 7–13) referred through typical channels for treatment to community clinics and school-based mental health settings. MATCH (using the original version designed for anxiety, depression, and conduct problems, but not trauma) was shown to be more effective than usual clinical care and standard, established EBTs for anxiety, depression, and conduct problems (i.e., CBT for anxiety and depression; behavioral parent training for conduct problems), on measures of youth- and caregiver-reported internalizing and externalizing problems and idiographic measures of top problems. Effect sizes, combining youth and caregiver-report measures, ranged from .48 to .62 for the MATCH vs. usual care comparisons, and from .50 to .71 for the MATCH vs. standard EBTs comparisons.

In a follow-up study, MATCH continued to outperform the usual care condition on youth- and caregiver-reported symptom measures 2 years later (Chorpita et al., 2013). In another RCET (Chorpita et al., 2017), MATCH (using the current version designed for anxiety, depression, conduct problems, and trauma) was compared to usual clinical care that consisted of evidence-based practices for youths aged 5–15. In this study, youths treated with MATCH showed significantly faster rates of improvement on clinical measures of youth- and caregiver-reported externalizing ($d = .38$ and $.50$, respectively) and internalizing problems ($d = .46$), and youth and caregiver idiographic measures of top problem severity ($d = .56$ and $.38$, respectively) compared to youths receiving treatment as usual. In a more recent randomized trial comparing MATCH to usual clinical care (Weisz et al., 2020), participants (156 youths, aged 6–16) in the MATCH condition showed significant improvement on all post-treatment measures of youth- and caregiver-reported internalizing and externalizing prob-

lems, and idiographic measures of top problems, but MATCH did not outperform usual clinical care. Effect sizes, combining youth and caregiver-report measures, ranged from .00 to .40 for the MATCH vs. usual clinical care comparisons. Similar findings emerged from a fourth RCET conducted in community mental health clinics in New Zealand (Merry et al., 2020); that trial showed substantial symptom reduction in MATCH-treated youths on measures of youth- and caregiver-reported internalizing and externalizing problems, but no significant differences in the rates of change between MATCH and usual care conditions for youth- and caregiver-reports ($d = .00$ and $-.02$, respectively).

One potentially important difference between the two most and two least successful trials is that the former included individual weekly meetings of each clinician with a MATCH consultant, to help guide the implementation of this rather complex and unfamiliar treatment, whereas in the least successful trials clinician support was reduced to group consultation, with each clinician having relatively little time to receive guidance on his/her specific cases. Mindful of this difference and its possible consequences, we arranged for individual clinician consultation to be used in the school-based RCET that is the focus of this chapter.

Implementation of MATCH in Schools

We sought to assess whether MATCH was effective in reducing mental health problems and improving academic outcomes when delivered as a school-based intervention. As noted earlier, schools have been identified by some experts as the most common entry point for mental health care among youth in the United States (Farmer et al., 2003; Green et al., 2013), and transdiagnostic modular psychotherapies may be particularly well-suited to the school context, where clinicians see students with diverse, often co-occurring, and evolving mental health needs (Lyon et al., 2014). Thus, we conducted a multi-year RCET of MATCH in 27 Boston-area public schools, with a sample of 168 students (aged

7–14). The study was funded by the Institute of Education Sciences.

Overview of MATCH School-Based Trial Procedures

A thorough description of the trial procedures is beyond the scope of this chapter (for a more detailed description, see Harmon et al., 2021). Here we briefly highlight information pertinent to our implementation of MATCH in schools. With regard to study design, we had originally planned to randomly assign students individually to MATCH versus usual care within each school. However, this design proved to be unacceptable to school clinicians, as many students most in need of care had ongoing relationships with particular counselors—some dating back years—and disrupting those relationships for purposes of a study was deemed inappropriate, possibly even ethically marginal. So, we randomized school clinicians (rather than students) to MATCH versus usual care conditions (i.e., MATCH training was provided to usual care clinicians *after* the end of the trial). School clinicians assigned to the MATCH condition completed (1) 6 days of training in the treatment protocol and (2) weekly in-person individual consultation with a MATCH expert (i.e., a master’s or doctoral-level clinician with previous MATCH training and experience) while providing MATCH treatment to one or more students in their caseload (see Corteselli et al., 2020 for additional details about school clinician participation). Of note, no modifications were made to the MATCH protocol before or during the trial to adapt the treatment to the school setting, but adjustments were made in *how* some MATCH contents were delivered, in response to school conditions.

MATCH Implementation Challenges and Lessons Learned

Throughout the multi-year effectiveness trial, we learned about the many complexities of school-based therapy and developed ideas for

improved implementation for future studies. Below, we summarize these challenges as they arose in the research process, and we end each section with lessons learned. It is our hope that these lessons learned will be helpful to other researchers and practitioners aiming to implement MATCH or other types of modular programs in schools, as well as those aiming to design and implement studies to test such models.

School District Recruitment The initial study protocol proposed a 4-year trial in one large Boston-area school district. After 1 year, we realized that additional school district partners were necessary in order to recruit a sufficient sample of student participants, as youths typically continue to see the same clinician within their school across multiple years, thus limiting opportunities for new referrals within the same pool of clinicians. Accordingly, we eventually recruited and partnered with four additional school districts over the course of the study. Due to the aforementioned limitations, some of the school districts were involved for 1–2 years before we ran out of new school clinicians or students to enroll. Identifying and successfully recruiting school districts proved to be laborious—often involving calling and emailing school personnel previously unfamiliar with the research team who were often overworked and overwhelmed with myriad job duties. Although we ultimately recruited the number of school districts necessary to meet our sample size requirements, we found that partnering school districts that were able to enroll significant numbers of students tended to be those with the monetary and personnel resources necessary to commit to responsibilities outside of their typical job duties (we did compensate school clinical and administrative staff for their time and effort, but most had little time to spare, given their demanding jobs). Similarly, among the districts successfully recruited, administrators varied widely in available bandwidth to attend to and monitor the study, another variable that was closely linked to systemic factors (e.g., limited school funding, with resulting staff shortages, and location in an under-resourced

neighborhood, with high levels of student need unrelated to the study).

Lessons Learned We recommend that implementers of MATCH work to establish multiple school partnerships well before the start of the study and collaboratively develop relationships with school stakeholders (e.g., district-level personnel, principals, clinical leaders and staff, and teachers) to work through how best to implement the model in a way that reduces the burden and maximizes the benefit for the school community—particularly for under-resourced schools.

Participant Recruitment In addition to the difficulties faced while recruiting school districts, recruiting clinician, teacher, and student participants was effortful and resulted in many lessons learned. Like school administrators, clinicians (who had weekly study activities) and teachers (who had monthly study activities) worked long hours and had a wide variety of job-related tasks that made additional commitments logistically difficult. As clinicians were randomized to the treatment versus control conditions, the students enrolled in the treatment condition were those who were already seeing, or newly assigned to see, a MATCH-trained clinician. Accordingly, and following clinician and school administrator preference, the participating clinicians were responsible for informing their students and their students' caregivers about the study and providing the research team with the families' initial consent (e.g., for a phone call to describe the study more fully) and contact information. Student recruitment thus depended on school clinician availability and possibly their level of motivation to participate in the study and add new study cases to their workloads.

In fact, of the 44 clinicians trained, only 30 implemented MATCH with at least one student. Anecdotal information suggests that some participating clinicians may have been unable to enroll students because they changed jobs during the study or did not have time, that the families they approached were not interested, or possibly

that some clinicians were unwilling to commit to the ongoing requirements of the study. Given the procedure we followed, it was not possible for us to know what wording was used in any instance to describe the study opportunity to families. Recruitment of student participants also varied depending on which study condition clinicians had been randomly assigned to, with MATCH clinicians more likely to enroll students; this resulted in a marked difference in participant sample size for MATCH ($N = 85$) versus usual care ($N = 57$).

Overall, the process of recruiting students and caregivers relied on our ability to engage school clinicians in that aspect of the study procedures, and on their success in enrolling youths and caregivers; and multiple factors appeared to have an impact on the resulting enrollment numbers. Throughout this project, we identified and tested several methods of engaging clinicians. In every district, we offered continuing education credits for participation in our MATCH training. In some districts, school administrators offered additional help (e.g., sending encouraging emails) and worked with the research team to identify times and places for us to meet in person with clinicians (in some cases, in mandatory staff meetings).

We also provided several luncheons and dinners, inviting school clinicians to talk about their involvement in the study, ask questions, discuss concerns, and get to know the research team. Likewise, we delivered small tokens of appreciation (e.g., mugs, candy, snacks, and cards) to participating clinicians throughout the year (especially during holidays) and opted for as many in-person meetings (versus phone or video calls) as possible. In sum, we found that getting to know the clinicians in settings outside of school (e.g., meals together) and expressing our appreciation in a variety of ways was well received and often boosted clinician engagement, and thus student recruitment. The benefits for us were substantial—in particular, the opportunity to meet some remarkable clinicians whose dedication to the students they served was genuinely impressive.

Lessons Learned The process of recruiting clinicians as implementers of MATCH relied heavily on our ability to engage them at various stages and often. However, in a typical, school-based clinical setting, some of the steps we took would be impractical, at least to the extent detailed above. Alternatively, offering incentives such as continuing education credits, reimbursing clinicians for training costs, and having school administrators offer verbal and structural support may increase the feasibility of skill-building, and may also boost engagement.

School Clinician Training Due to school clinicians' many job demands during the academic year, we offered our MATCH trainings during summers—in some cases in the form of one 6-day in-person MATCH training in a single week, and in other cases in 1- to 2-day installments spread over multiple weeks. Scheduling the trainings involved coordinating the schedules of research team members and school clinicians, which were often complicated by childcare duties and summer vacations. Although the training was generally well received by school clinicians (e.g., role-plays were deemed particularly helpful), some later noted in qualitative interviews that the training was not sufficiently applicable to the school setting and that it would have been helpful if trainers had more expertise in school-based services (Corteselli et al., 2020).

Anecdotally, several concerns were raised during trainings about two of the MATCH protocols: trauma and conduct. For example, several clinicians verbalized during the training and/or in their written feedback about the training, that they believed it was inappropriate to discuss trauma in schools (e.g., they believed that it might dysregulate students before returning to class). Relevant to the conduct module, several school clinicians noted that they rarely worked with parents and thus did not view the conduct protocol, which primarily involves parent training, as particularly relevant to their work in schools. Indeed, the dearth of parent involvement in treatment and school clinicians' reluctance to address trauma in therapy, were themes echoed throughout the trial (e.g., during training and consultation, and dur-

ing follow-up interviews; Corteselli et al., 2020) and in a previous study of MATCH in schools (Lyon et al., 2014).

Lessons Learned An important lesson we learned throughout this process was that MATCH, which was originally developed primarily for clinical care settings, did not fit the school context in some significant respects. A challenge for our field is evaluating the extent to which such mismatches should be accepted as the nature of reality versus challenged through new strategies for working with school personnel and stakeholders. It might be possible, for example, to develop and implement strategies for engaging caregivers in therapy; but perhaps the fact that caregivers are so often at work when their children are at school would make this impractical.

On the other hand, the unpredictability of school clinicians' workdays could make it difficult for them to guarantee the significant blocks of time that effective caregiver training would require. It might also be possible for trainers of the MATCH protocol to stress the importance of addressing trauma in school therapy with reluctant clinicians, noting that research suggests that trauma-related outcomes may be effectively addressed in schools (Yohannan & Carlson, 2019). However, the research suggests that this may require that successful implementation be prioritized (Powell et al., 2020), and the conditions under which school clinicians work could make that difficult to ensure, with the concomitant risk of precisely the dysregulating effects on students about which some clinicians in our MATCH training had expressed concern. Ultimately, decisions regarding which MATCH modules to administer, and in what order, are made by clinicians based on the perceived needs of the students they are treating, and their own clinical training and expertise. Research suggests that clinicians can be systematic and rational in their decisions regarding treatment techniques within a modular treatment approach (Park et al., 2018). From the individual clinician's perspective, an advantage of a modular treatment program, relative to a standardized treatment protocol, is that the modular program can offer a menu of intervention procedures from

which the clinician may choose, with the option to select preferred procedures and pass over options that seem inappropriate based on the clinician's individual judgment.

MATCH Consultation Various facets of weekly 1-h consultation meetings with a MATCH expert were evaluated by school clinicians in a qualitative study on provider-level implementation (Corteselli et al., 2020). For instance, all school clinicians in this study found at least one aspect of consultation helpful (e.g., problem-solving, generating ideas for future sessions), but some noted that finding an hour to meet on a weekly basis was difficult. From the standpoint of the research team, we too found it difficult to find time to meet with all of our clinician participants weekly, especially given that meetings were in person and thus required ample time for driving, in addition to significant preparation time and effort (e.g., listening to recorded therapy sessions and creating session agendas).

During our consultation meetings, several unanticipated themes specific to school therapy came up that required consultants to think flexibly about the MATCH protocol and make school-specific adaptation recommendations. For example, on average, school therapy sessions lasted about a half-hour ($M = 27$ min for MATCH sessions; $M = 29$ min for usual care sessions)—much shorter than the 50-min session MATCH was originally designed for. Accordingly, consultants worked with clinicians to choose the components of each module they anticipated would be most helpful for their clients, with an emphasis on shrinking the content to what could be covered in a half-hour. Often, school clinicians reported interruptions or unanticipated crises that derailed their MATCH protocol plans. For instance, disciplinary concerns raised by a young client's teacher might result in the therapist focusing on classroom matters rather than the focus (e.g., depression and anxiety) that was planned for MATCH. Likewise, school clinicians often inhabited an informal on-call position, such that their sessions might be interrupted at any time to address an unexpected concern in the wider school community (e.g., classroom disruption

and unexpected death in a student's family). Relatedly, some school clinicians noted that student engagement in therapy was limited by students' views of school therapy as a form of discipline or punishment.

Lessons Learned In sum, the centrality of the specific care setting to successful implementation was made clear to us during this study. Interventions designed for particular types of settings will almost certainly require adjustments in different types of settings, given inevitable differences in setting characteristics and objectives and the working conditions of personnel in the settings. Accordingly, one aspect of our clinician consultation was an ongoing effort to brainstorm adjustments that could make MATCH workable, case by case, in the school context where each clinician worked. We expect that similar creativity may be needed by school clinicians who employ modular treatments in their everyday work outside of any research project. With or without ongoing clinical supervision, such clinicians may well need to be innovative problem-solvers as they navigate the school context.

Conclusions and Future Research Directions

School is a common point of entry into the mental health system for many young people. Indeed, according to some experts, schools are the most common context for youth mental health services (Farmer et al., 2003; Green et al., 2013). Locating mental health services in schools can increase access, especially for underserved youths who might not be referred for care in traditional clinical settings, and who thus might have little access to school-based intervention (Kataoka et al., 2007). However, the infrastructure and support systems available in schools, and the conditions under which school clinicians work, may not always provide a context in which empirically supported treatments can be implemented as intended. This point is illustrated in multiple ways by our school-based implementation of a treatment designed for clinical practice settings.

The challenges we faced, including those involving school clinician job pressures, might have been better anticipated and more fully addressed if there had been an initial open trial testing feasibility and acceptability, and geared toward identifying challenges that would need to be tackled in a full RCT. In addition, to the extent that research teams can include expertise in both the treatment setting (e.g., schools) and the intervention, anticipatory problem-solving may be enhanced. More broadly, human-centered design methods may offer the kinds of tools needed to address the intervention adaptation and implementation challenges discussed in this chapter (Lyon et al., 2019, 2020). The most effective school-based intervention may require not only a knowledge of evidence-based interventions but also a flexible intervention design with a broad reach across diverse types of mental health challenges, combined with a deep understanding of the school context and the creativity needed to fashion a fit between the intervention and the setting.

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Adapting Evidence-Based Professional Development Models for Online Delivery and Scale-up to Practitioners in Applied Settings

Lydia A. Beahm and Catherine P. Bradshaw

The traditional model for providing training and disseminating evidence-based programs to practitioners in applied settings, such as schools, has been through in-person training or written curricula. As the field pushes for wider dissemination of evidence-based practices to multiple end-users, program developers are eager to use the Internet to reach a broader audience for their programming. In fact, the Internet has become an attractive and popular modality for achieving this dissemination goal, as it enables program developers to scale up their programs more effectively and reach a broader audience of practitioners, many of whom may have had limited access to evidence-based programming. From an end-user's perspective, the Internet provides the potential for accessing high-quality resources; however, it does not ensure that the materials accessed are of high quality or equally as effective as traditional models developed and tested (Reichow et al., 2012; Test et al., 2015). Such issues are particularly salient for certain end-users, like practitioners in rural or low-resource settings (Hicks et al., 2014), or those with limited training in how to discriminate evidence-based from non-evidence-based practices (Hudson et al., 2016; Stormont et al., 2011). Moreover, recent events such as the COVID-19 pandemic

have accelerated the need to develop high-quality trainings that are available on the Internet.

Although some research suggests that online teacher professional development is as good as, if not better than in-person training (Magidin de Kramer et al., 2012; Masters et al., 2010), there has been less consideration of the process by which program developers adapt existing curricula or programming for online delivery. In a rush to bridge this gap between traditional and Internet-based delivery models, program developers may underestimate or overlook several essential considerations that could either bolster program utility or compromise effectiveness. It may be tempting to simply post curricula electronically or a downloadable from a traditional website; however, the process of adapting a program for online delivery should not be undertaken without careful consideration of several factors.

The purpose of the current chapter was to leverage frameworks for online adult learning and program dissemination and apply them to the process of adapting an existing evidence-based program for online delivery to practitioners (e.g., educators and school mental health professionals) in applied settings. We first review four commonly used frameworks, then review the process of adapting existing programs for delivery through an online platform. We then formulate a set of recommended practices by drawing upon extant literature and strategies identified as effective by

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experienced program developers. We conclude by summarizing some implications of our recommendations for research focused on adapting and testing the impact of professional development models when scaled for online delivery.

Frameworks for Adapting Programs for Online Delivery

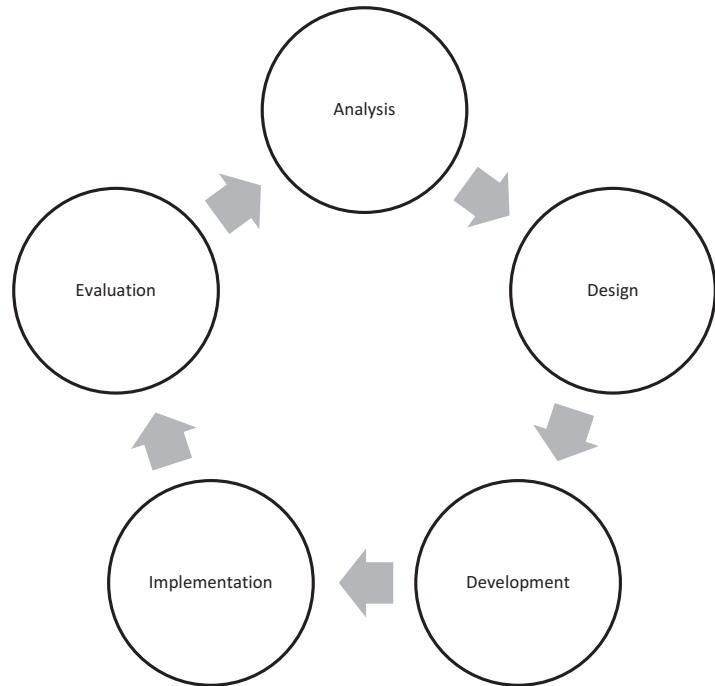
The instructional design includes the process of the design, development, evaluation, and revision of instructional content that facilitates learning (Dick et al., 2009; Seel et al., 2017). Instructional design frameworks were initially created to inform the development of training programs for a wide range of end-users (e.g., teachers). Although these frameworks were initially designed for in-person training, researchers have also used these models to develop online programs (e.g., higher education courses). A systematic instructional design framework generally makes instruction and training more effective and relevant (Seel et al., 2017; Stefaniak & Xu, 2020). Therefore, it is beneficial for researchers to use a framework when adapting an existing professional development program for delivery through an online platform. Although not intended to serve as a comprehensive review of all instructional design frameworks, we focus on four of the more commonly used models for online programming: the ADDIE model, the Dick and Carey model, the KEMP model, and the ARCS model. In considering these four frameworks and evaluating their relevance and contributions to the process of adapting programs for delivery through the Internet, we highlight the roles various stakeholders play. For example, we consider the role of the original program *content developer* or “researcher” who is adapting the program for online delivery to reach a group of, in our case, adult *end-users* or “learners.” A core partner in this process is often an information technology (IT) design expert frequently referred to in the instructional design literature as a “developer”; however, to distinguish their role from the original content or program developer, we refer to them as an *IT designer*.

ADDIE Model

The ADDIE model is an iterative approach that includes five phases: **Analyze**, **Design**, **Develop**, **Implement**, and **Evaluate** (Branch, 2009; Kurt, 2017). This model is the most frequently used instructional design model and is commonly cited in the literature (Stefaniak & Xu, 2020). This framework utilizes a hierarchical system where the five phases must occur in an order as each phase informs the next (see Fig. 33.1). Specifically, the **Analysis** phase focuses on goal setting, determining the target audience (i.e., end-users), the background knowledge necessary to complete the program, and what the end-user should know at the end of the program. In the **Design** phase, researchers consider all the program’s goals and the tools, tests, and resources necessary for the learners to reach the ultimate goal. Learning objectives, content, lesson planning, assessment instruments, and media selection are part of the design phase. Production and testing of the methodology drive the **Development** phase, where researchers use data from the analysis and design phases to inform the program’s development. Whereas the previous phases relied on planning and brainstorming, the development phase puts those thoughts and ideas into action. The development stage is further broken up into three smaller steps, drafting, production, and evaluation.

The end-users interact with the program in the **Implementation** stage. Specifically, the researchers and IT designers work hand-in-hand to revise, edit, and update to ensure that the program is high-quality and user-friendly and that the potential usefulness is not compromised through the adaptation process. Researchers and IT designers may revisit other phases based on learners’ responses to and interactions with the program. Additionally, program **Evaluation** occurs in the implementation stage, and researchers must take an active role during this process to ensure the quality of the program is not compromised. The evaluation phase is intended to yield information to determine if the program has the intended outcomes. All aspects of the program are analyzed for when, how, why, and which goals were not

Fig. 33.1 ADDIE model. (Note: Adapted from Bennett, B. (2009). *Digital portfolio*. ADDIE Model. Retrieved November 21, 2021, from <http://msidt.com/Research/ID/ADDIE.aspx>)



accomplished. This phase includes both formative (process-focused) and summative (outcomes-focused) evaluation activities. Based on the evaluation results, researchers are directed to revisit the other four phases and re-develop the program iteratively and continuously to produce a high-quality product.

One strength of the ADDIE model is that it front-loads much of the research, planning, and analysis into the beginning of the design process. This allows researchers to verify assumptions before spending time and resources on actual product development, potentially saving money. Additionally, as researchers should have spent a great deal of time in the planning and development stages, they should be able to build the program more quickly and efficiently. The phases are goal-oriented and provide a solid blueprint to guide researchers. Moreover, the ADDIE Model is widely used and accepted, and flexible so that it can be utilized for various institutions or programs (Kurt, 2017; Stefaniak & Xu, 2020).

Despite these strengths, there are some drawbacks to the ADDIE model. For example, the linear process means that researchers must complete

one stage before moving on to the next, so researchers must make assumptions about what is possible early on, which may ultimately be impossible (e.g., the software does not currently exist) or expensive. If researchers discover that their assumptions were wrong, they must then go back to the design stage, which takes more time and effort. If this happens, the researchers may end up spending more money instead of saving it. Additionally, input from the end-user does not come until stage four, which is late in the process and therefore is designed to build a product *for* practitioners instead of *with* practitioners; incorporating end-users sooner may offer the opportunity to check assumptions and utility early on which may lead to a more acceptable and user-friendly product. In sum, this may be useful to researchers interested in adapting programs for online delivery because of the front loading, adaptability, and the guided process within each phase. However, the lack of fluidity between the stages may restrict the creative process, stifling high-quality development, and the lack of incorporation of end-users early in the process may hinder the usability of the end product.

Dick and Carey (DC) Model

Similar to the ADDIE Model, the Dick and Carey (DC) model is also linear (Dick et al., 2009), in that it follows a sequenced approach where instruction is broken down into small components and each phase of the sequence informs the next phase (see Fig. 33.2). The DC model also prioritizes a link between the presented materials and the learners’ ability to learn from that material. Researchers utilizing the DC model identify sub-skills that learners are required to master before they can acquire the intended skills (i.e., learning goal). It includes ten core components: (1) identify the instruction goals, (2) determine the instructional analysis or the appropriate pedagogy to utilize, (3) identify the appropriate methods to assess learners’ current skills, (4) determine the specific goals and objects for each lesson, (5) develop a criterion-referenced test, (6) develop the lesson plans and instructional strategies, (7) identify the necessary materials for each lesson, (8) determine the appropriate formative evaluation, (9) find appropriate summative evaluations, and (10) reflect on the entire model, use the evaluations to find strong and weak areas, uses these evaluations to revise the weak areas. These evaluations are crucial to ensuring that the learner is reaching the intended goals and outcomes.

Although the DC model is not as commonly used as the ADDIE model (Stefaniak & Xu, 2020), it may be helpful to the development of other programs and professional development models aiming to change teacher practice and implementation of other curricula, like social-emotional learning programs, or behavior management strategies. In fact, the DC model has similar strengths and weaknesses to the ADDIE model. Both are systematic and goal-oriented, and much of the work is done at the beginning. One significant difference between the two is the number of phases. The DC Model has 10 phases, which means that the phases are broken down into potentially more manageable steps and include measurable objectives that guide researchers. This may be helpful because each phase’s requirements may not feel overwhelming and help focus the researcher. However, numerous phases require lots of time, and the creative process may be stifled. Additionally, the linear design means that if a researcher makes decisions that are not feasible (e.g., too expensive), they have to go back to the model’s beginning and spend more time recreating the program. Overall, this model may be helpful because it is broken down into small, manageable phases and can be applied in any context. However, the linear nature does not create an opportunity for correcting mis-

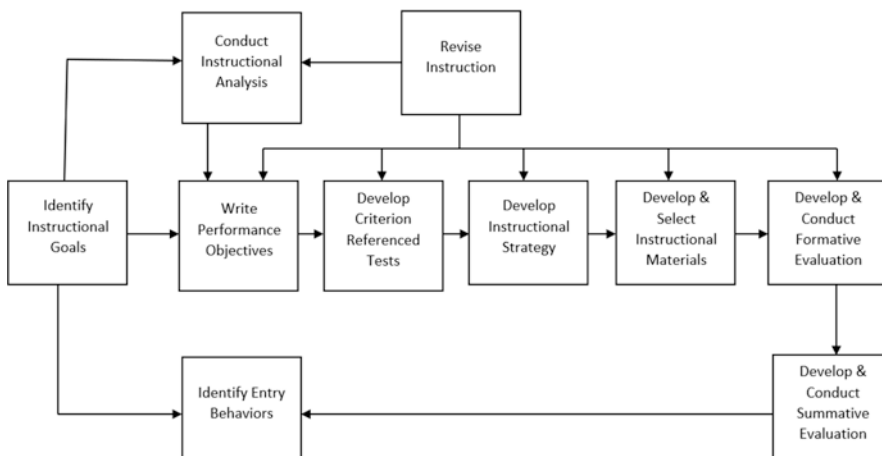


Fig. 33.2 Dick and Carey model (Note: Adapted from Kurt, S. (2016, December 12). *Dick and Carey instructional model*. Educational Technology. Retrieved

November 21, 2021, from <https://educationaltechnology.net/dick-and-carey-instructional-model/>)

takes that may occur along the way, may be too time-consuming, and may suppress the creative process (Kurt, 2017).

Kemp Design Model

In contrast to the previous models, the Kemp model, also known as the Morrison, Ross, and Kemp Design model (MRK Model), utilizes a circular structure (Morrison et al., 2019; see Fig. 33.3). Each of the nine core elements is interdependent, which allows for more fluidity and adaptability. Similar to the ADDIE and DC models, each phase informs the other phases. In contrast, researchers can begin and end in any phase, and several phases can be addressed simultaneously, while some may never be addressed. The Kemp Model's circular nature allows for fluidity as the phases are open for constant readjustments based on decisions made in

other phases. Yet the core elements are very similar to the previous models. Goal identification, learner characteristics, background knowledge, program goals and objectives, learner outcomes, delivery method, evaluation instruments, and necessary materials are included in the core components. Just like the other two models, the Kemp Model utilizes formative and summative evaluations to ensure the program delivers the intended content.

This model's strength is that all elements are considered simultaneously, and the process is continuously evaluated and revised. The holistic approach is viewed from the learners' perspective, allowing researchers to consider environmental factors. The continuous refinement enables researchers to make changes to other phases based on the decisions made in another phase. Additionally, it may be a more challenging design for an inexperienced user due to its fluid nature.

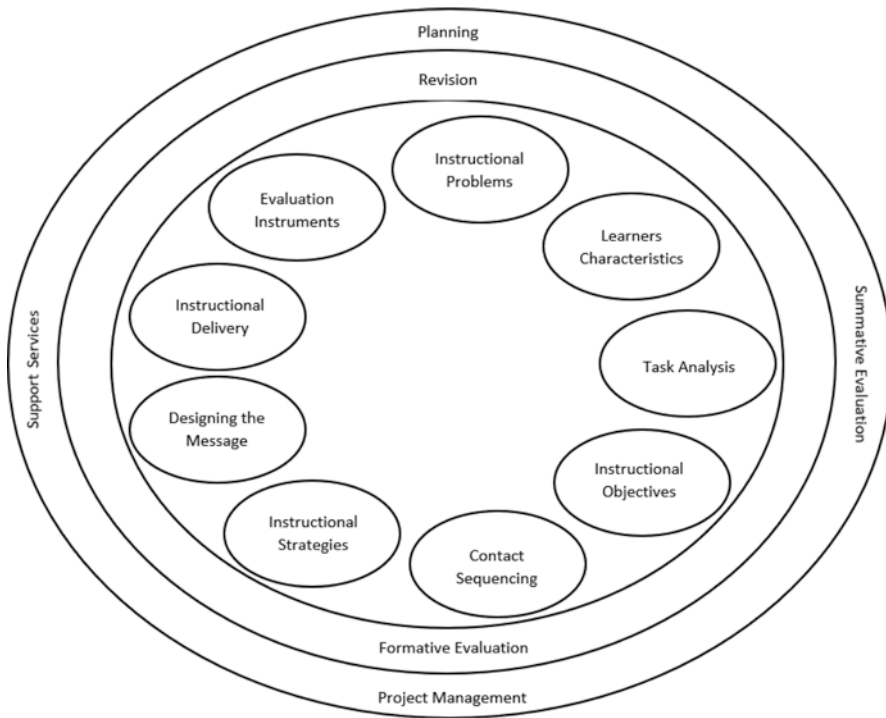


Fig. 33.3 Kemp Design model (Note: Adapted from Kurt, S. (2016, December 12). *Kemp Design Model*. Educational Technology. Retrieved November 21, 2021, from <https://educationaltechnology.net/kemp-design-model/>)

ARCS Model

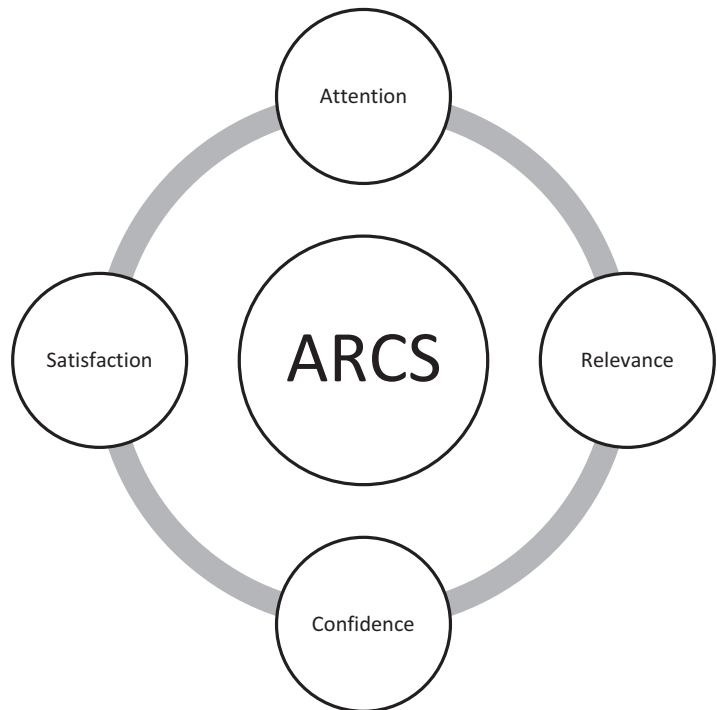
Keller’s ARCS model of motivation utilizes a problem-solving approach to learning that designers may use to develop high-quality, successful, and engaging content (Keller, 1987; 2009). The ARCS model is a systematic method for increasing engagement in learners by improving the motivational appeal of the content. The ARCS model contains four conceptual categories that capture specific concepts and variables to increase learners’ motivation, **A**ttention, **R**elevance, **C**onfidence, and **S**atisfaction (see Fig. 33.4). Each section is further broken down into sub-sections to provide more strategies for developing motivational content. This model is less about instructional design and more about content development and it is recommended that developers use this model in conjunction with an instructional design model (e.g., the ADDIE Model; Keller, 1987).

The ARCS model utilizes a nine-step motivational design process that is grouped into four categories, define, design, develop, and evaluate (Keller, 1987, 2015). When designing, develop-

ers should consider the goal of the program, analyze the audience’s motivation toward the topic, and brainstorm motivational objectives. The main goal of the first three categories (i.e., define, design, and develop) is to identify motivational problems in the target audience and attempt to preemptively fix them. In the final phase, developers evaluate the reactions of the participants and determine the effectiveness of their motivational materials. The results from the evaluation inform subsequent iterations of the motivational content embedded in the program.

There are some benefits to the ARCS model, such as flexibility since there is no formal or set start or endpoint. Moreover, various elements of this model can be used without necessarily utilizing all aspects of the model. It can also be incorporated into a wide variety of learning experiences, and it provides many options to guide researchers to develop high-quality programs that are likely to be engaging to multiple learners. However, there are some drawbacks to using the ARCS model. For example, it can be time-consuming to address all issues within each domain (Attention, Relevance, Confidence,

Fig. 33.4 ARCS model summary (Note: Adapted from Karageorgakis, T. (2021, January 9). *ARCS motivation model. What should be included in a learning activity to make it more appealing?* Educraft. Retrieved November 21, 2021, from <https://educraft.tech/arcs/>)



Satisfaction), and researchers may have to make difficult decisions on how to incorporate all the elements into the program. Moreover, including all these various features may be costly and time-consuming, so it is challenging to know which features will be the most motivating to the learners. This may make it difficult for researchers to decide where to invest their limited development (financial) resources. Despite these drawbacks, the ARCS model may provide a framework for researchers to adopt when scaling up content to the online platform, and provide insight into some important considerations for engaging the learner in program content.

Recommendations for Adapting Programming for Online Delivery

While all three of the models summarized above approach instructional development differently, there are several common or cross-cutting issues to consider when applying them to the process of adapting a program for delivery online in school or community settings. In the following sections, we leverage these models and blend them with recommended strategies and specific tips provided by experts in the field who have considerable experience adapting programs for online delivery. The first step in adapting programming for online delivery is to select an instructional design framework (see Table 33.1). Although we have mapped these recommendations back to the four frameworks discussed, we rely heavily on the ARCS model, as we find it particularly instructive and helpful for guiding the adaptation process.

Updating or Adapting the Theory of Change to Fit the Online Delivery

As a researcher or program developer is beginning to adapt a program for online delivery, they should first confirm several core elements of the program’s model or theory of change, alongside the primary objectives and intended outcomes.

Table 33.1 Summary of recommended steps for adapting evidence-based programs for online delivery

1.	Choose a framework to guide the adaptation of the program for online delivery, such as one of the following.
	ADDIE model
	Dick and Carey model
	Kemp design
2.	Adapt/develop the logic model.
	The original logic model articulating the theory of change for the in-person program will likely need to be modified and updated to reflect the new online content and activities, as well as the hypothesized mechanisms of change.
	The logic model may help guide the types of data elements to be tracked through the platform (e.g., duration and number of lessons completed).
3.	Develop a partnership with an IT designer.
	Carefully consider IT designers and web designers.
	Consider the IT designers’ experience, expertise, and background knowledge relevant to the content area and target learner.
	Overestimate your budget and timeline to accommodate additions, modifications, and unexpected changes.
	Manage maintenance and improvement costs.
4.	Use the ARCS model to fashion content that increases motivation and engagement.
	Attention
	Active participation (e.g., message boards)
	Humor (e.g., entertaining, but lighthearted relevant stories)
	Conflict (e.g., surprising facts or debunking myths)
	Variety (e.g., change in activities or videos)
	Real-world examples (e.g., practitioner testimonials)
	Relevance
	Relating to previous experience (e.g., how this may build on their current knowledge base)
	Increased perceive worth and future use (e.g., how might this information improve their daily life)
	Modeling (e.g., a video of a practitioner implementing the strategy)
	Choice (e.g., allowing the learner to choose the order of modules)
	Confidence
	Self-growth (e.g., reflecting on the ways the information has improved their daily life)

(continued)

Table 33.1 (continued)

	Communicating objectives and pre-requisites (e.g., specifically stating what the participant will learn)
	Providing feedback (e.g., weekly emails, nudges)
	Control (e.g., allowing the learner to choose what they learn)
	Satisfaction
	Praise/rewards (e.g., certificates of completion)
	Immediate application (e.g., teacher challenges)
5.	Consider the inclusion of coaching and implementation supports.
	Determine the types of technical assistance that will be needed for online learners, as those supports may differ from the types of support needed for in-person training and professional development (e.g., troubleshooting the website, navigating the online site, adaptations across context or populations, and responding to helpline requests).
	Determine what types of implementation supports (e.g., coaching and technical assistance) are feasible to include in the online platform, given available resources (e.g., budget and staffing).
6.	Develop and implement an evaluation plan.
	Consider the various types of data that could be collected and built into the online system.
	Prioritize data elements that support implementation and tracking outcomes.
	Use data to inform decisions regarding ongoing quality program improvements and program modifications.

Early in the process, researchers should consider the program's learning goals and objectives and examine what the learner should be able to do after engaging with the content. Researchers should also decide who the target audience is, and the necessary skills needed to complete the program. In addition, researchers should reflect on the different assessments required to ensure the program has the intended outcomes.

A logic model or theory of change may help guide some of these decisions and articulate the change process to various stakeholders, including the IT design partner (Shadish, 1991; Weiss, 1998). It is possible that the original theory of change may also be applicable for the online version; however, there may be a desire to incorpo-

rate additional program activities or core components in the online version of the program that were not part of the original program. For example, researchers may decide to include videos to replace modeling, guided readings, electronic "nudges" (e.g., email reminders and text messages), or videos of in-person professional development in the online version which were not part of the original training or delivery model. It is worth noting that the inclusion of such multimodal or electronic components may change the logic model or theorized change process from the original in-person design. In contrast, some interactive activities typically included in in-person training, such as experiential or group activities, role plays, think-pair-share, or team-based action planning, may not be possible in an online format.

Once the research team has made some of these initial decisions, the research team needs to partner with an IT designer or development team to refine the scope of work, timeline, and budget. The logic model will likely guide some of the additional questions and activities they engage in alongside the IT design partner; thus, it is common for the logic model to continue to undergo revision and modification throughout the development and adaptation process (Lin & Wu, 2016; Shadish, 1991).

Identifying an Expert IT Designer to Partner With

There are numerous decisions to be made and factors to consider when selecting an IT expert to partner with on the adaptation process. While some of these decisions may seem foundational or be constrained by available resources, it is essential to set reasonable goals and communicate them accordingly. First, researchers should carefully analyze their budget and potential cost expenditure. It is crucial to consider the upfront cost of developing the website and the prolonged cost of maintaining and updating the website. Many researchers find that development usually costs more than predicted, especially if a professional IT or website development team is hired.

Therefore, it is recommended to overestimate development costs and have a “cushion” of extra money in the event that additional features are added during the adaptation process or technical challenges are encountered. It is also beneficial to establish a timeline of events to guide the development process. As with the budgeting process, it is common for the development process to take longer than anticipated. Therefore, it is recommended that teams be realistic with their timelines and be prepared for unanticipated challenges, costs, and delays.

Another recommendation from experts is to shop for website development companies wisely. Researchers may want to familiarize themselves with frequently used website jargon (e.g., application, bootstrap, and backend) as well as some business issues that may appear in the contract (e.g., work for hire, copyright, intellectual property, open source). Understanding some of the basic vocabulary allows for better communication between the researchers and IT designers, and a clearer articulation of the desired components and scope of work and issues related to ownership and access. It is also necessary to consider the background knowledge of the IT designers. Many IT designers have experts from different fields (e.g., education and mental health) that can help facilitate effective communication between the researchers and IT designers because they have a background in planning and development. This allows for quicker and more effective website development because the IT designers have a deeper understanding of what the researchers prefer by targeting some of the underlying mechanism of the change process. For example, a development team that has a background in education is more likely to understand the nuances of how a classroom operates and will be able to capture a more realistic virtual classroom than a team with no classroom experience or understand the typical training and experiences of a classroom teacher, and thus the multiple demands on their time. Therefore, it is recommended that researchers develop questions to ask the IT design team to determine if the partnership is a contextual fit.

Finally, consider utilizing community partnerships to enhance the development of web-based content and case illustrations. For example, collaborating with an art museum for a program designed to provide art teachers with training on including writing elements in their curriculum or reaching out to Board Certified Behavior Analyst (BCBA) when developing behavior management programs may increase the quality of the program. Involving community partnerships may also help with cost and reaching a broader audience. In some instances, community partnerships may even help with promoting the online program. For example, suppose an art museum is involved with the development of online programming, they may agree to include a link to the program website on their webpage. Or BCBA may distribute information on how to access the online program to schools with whom they are working.

Developing the Program and Motivating Learners Based on the ARCS Model

If a learner feels the program content and examples are more attractive or relevant, they may be more motivated to engage with the content. In fact, motivation is key to ensuring learners persist through all of the intended content and complete the activities with fidelity (Pinchevsky-Font & Dunbar, 2015). However, motivating learners is no simple task. Although there are myriad ways to present information to learners (e.g., lectures, videos, activities, and testimonials), it is challenging to determine what will motivate the learners to complete the modules as intended. There is solid evidence that when learners are motivated, they are more likely to be successful and implement the presented information (Pinchevsky-Font & Dunbar, 2015). And while there is no single approach to ensure motivation and buy-in to online programming, the ARCS Model provides some insight into ways to motivate learners to engage with and complete program content (Li & Keller, 2018).

Leveraging Learners' Attention to Increase Engagement

As mentioned above, the A in the ARCS model stands for "Attention," which refers to the importance of the instructional material in attracting and maintaining learners' interest. Keller (1987) posited that attention could be obtained by perceptual (e.g., surprise, doubt, and disbelief) or inquiry arousal (e.g., curiosity and problem-solving challenges). Content that keeps the learner's attention is more likely to promote learner engagement and motivation, which together optimize the acquisition of skills and knowledge (Kurt & Keçik, 2017). The attention element of the ARCS Model is further divided into five subsections, which provide the framework for attention recommendations: active participation, humor, conflict, variety, and real-world examples (Keller, 1987).

Promoting Active Participation to Optimize and Sustain Learners' Attention

It is crucial that learners are actively engaged with other learners in any learning environment and have a social presence throughout the program (Conley et al., 2017). This is especially true in online learning environments, which allow for interaction among learners. In fact, the literature suggests that social presence and peer interaction are the most vital components of an effective online environment (Garrison & Cleveland-Innes, 2005; Martin et al., 2012). For example, learners who work in online teams are more likely to be motivated and engaged than learners who work independently. Some recommended ways to accomplish an interactive online environment include discussion boards, blogs, instant messaging, and synchronous video discussions. Group projects and collaborative learning may also decrease the feeling of isolation in an online environment.

It is also important for the learner to feel involved with or engaged in the curriculum. There are multiple ways to accomplish this. One of the most common ways is to check for understanding randomly in the middle of a lesson or

learning module. This is especially important if the module is long or there is a lot of information. Mini quizzes, multiple-choice questions, or drag-and-drop activities are commonly used methods to involve learners and encourage active participation. While there are myriad activities or online games that can increase learner engagement, the more complex the game or activity, the more complicated and expensive it is to develop. Therefore, researchers may want to identify and prioritize the information or skills that are the most critical and dedicate the most resources to activities focused on teaching that content.

Another method for keeping learners engaged is the use of content-acquisition podcasts (CAP), which are short, multimedia vignettes intended to provide instruction (i.e., information) to an end-user (Kennedy et al., 2015). CAPs reduce the cognitive load on users, resulting in increased learning and engagement (Kennedy et al., 2016). They are based on the cognitive theory of multimedia learning that posits that people learn from both words and pictures (Mayer, 2021). Multimedia messages include sounds (i.e., auditory) and words (i.e., visuals) to prompt learning (Mayer, 2021). Multimedia learning can be used for response strengthening (i.e., rote practice), information acquisition (i.e., learning new information), or knowledge construction (i.e., sense-making). When deciding how to use activities (e.g., CAPs), developers may want to consider the type of learning intended for the learners and create activities that focus on that cognitive activity (Mayer, 2021).

Use Humor and Conflict as Appropriate to Increase Learners' Attention

Humor and conflict can be beneficial to increase learners' attention, but both must be done with care. While humor is a great way to increase interest, it must not result in a learner feeling offended or insulted. Short, lighthearted stories or testimonials from experienced implementers relevant to the topic might grab the audience's attention without causing any controversy. The SUCCES Model (Heath & Heath, 2009) recommends incorporating short, humorous stories to capture the learners' attention and maintain their

focus on the program content. As such, researchers may want to consider documenting amusing anecdotes or examples and interspersing throughout the online program in some type of recorded format (e.g., video, sidebar, and callout).

Another way to pique interest is to present statements that may be contrary to what the learner knows or thinks. This advice is similar to another SUCCES Model recommendation (Heath & Heath, 2009), which includes adding something unexpected. A surprising fact or debunking a common myth may pique learners' interest. However, the information must be supported by scientific evidence and should not be polarizing or political. It may be beneficial to evaluate a test audience's (i.e., small group of learners) reaction to both the humorous or unexpected story or surprising fact to ensure that the material is appropriate and engaging instead of offensive. Another method may be to include an occasional loud whistle and an upside-down word in a visual as unexpected events to maintain learners' attention (Kurt & Keçik, 2017). Other suggestions include a bolded dramatic statement, a quiet pause, or a random and unrelated picture (e.g., a snake). However, it is important not to be predictable with unexpected events (Heath & Heath, 2009). For example, using a popping sound and an upside-down word in one lecture then incorporating balloons floating up the screen and a loud whistle in another lecture.

Using Variability to Increase Learners' Attention

It is helpful to include various activities, layouts, events, visuals, colors, and presentations to keep the learner's attention. For example, use a color scheme that is inviting to look at but is not distracting to help keep the learner focused on the materials. Bolding, italicizing, and using bright or bold colors can help direct learners' attention to critical information. However, the visuals must not become so overwhelming (e.g., overly glaring or flashing) that it distracts from the content or is visually discomforting. Therefore, developers may want to use consistent color schemes and a clean, streamlined look to help keep the learner's attention without being distracted. In addition

to color schemes, using a background that slowly and gradually changes can also help keep the eyes' attention. Some examples are slow-moving bubbles in the background, an ambiguous blob that slowly changes position, shape, and size, or a little character that might show up in the corner and briefly wave. As television and social media have shortened our attention span and increased the amount of visual input that our brains interpret (Landhuis et al., 2007), it is reasonable to suggest that incorporating subtle movement into the design will keep learners' attention.

As suggested above, IT designers should be able to provide examples of several different types of activities or stimulating features to include in the online program (Milman & Wessmiller, 2016). For example, when learners use the same drag-and-drop feature, they are likely to get bored and stop attending the lessons. Incorporating different activities keeps learners "on their toes," and they are more likely to focus on the material. Conversely, too many kinds of activities and too much variety may overwhelm the learner or cause frustration, especially if the activities are demanding. While incorporating a few challenging activities is essential, the activities should be user-friendly and relatively easy to understand. Few learners are likely to be experienced gamers with the skill base to interact with more obscure activities. Thus, developers must balance being predictable enough not to frustrate the learner but different and exciting enough to be engaging. It may be prudent to pilot or test content on a small group of participants to evaluate how the activities are received and used by the target audience.

There are several activities, such as full animation or text motion graphics, that can be incorporated into online learning environments. As technology continues to advance, so do the activities IT designers can include in an online program. However, the more complex the activity, the more expensive it is to build or incorporate into the online program. It may also require faster Internet speed or bandwidth, which could be a challenge for some practitioners, particularly those in remote, rural, or low-resource settings.

As such, researchers should be prudent about incorporating such high-end activities, which often drive up costs but could produce a higher return on investment through increased engagement. Researchers should consider their budget and decide which skills should be covered by the costly activities to optimize the return on investment.

Leveraging Real-World Examples to Gain Learners' Attention

Most practitioners prefer and rely heavily on other practitioners for information than on original sources, like books or research articles (Beahm et al., 2021; Smith et al., 2010). Therefore, it may be beneficial to include videos, stories, testimonials, and advice from other practitioners in the online version of the programming. These stories could consist of a blend of humorous, personal, and informational content, which may increase the likelihood that learners will engage with the material. When it comes to the inclusion of video, experts recommend using quality videographers when creating a video and having an experienced video editor compose the footage. Although it is easy to use a computer, smartphone, or tablet to do the recordings, these devices do not produce quality sounds or pictures. Additionally, experts recommend filming a practitioner implement the strategy naturalistically instead of staging the footage. On the other hand, it is more expensive to gather naturalistic footage because of the amount of time and editing required, so budget constraints must be considered. However, it is better to include fewer high-quality videos as opposed to numerous low-quality videos.

In addition to quality, the length of the video is very important to consider. Experts in the field recommend the length of videos to be just 2–3 min in duration. Ten-minute videos are acceptable for more complicated information or complex skill development (Prober & Khan, 2013); however, for longer videos, it may be beneficial to include one or two pause breaks that encourage participants to record any notes. For example, CAPs are designed to reduce cognitive overload by being short in length. As such, they

tend to be 5–15 min in length; pause breaks are included in videos that are longer than nine minutes (Kennedy et al., 2015). Generally speaking, it may be beneficial for videos to be less than five minutes in length and if a video does need to be longer, it is recommended to include breaks.

Regardless of whether it is through video or text, it is helpful to incorporate advice or stories from other practitioners, including tips for success or lessons learned through implementing the strategy. This may include direct quotes or testimonies from real practitioners explaining how they implemented the strategy into their environment and its impact. Moreover, many implementers may feel the need to adapt or slightly modify the program content or its delivery for the culture or context of their school to make the program a better fit for their setting (Kern & Wehby, 2014; State et al., 2017). Therefore, it may benefit the learner to hear how prior teachers or practitioners modified the strategy to work in their setting in a way that does not compromise program fidelity or integrity. Like teachers, school mental health professionals may benefit from learning how students responded to different strategies and tips for quality implementation. Therefore, it is helpful to include a range of examples from diverse settings to illustrate the implementation of a particular skill, which may increase the learner's motivation and efficacy to use the strategy.

Increasing Relevance to Foster Motivation

The R in the ARCS model refers to relevance. Keller (1987) emphasized the importance of highlighting how the content is relevant to the learner's life, career, or personal goals. Learners are more likely to be engaged when the content has a useful and practical application in real life. Therefore, it may be helpful to consider language, analogies, and stories to which the learner can easily understand and relate when aiming to increase relevance. Similar to the previous section on attention, the relevance element of the ARCS model is broken down into four sub-categories. Below we provide recommendations

on ways to make content relevant based on these four sub-categories: link to previous experience, increase perceived present worth and future usefulness, include modeling, and provide end-users with choice.

Using Previous Experience and Perceived Present Worth, and Future Usefulness to Make Content Relevant to the Learner

Learners are more likely to be engaged with material that feels relevant to their own life or career and is connected to their previous knowledge (Bocchi et al., 2004; Park & Choi, 2009). One way to show relevancy is to build on learners' background knowledge and make direct connections to how the information will help them meet their goals. This may include a short statement about how the behavior strategy in the module may help reduce off-task behavior in the classroom. Another example is to explain how the module will increase the learners' knowledge of ways to support bullied students.

Furthermore, studies show that learners with higher intrinsic motivation are more likely to stay motivated and engaged with a module than extrinsically motivated learners; therefore, when learners find the content relevant to their own goals, their intrinsic motivation usually increases (Chang & Lehman, 2002). Although it is challenging to evoke intrinsic motivation, certain practices increase the likelihood that learners will become intrinsically motivated. Some recommended strategies for increasing intrinsic motivation are peer evaluation, self-reflection, personal goal setting, and check-in exercises (Chang & Lehman, 2002). Providing opportunities for learners to take risks, be creative, and try new strategies with support also increases internal motivation. For example, it may be helpful to provide opportunities for learners to apply their new knowledge in a simulated scenario and provide them with positive and constructive feedback.

In fact, many of these activities align with the broader research on motivational interviewing (MI; Herman et al., 2014; also see the chapter by Frey et al., 2021 in this book). It may also be ben-

eficial to include components of MI. While it may be difficult to have one on one MI sessions when the online program is asynchronous, developers may want to consider including an MI checklist that asks learners to think and reflect on areas they feel confident in and which areas they want to improve upon. MI is a powerful way of helping learners elicit behavior change by exploring and resolving ambivalence and problem areas, and thus may be a helpful technique to include in an online adaptation, particularly when there is a coaching or technical support mechanism (see Herman et al., 2014).

Model the Skill

Like real-world examples, it is also essential to provide high-quality models of the skill or strategy. The difference between examples of a strategy and modeling the strategy is that modeling breaks down and explains each step. Research suggests that video modeling is an effective method that increases the rate of skill acquisition (Tyner & Fienup, 2015). Modeling may be done with an overlay of text, a voice-over, or having the model discuss each step as it is performed. An example may be a teacher in a classroom who implements one step in a strategy, then explains to the learner the purpose of that step or ways to adjust it. Another method is to include a fidelity checklist that practitioners can print out to help them implement the strategy or fully fleshed-out lesson plans that teachers or practitioners can download and quickly implement in their schools. The lesson plan may also be accompanied by a video example of a teacher implementing the lesson in their classroom.

Allow for Choice

Another way to motivate learners is to provide them with choices. If the budget allows, it is beneficial to provide different learning strategies and activities to learners for the same topic. The learner may choose between listening to a lecture, watching a video, or completing an activity on a topic. Another method of including choice is allowing learners to decide which lessons are the most relevant to them at that moment. While some content may need to be accessed before

other content, giving learners the power to choose their lessons' order may increase motivation and persistence.

Promoting Confidence in the Learners

The third element of the ARCS model is promoting Confidence, as confident learners are more likely to attribute their success to their own ability and effort instead of luck or ease of the task (Keller, 1987). Therefore, confident learners tend to be more involved with the lessons and enjoy pushing through challenges. It is essential that learners feel successful while engaging with the material. While the content should be challenging, the learner needs to feel as though they successfully learn the new content and be efficacious in applying the new skills. Similar to Vygotsky's (1980) zone of proximal development, some activities should be easy enough so that learners quickly find success, while other activities should be slightly tricky and require the learner to grapple with the information.

A related concept to confidence is self-efficacy, as people who feel confident or have a strong sense of self-efficacy are more likely to feel accomplished, set challenging goals, and maintain a strong commitment to meeting those goals (Bandura, 1977). Research suggests that teachers with high self-efficacy engage in higher-quality teaching practices, and may be more likely to incorporate innovations into their routine practice (Peters et al., 2014; Reinke et al., 2013). While it may be challenging to measure confidence in a learner, collecting self-efficacy data may help developers determine if the module increases the learner's abilities. In the sections that follow, we apply Keller's (1987) sub-category framework for promoting confidence, facilitating self-growth, communicating objectives and pre-requisites, and providing feedback we provide recommendations from program experts on strategies for building learner confidence.

Facilitating Self-Growth to Build Confidence

One way to promote self-growth is to encourage learners to set goals within the program. If possible, weekly nudges can be set out to show learners their progress toward their goals. A nudge can be in the form of a brief text or email with a sentence or two detailing pertinent information, or reminders to engage in a particular activity or use a specific program strategy. For example, a nudge may remind a learner that they are three lessons away from completing their goal, or prompt them to use a specific learned skill (e.g., praise and mindful breathing technique) in their routine that day. Another way to build confidence and thus efficacy to implement the program is by providing learners with ways to assess their learning, including pre-and post-tests so that they can evaluate their growth. Mini check-ins or quizzes in the middle of a lesson also allow learners to determine how the material increased their knowledge base.

Communicate Objectives and Prerequisites to Build Learners' Confidence

Learners need to know precisely what is expected of them, the program's goal, and the syllabus. Programs that provide a syllabus or advanced organizer with clear expectations and instructions typically have increased learner participation (Li & Moore, 2018). It may be beneficial for programs to have a list of lessons and the prerequisites, the lesson's learning goals, and the approximate time required. If a module is lengthy, it may also increase engagement if learners are provided with a progress bar and can stop and start the task without losing progress. As previously stated, it may help send positive emails or nudges to learners to encourage them to continue engaging with the program and include reminders of their progress.

Increase Confidence by Providing Ongoing Performance Feedback

Multiple studies have demonstrated that consistent, positive, and detailed feedback increases

learner engagement and motivation to complete the task (Herman et al., 2014). Learners who can interact with an instructor or expert demonstrated higher engagement and motivation to complete the tasks. Blogs, comment boxes, discussion boards, and chat/emails are options that allow learners to receive feedback from either an instructor or a peer. However, cost maintenance and time dedication must be considered with feedback options. While positive and detailed feedback is beneficial, learners are more concerned with timely feedback (Herman et al., 2014). Typically, learners want feedback within 24–48 h. Thus, developers should be cognizant of this preference and ensure that the responses are timely if feedback is an option. Li and Moore (2018) offered hints and tips to those who answered incorrectly on a quiz or activity.

Rapid, personalized feedback may not be possible in a large-scale online program. However, one option may be to incorporate a standardized or even semi-customized brief report back of data and progress, a recap of core goals or strategies, with some pre-scripted motivational and goal-setting language. This may go a long way to help learners feel engaged, reinforced, and motivated to persist in the program and implement some of the learned strategies, and is consistent with the larger literature on MI (see Herman et al., 2014).

Another way to increase confidence or efficacy is to provide online coaching. One way to do this is to have the learner video record themselves implementing the skill which a coach then evaluates. The coach can then provide performance feedback via email, phone call, or video conference. The coaching session should include areas of strength and areas where the learner can improve. It may be beneficial to go over an implementation checklist to show the learner which steps they did well and which need improvement. Evidence suggests that coaching successfully changes teacher behavior and increases the implementation of a skill (Bradshaw et al., 2018; Duchaine et al., 2011; Reinke et al., 2014). While evidence suggests that feedback and coaching more generally are important to motivate learners and affect behavior change, it is important to consider both the costs of coaching in relation to the

benefits of providing these types of coaching supports (Pas et al., 2020; Pas et al., 2022).

Give Learners a Sense of Control in Improve Their Confidence

Similar to choice, it is helpful to provide opportunities for learners to choose their own learning path, and when possible, select the elements of the program or modules to take first, as those may be most attractive and closely aligned with their goals. Although the developer may feel strongly that the order of the program content needs to be sequenced based on a logic model or the development of specific foundational skills, this may be an issue to revisit when moving a model online, as compared to in-person delivery. Additionally, the researcher may want to consider allowing learners to pick a useful topic, dig deep into the particular topic, and become mini-experts in that area. For example, instead of expecting every teacher to master all elements or aspects of the behavior management method encourage some teachers to become experts in particular program components or evidence-based programs, such as Check-In/Check-Out, while others become experts in behavior-specific praise or token economies. This will enable teachers to become masters of one skill that they can share with colleagues and promote informal dissemination of the program content through their existing networks. Becoming a mini-expert is also likely to build confidence, particularly when they have the opportunity to try it out themselves and then teach it to others; this, in turn, may increase their motivation and efficacy to implement and model the use of the strategy for others.

Promote Satisfaction

The final component in the ARCS model is Satisfaction. Keller (1987) speculated that learners who were satisfied with a program were more motivated and more likely to stay engaged. When learners feel proud of what they have accomplished, they are more likely to increase their internal motivation, potentially leading to more engagement.

Incorporate Praise or Rewards to Increase Learner Satisfaction

At the end of each module, learners should receive some sort of accolade. This may be in the form of a certificate, an email of praise, or a small physical or financial reward. A reward may be in the form of completion hours that go toward furthering their career or a badge or certification that can be included in an annual review of their resume. If possible, developers may have a small display on the screen such as fireworks or confetti to celebrate the learner completing the module or a certificate of completion. In some instances, program developers may be able to award continuing education credits for program completion; this typically requires an agreement with the accrediting board state or local school system. See details below on how to build in data collection and tracking efforts to ensure completion of program content for reporting or crediting purposes.

Allow for Immediate Application to Increase Learner Satisfaction

Like relevance, learners should be able to apply the skills they have learned throughout the program immediately. Providing opportunities for learners to feel a sense of accomplishment by seeing their hard work pay off may also increase inner satisfaction. Moreover, learners may feel encouraged to participate in future online training opportunities and approach the program with a greater motivation level. Therefore, researchers must provide options for learners to implement their learned skills as quickly as possible. One way for researchers to provide options for immediate application is to include weekly or bi-monthly “challenges” that encourage the learner to apply a specific strategy from the program into their daily schedule. For example, suppose the module was designed to incorporate behavior-specific praise into the classroom, the teacher’s challenge may be for the teacher to record how often she uses behavior-specific praise during math class every day for a week. The next challenge may encourage the teacher to make anecdotal notes about the change in student behavior after receiving the behavior-

specific praise. Another way for learners to feel encouraged is to provide a message board that allows them to post how they incorporated the learned material into their daily lives and any successes they experienced afterward. This not only allows practitioners to share their experiences with others but gives them the space to share their accomplishments and increases their feeling of satisfaction.

Implications for Research on the Efficacy of Online Program Delivery

One of the many potential benefits of online delivery is the option of building into the online program a feature that captures data on the learner and their progress through the training. For example, features can be built into the system to record the number of hours the learner engages with the program content, which modules are completed, how long it took to complete them, how often they logged into the system, which elements of the program they engaged with and potentially which order they accessed them, and other tracking mechanisms. This information can be used for various purposes, such as ensuring that the core elements of the program were actually completed and how long it took to complete them.

In fact, there are myriad ways to collect data to evaluate the effectiveness of online training and professional development, which may also include data on any comprehension checks to ensure they are answered correctly and to provide follow-up on incorrect responses. Additionally, programs can collect data on how long participants spend on the activities, and if learners correctly answered the questions. Websites can also track how long learners spend on the website and which activity, video, or section gets the most attention. This information can help researchers evaluate which activities result in the highest levels of understanding and may be preferred by the learners. It may also be helpful to evaluate the social validity of the program by asking learners to answer Likert scale

questions (e.g., rate the usefulness of this tool on a scale from 1 to 5) at the end of each section or provide a link to a survey on the website. This information will help researchers understand which sections and activities are preferred by the learners, so future iterations may include more of the preferred activities. If program developers are interested in tracking these types of features, for evaluation or accreditation, it is strongly encouraged that they discuss which types of data elements they want to track with the IT designers early in the development process, so that those elements can be built into the architecture of the program. If those tracking features are not intentionally built into the architecture of program, learner-specific data may not be tracked sufficiently to allow for this level of reporting or analysis. While these types of data are potentially useful for several purposes, researchers may also want to build a feature to collect data on behavior changes in teachers or students. If the program includes online coaching, teachers may want to upload recorded videos that coaches can view to guide feedback, as is common with the MyTeachingPartner program model (Gregory et al., 2017). These or other types of videos can also be scored by the coach or researchers to assess implementation fidelity.

Furthermore, researchers are encouraged to evaluate the extent to which online learning changed teacher beliefs and practices that ultimately led to a change in student outcomes. One way to evaluate change is by doing direct observations in the classroom. Researchers could use the Classroom Assessment Scoring System (CLASS, Pianta et al., 2008) to evaluate teacher-student interactions (i.e., emotional support, classroom organization, and instructional support). However, there are multiple research-based classroom assessments that can be used to evaluate a change in teacher behavior and student outcomes. While in-person evaluation may be difficult, teachers can upload videos of themselves that are then scored by trained coders. This approach was used in the MyTeachingPartner program model and results indicated that teachers improved their instructional practices (Allen et al., 2015; Gregory et al., 2017).

Conclusions and Implications

The movement to online delivery of program content to educators and mental health practitioners holds great promise and has become a bit of an urgent issue for the field, both in response to COVID and the desire to more efficiently scale-up evidence-based programs. While this desire to shift training in evidence-based programs to online delivery is exciting and timely, we caution program developers not to assume that program impacts achieved through in-person training will achieve the same outcomes as those delivered online. It is quite possible that online delivery may even yield broader or potentially more sustained impacts on program adoption and implementation, given the potential to continually interact with the site or online program content for refreshers, coaching, or content review. The dynamic nature of online learning and the potential to add additional features or modules also holds great promise for sustained engagement and ongoing adoption, as well as the phased release of new content to drive learners back to the online platform.

In summary, it is incumbent upon researchers to carefully plan study designs that track various aspects of the online program content delivery and learner engagement (many of which were suggested above) which may be different from the original program model. It may also be of interest to researchers to evaluate the efficacy or effectiveness of the online delivery compared to the in-person training model. Such study designs require careful consideration of issues such as the nesting of participants within training offerings, and participant engagement with each other in real-time and through the online platform. The importance of selecting a trusted and experienced IT designer to partner with on this effort is not to be underestimated. With these considerations in mind, there is a great opportunity, enthusiasm, and urgency for the field to thoughtfully engage in a research-based process for adapting programs for online delivery. We believe the models described in this chapter, particularly the ARCS model, in combination with the recommendations and tips from experienced and expert pro-

gram developers will provide a blueprint for future researchers and program developers embarking on this exciting brave new world of online program delivery (see Table 33.1 for a summary of suggestions).

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Best Practices in Online Delivery of Mental Health Programs and Practices to Children and Youth

34

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Introduction

Although a novel concept 20 years ago, use of online and mobile applications to deliver mental health interventions and services is increasingly becoming normative. The advent of affordable computer hardware, high-speed Internet connectivity, and an expanding array of accessible technology platforms have made delivery of MH programs and practices more feasible and attractive for both practitioners and families. And, propelled by unmet and ever-growing needs, the movement toward using digital technologies for MH improvement is unlikely to slow. In fact, the COVID-19 pandemic has forced a systemic shift toward digital delivery of MH services being seen as not only desirable but necessary. The closure of schools—where more than three million US youth receive MH services each year—leaves many families without support, and social distancing restrictions mean practitioners and families must find alternatives to traditional in-person services. As COVID-19 recedes and in-person delivery returns, we will likely find that the shift toward digital delivery has resulted in a foundational change in mental healthcare practice, where online services continue to be an accepted and desired format.

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Historical Context

Over the past half-century, much work has gone into developing and testing MH interventions for youth. And as the available pool of programs has grown, organizations have emerged to establish standards for determining evidence of efficacy and to assist schools and practitioners in selecting programs that best meet the needs of their target population, such as *Blueprints for Healthy Youth Development* (www.blueprintsprograms.org), the *What Works Clearinghouse* (<https://ies.ed.gov/ncee/wwc>), and the *California Evidence-Based Clearinghouse for Child Welfare* (CEBC; www.cebc4cw.org), among many others. The collective result of all these efforts is a wealth of evidence-based programs and practices (EBPs) for improving the health and well-being of youth across the spectrum of target outcomes, behaviors, and risk and protective factors. New programs continue to be developed and tested, further increasing the available pool of effective MH interventions for youth. It is important to note that the vast majority of established and newly developed EBPs for MH rely on in-person delivery, using traditional intervention formats (e.g., one-on-one, small group, and family) and methods (e.g., reflective listening, role plays, controlled exposure with practice, and behavioral reinforcement).

Despite all the progress made in developing EBPs with demonstrated efficacy for improving

youth MH, the gap between need and access to MH services for youth is abysmal. MH problems are the leading cause of disability in young people (Fichter et al., 2009; Kessler et al., 2005). Yet, up to 80% of youth with MH needs in the U.S. go without MH services of any kind, much less via an EBP (Kataoka et al., 2002; Merikangas et al., 2011). Barriers—both systemic (high costs, need for transportation, scheduling challenges, lack of trained providers) and internal (stigma, preference for self-help)—prevent many youths from seeking MH treatment and contribute to high premature dropout rates (~28–59%) for those who actually do receive outpatient MH services (Cummings et al., 2013; de Haan et al., 2013; Konrad et al., 2009).

This pre-existing public health crisis has been exacerbated by COVID-19. Early investigations of the pandemic's impact show youth are experiencing heightened emotional distress and MH problems (Jiao et al., 2020; Roccella, 2020). Social distancing has decreased youth's access to and support from peers, leading to increased social isolation and loneliness (Crawley et al., 2020). Newfound financial strain impedes families' capacity to afford MH care for their children, and youth are now cut off from MH professionals at school. In short, a generation of youth are being exposed to increased psychosocial adversity and are poised to fall further through the cracks of our mental healthcare system.

Leaders in the field of clinical intervention science have long called for new delivery approaches to extend the reach and population-level impact of EBPs for youth MH (Kazdin & Blase, 2011; Kazdin & Rabbitt, 2013). In particular, digital delivery via computers and smart devices is touted as a fruitful means to lower barriers and optimize accessibility by removing the traditional requirements of a face-to-face format, a trained "expert," and a physical office (Cummings et al., 2013; Kazdin, 2019). And there is ample evidence via clinical trials and meta-analyses that online MH programs can effectively reduce and prevent MH concerns for both high-risk and community youth samples, including equivalent or better effects for digital

vs. wholly therapist-delivered intervention (Clarke et al., 2015; Cunningham et al., 2014; Karyotaki et al., 2017; Lattie et al., 2019; Schleider & Weisz, 2017; Wozney et al., 2018). Further, youth and families have repeatedly found digital, self-guided delivery of MH intervention to be an acceptable treatment modality (Andrews et al., 2010; Baghaei et al., 2020; Batterham et al., 2021; Schleider et al., 2020). In the wake of COVID-19, it is more critical than ever to develop effective, scalable alternatives to support youth MH—particularly ones that deliver evidence-based intervention strategies in a cost- and time-efficient manner to address the clinical needs of as many youths as possible.

Key Considerations

Adapt vs. New—Benefits and Challenges

Typically, developers of digital MH interventions have significant clinical experience providing services through traditional intervention formats, and they often have prior experience creating and testing in-person intervention programs. These experiences are valuable, but they don't necessarily provide developers with a clear understanding of what aspects of in-person intervention models can (or should) be replicated online. Regardless of whether the developer wishes to adapt their existing EBP or create a new EBP from scratch, they must recognize that digital delivery will **not** look like in-person delivery. Developers must be prepared to question, and often let go of, assumptions about MH intervention in order to reimagine what is possible.

To prepare for this endeavor, it may be useful to consider the relative benefits and challenges of adapting an existing EBP versus creating an entirely new one. Adaptation refers to the process of translating existing content and intervention methods used in a traditional in-person EBP into an online version of that same EBP. In contrast, developing a new intervention for digital delivery involves creating that intervention from scratch, also termed *green field* development because

there are no pre-existing constraints on what can be developed.

An advantage of adaptation is that the existing EBP provides a wealth of content that can be repurposed for online presentation. The objectives, text, and intervention methods can all be drawn on, greatly decreasing the amount of time and effort needed to produce the digital content. However, when an EBP already exists, developers can be biased toward presenting the content in the same way as in the original intervention. This is understandable, given the amount of time and thought that went into developing the original program. However, this bias can limit the creativity and openness required to make necessary revisions to the content for online presentation. For example, whereas participants generally tolerate longer, uninterrupted periods of a provider talking during in-person delivery, online content needs to be more streamlined and chunked to maintain participant engagement. It can also be helpful to use novel online strategies, such as interactive menus or drag-and-drop exercises, to convey the same content in a more engaging fashion. Adapting an existing EBP can accelerate development in many regards, but you must still reconstruct your intervention's elements, and your progress in doing so will be hindered if you are highly wedded to the original amount and delivery style of the content.

You may wonder why you would adapt an existing EBP if so much needs to be altered. A primary advantage of adapting an existing EBP is the developer's prior experience delivering the intervention with intended youth participants. For example, participant feedback and reactions gathered during development of the original EBP likely helped guide adjustments to wording, sequencing, and other key aspects to best meet the developmental and clinical needs of the target population. With green field projects, the developer can draw on related experience with other EBPs but does not have the benefit of prior experience with that particular intervention's content and methods. Thus, green field projects will require substantially greater iterative user testing and revisions during the course of development.

Practically speaking, these additional efforts translate into more time, effort, and expense.

Another important consideration when adapting an existing EBP is the need for new efficacy research. An EBP adapted to a digital format must be rigorously tested to be deemed efficacious. Even if you were careful to maintain core components and include as much of the content as possible, you will have necessarily changed many elements. It is difficult to know how all of the combined elements of an intervention drive its efficacy, so it is possible that during reconstruction, something fundamentally changed. An adaptation is by definition different from the original EBP, so prior efficacy data cannot be assumed to apply to the online version. However, testing an adaptation has advantages, including prior experience with research methods and assessment tools that can be reused for testing the online program, as well as the ability to directly compare the online version with the in-person version for equivalent or better efficacy. With an entirely new digital intervention, no constraints are imposed by prior research, so comparison to an in-person intervention may not be needed and innovative research designs may be possible, such as comparison to a computerized attention control.

Online Dissemination Advantages

If you have devoted your career to creating youth MH programs, you are undoubtedly also devoted to meeting the broad and unmet MH needs of youth. As mentioned earlier in this chapter, a primary argument for developing a digital EBP is that online delivery can significantly increase the reach and scalability of an EBP and thereby the likelihood that it will positively impact a larger number of youth at risk with MH problems. With digital delivery, access barriers can be largely mitigated. Youth and families can access MH services from anywhere (with sufficient Internet connectivity) and at any time, removing travel and scheduling challenges. A local trained provider and physical office are no longer required, decreasing the cost of mental healthcare and

making evidence-based MH services more feasible for all families, especially those from low-resourced and geographically isolated communities. In addition, remote, self-paced participation in an EBP can mitigate internal barriers to care. Fear, stigma, and discomfort contribute to youths' reluctance to utilize traditional in-person MH services and to premature dropout for those youth who do engage in these services (Baruch et al., 2009; de Haan et al., 2013). Providing a safe, secure, and private online environment can help youth feel more comfortable engaging in the intervention and encourage full participation.

Time and cost savings for the intervention developer are other driving forces for online EBP delivery. For traditional in-person EBPs, once development and testing are completed, considerable ongoing efforts are needed to disseminate and scale that EBP. The most common model for successful scale-up is a network of trainers who conduct in-person workshops across the country to train providers in the use of the EBP. Fees are paid to cover trainer time and travel and to purchase intervention materials, such as hard-copy manuals, consumables for youth (e.g., stickers and workbooks), and other items (e.g., posters and puppets). This business model incurs many expenses to make and fulfill a sale (aka *cost of goods sold* or COGS). Increasing awareness of the EBP and its benefits over alternatives requires considerable marketing to schools and MH providers, such as conference exhibits and printed and online catalogs. A cadre of certified trainers must be available to travel and conduct workshops, and an administrator is needed to schedule and coordinate these trainings.

And disseminating an EBP requires efforts beyond pre-implementation training. To support high-quality implementation of the EBP and sustained use over time, ongoing assistance to those implementing the intervention needs to be provided, particularly during the first year or two in a new setting (Cooper et al., 2015; Edmunds et al., 2013; Wenz-Gross & Upshur, 2012). This assistance can range from phone and email support to online or in-person booster trainings to a structured coaching model. These follow-on ser-

vices are typically charged separately, but again, require trained professional and administrative staff to schedule, coordinate, and deliver.

Thus, successful dissemination and scale-up of a traditional in-person EBP requires a significant commitment of time, finances, and oversight by the intervention developer, as well as solid dissemination and business model. Many developers are employed by academic and research institutions that are not designed to support this type of scale-up, so managing the dissemination of an EBP can be highly burdensome for developers. While a number of successful businesses that market, sell, and support one or more EBPs in the school MH market do exist (e.g., Positive Action, PATHS, and Life Skills), founding and managing a separate business may not be a viable, or desired, career path for many developers.

In contrast, online delivery of an EBP greatly reduces the time and financial costs needed to scale. The self-contained nature of the intervention, which directly provides MH services, reduces the need for pre-implementation and ongoing supports. Implementation assistance is important to ensure high-quality use of the digital EBP, but these supports can often be provided through an online resource center and administrative dashboard for those overseeing the use of the intervention by youth at their site. Travel costs are eliminated and intervention materials for youth and providers can be disseminated online, as needed, to eliminate printing and shipping costs. Administrative hours can also be decreased through use of an online shopping cart for credit card payments and a licensing platform to manage accounts for those who purchase the EBP (e.g., renew subscriptions and manage users). Because marketing and support are still needed to effectively scale, COGS cannot be eliminated entirely, but digital EBPs do offer considerable cost savings for dissemination compared to traditional in-person EBPs.

Program Development Costs

Although dissemination costs may be lessened, intervention developers need to be aware that the

time and financial costs to create an MH intervention for digital delivery are substantial. Developers understand what it takes to create a traditional in-person EBP, including writing the professional manual, detailed session scripts, and youth workbook materials. However, they are typically **not** familiar with what it takes to create a digital program. The steps involved in this design and development process are detailed later in this chapter, but it is important to keep in mind that scripting online modules differ considerably from writing in-person sessions, both in terms of the creation process and the end product. For example, you must not only script what the provider says but also create exercises that approximate in-person interaction between the provider and participants. Didactic content needs to be chunked into brief segments and intermixed with interactives (e.g., reflection questions, mini-games, and simulations) to maintain user engagement. And each piece must be **fully** defined in terms of dialogue, graphic elements (e.g., static images and motion graphics), and system responses (e.g., personalized feedback).

When planning a digital program, intervention developers need to increase their anticipated timeline and budget well beyond what they would allow for traditional in-person program development. It is not possible to set an exact percent increase because every project is different and the efforts needed to vary greatly depending on the number and type of interactives included in the program. For example, virtual simulations involve art and game mechanics that make them more expensive and time-consuming to create, so including more of these interactives will necessarily increase the budget and timeline. It is also common for specifications to change and new requirements or wishes to emerge as intervention developers engage in the software design and development process and learn what is possible. Therefore, building in time for revision, refinement, and adjustment is important.

Additionally, it takes time to establish a productive working relationship between intervention and software developers. Because of this process, the first module typically takes twice as long to develop as the second module, and devel-

opment time usually decreases over successive modules. During the early stage of development, software developers need to familiarize intervention developers with the options available to them for online presentation of didactic and interactive elements, as well as the efforts needed to create those options. Developers on both sides need to define the terminology they use to ensure they are speaking a common language, which will minimize mistaken assumptions and make it easier to agree on a shared vision. Visual mockups and sample exercises are especially helpful early on and we recommend wholly developing one module to provide a fully functioning example. End-user testing of early modules is also strongly recommended to ensure youth find the content and user interface acceptable, usable, and of high quality.

Before submitting a grant or seeking other funding to create a digital EBP, intervention developers should consult with an experienced software development company to establish a reasonable, though preliminary, statement of work and budget. Not doing so and basing estimates on experience with in-person programs can lead to difficult decisions and disappointment after a project is funded. More information regarding the type of experience to look for in a software partner is presented later in this chapter.

Balancing Ingredients

Effective Intervention

When developing any new MH program, ensuring efficacy is the top priority. You carefully select intervention content, materials, and methods because you believe engagement with these elements will result in positive change in target outcomes for participants. For example, if you are developing a program for adolescents with emotional disorders, you will draw on the research literature to include key concepts (e.g., self-esteem, locus of control, and mindfulness) and intervention methods (e.g., cognitive restructuring, diaphragmatic breathing, and graduated

exposure) supported by evidence showing a positive impact on symptoms of depression and anxiety. Essentially, program development involves tailoring what is presented to participants in order to achieve specific therapeutic objectives associated with growth and positive change in your targeted area(s) of youth MH.

A common objective of MH intervention is **psychoeducation** to increase participants' awareness and knowledge of key concepts and ideas. The focus of psychoeducation is the sharing of didactic information that participants need to effectively change maladaptive patterns of thought, emotion, and/or behavior. For example, in order to engage in cognitive restructuring, participants need to be aware of various types of maladaptive thoughts and understand how and why those thought patterns are associated with maladaptive behaviors and emotional distress. Awareness and understanding help participants attend to critical cues in themselves and others, make connections (e.g., cause and effect) between learned concepts and their own lives, and identify when and where change may be beneficial for them. Psychoeducation can also help participants recognize the value of engaging in the intervention and thereby fosters motivation to participate and use newly learned skills.

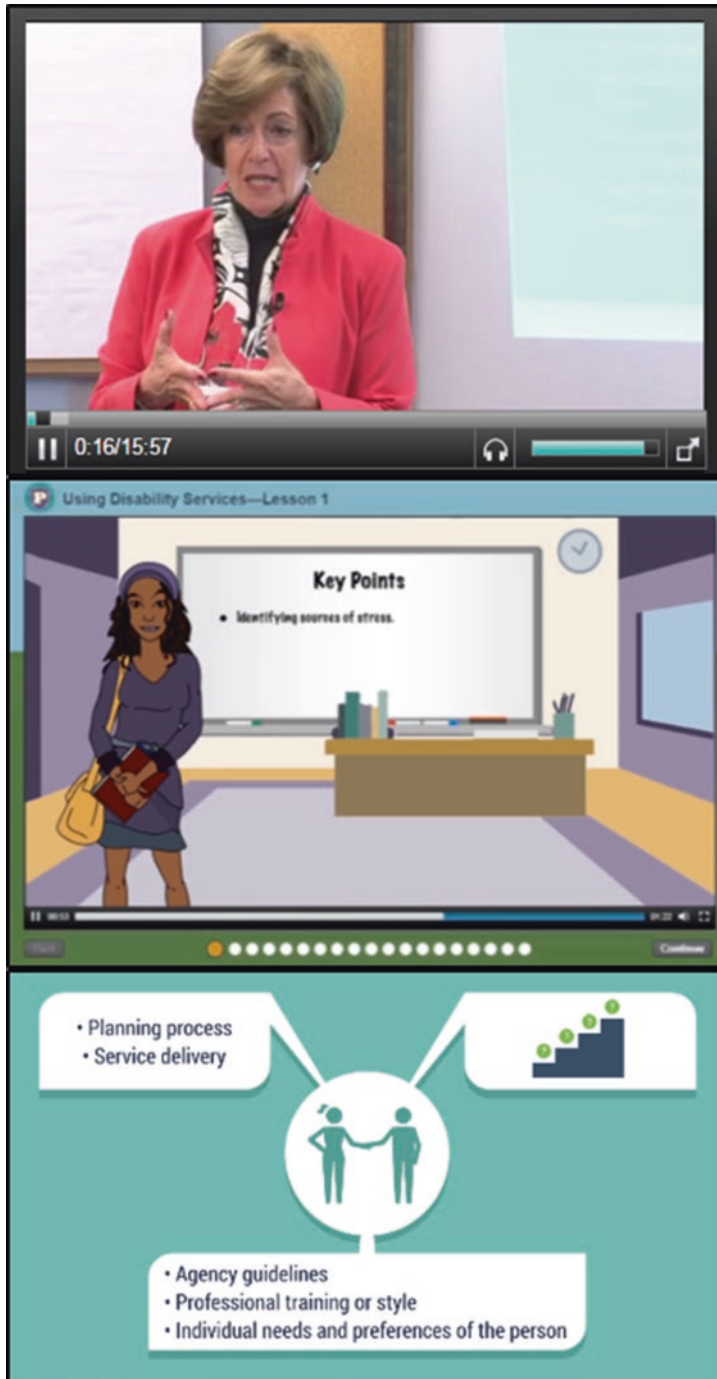
A second typical objective of MH intervention is **skill development**. Participants engage in activities to explore and practice alternative ways of thinking and behaving that are associated with improvement in target MH area(s). For example, a core skill in cognitive therapy is challenging and reframing maladaptive thoughts, such as *"I'm worthless"* or *"I can't do this."* After learning about cognitive restructuring, participants practice applying the technique to situations in their life. Active engagement in practice exercises along with instructive feedback (both positive and constructive) is essential to help participants refine their use of that technique and reinforce application of this newly learned skill in their everyday lives. Learning and practicing new skills is typically a core component in any intervention that wishes to effect change in the behaviors, thoughts, and emotions of its participants.

Psychoeducation and skill building are essential for online MH intervention, just as they are for in-person models. When translating a theory of change and intervention goals into an online environment, it can be helpful to categorize the possibilities by their intervention purpose. Figure 34.1 presents terminology used by the authors. *"Tell me"* features convey didactic information to instruct and educate participants so they can acquire the intended knowledge and understanding of target content. Video of live actors, animation, and motion graphics with voiceover are examples of methods used to convey psychoeducational content online (see Figs. 34.2–34.4). *"Show me"* features help bring didactic information to life and are used to make abstract or difficult concepts more real (see Figs. 34.5–34.6). For example, demonstration videos (with live or animated actors) help participants see concepts in action and interactive role plays, where the user can select different options and see different results, aiding in understanding antecedents and consequences. And a variety of visual displays (such as graphs, charts, illustrations, and photos) can be used to help visualize concepts, especially when these displays change dynamically based on user inputs.

"Let me try" features enable online participants to actively engage in practice with newly learned concepts and skills (see Figs. 34.7–34.9). Interactives are customized to meet particular aims, such as self-reflection, self-exploration,



Fig. 34.1 Elements of online intervention

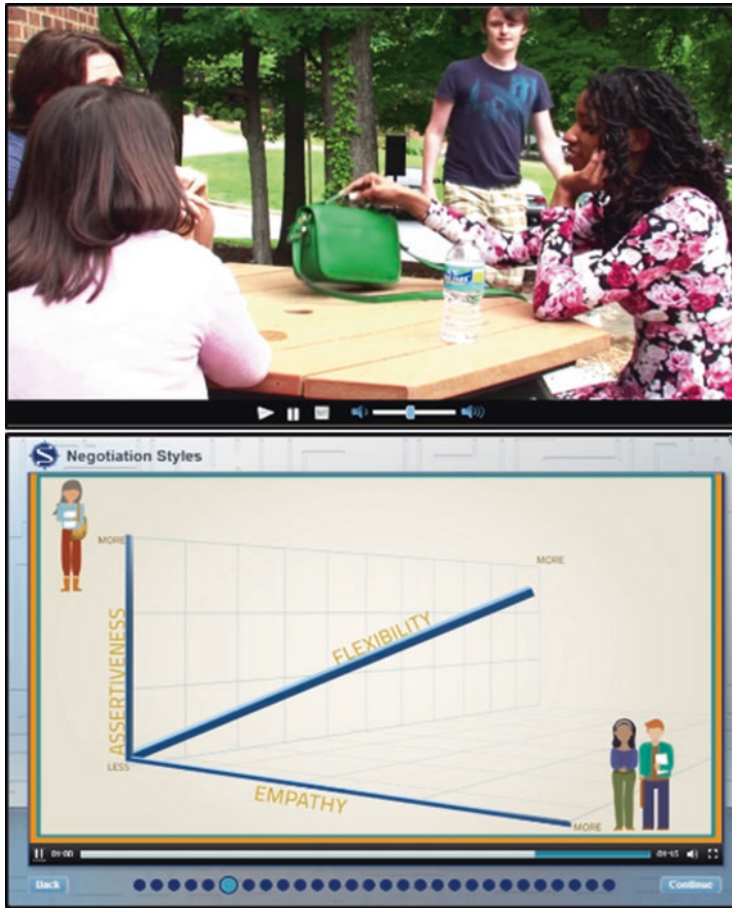


Figs. 34.2–34.4 Example “Tell me” features

and application in a specific situation, and can take a variety of forms, such as virtual simulations, drag-and-drop exercises, surveys, fillable forms, and mini-games. In this way, online participants can gain competence and confidence in

learned skills prior to attempting them in the real world.

Another essential ingredient of an online MH program is the gathering and use of data during the course of intervention (aka “*Gather data*”

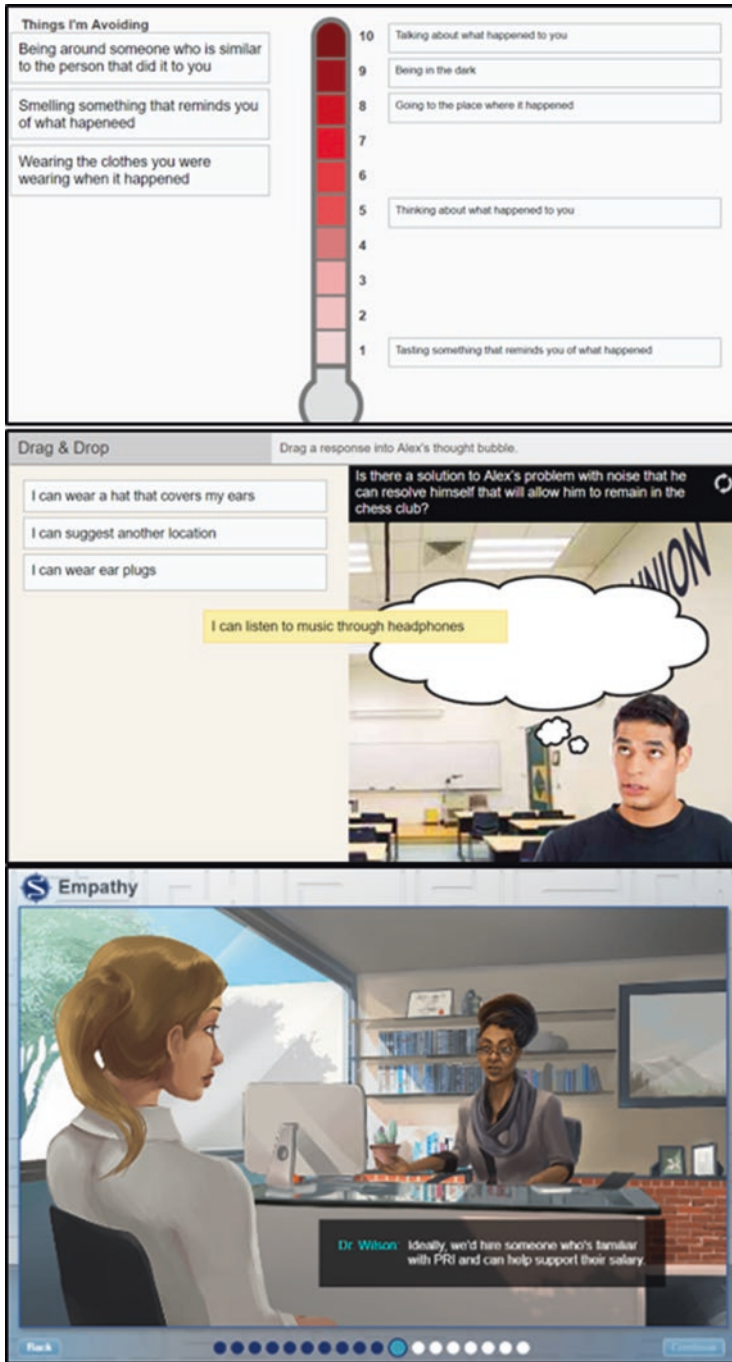


Figs. 34.5–34.6 Example ‘Show me’ features

features). Responses to online surveys and inputs collected via interactive exercises are used by the software to emulate observations, encouragement, redirections, and suggestions that traditionally would be provided by an in-person provider. For example, periodic surveys can be used to check for understanding or monitor target symptoms, with personalized feedback provided based on responses. Performance on interactive or response patterns to a survey can be analyzed to produce custom reports with individualized findings and recommendations to facilitate self-reflection and refinement of skills. And the intervention experience itself can be individualized based on user inputs. For example, participants who report experiencing trauma may

complete different modules than those who report high stress without incidents of trauma.

Beyond providing data for enhancing the participant experience, software can also continuously collect user data, such as number of logins, time spent, and number of times a feature is completed. This information can be used by those administering the MH intervention to assess online participants’ degree of exposure to intervention material, which in turn can be helpful for understanding treatment responsiveness. In addition, these data can be exported, along with data collected from direct sources within the intervention (such as survey responses and simulation performance indices), for further analysis regarding progress and efficacy.



Figs. 34.7–34.9 Example “Let me try” features

Engaging Intervention

Participant engagement should also be considered an essential ingredient for MH intervention. If participants are not engaged with the interven-

tion content, materials, and activities, it is unlikely participation will actually effect change (Bakker & Rickard, 2019; Becker et al., 2015; Nix et al., 2009; Smith et al., 2008). Low participant engagement is also linked to premature

dropout from treatment and poor generalization of intervention content to real-world settings (de Haan et al., 2013; Fleming et al., 2018). Therefore, in large part, participant engagement is a precursor of, and a necessary condition for, an MH intervention achieving efficacy for its participants.

The bar for ensuring sufficient participant engagement is much higher for an online intervention than it is for a traditional one. When there is a set amount of time scheduled for an in-person session and individuals are interacting face-to-face, it is much more difficult to disengage. MH providers are trained to observe participants and encourage participation as needed. If a participant is daydreaming, distracted, or off-task during an in-person session, they are likely to be called out and redirected. Social norms also play a part; participants may feel more obliged to listen and respond when faced with a person rather than a computer. As a result, tolerance for boredom and willingness to listen to large amounts of didactic information are substantially greater with in-person delivery.

In an effort to maximize the likelihood that the online MH intervention will sufficiently engage participants, the authors recommend intervention developers incorporate the following design considerations. First, *chunk didactic content* as much as possible. “Talking head” instruction, such as video of a subject matter expert, should be kept as brief as possible, preferably presented in segments of 2–3 min. Sessions, or modules, should also be chunked into manageable units (~5–20 min), so participants can complete one unit during daily life and easily pick up where they left off when returning to the program.

Second, *frequently alter the visual display* during didactic instruction. For example, break up a video of the subject matter expert speaking by showing motion graphics (animated art and/or text on screen), slides, or other videos with voiceover. Visual variety is critical for maintaining the attention and interest of online participants, particularly for longer didactic segments (Clark & Mayer, 2016). Moreover, youth are accustomed to seeing robust graphics. Attractive, professional-looking graphics will increase

engagement, whereas amateurish, substandard graphics can actually increase distraction and lower interest in didactic material.

Third, *frequently intermix interactives*. At a minimum, interactives break up the action and require user input so participants are actively engaged in moving the online intervention forward. For example, an interactive menu of videos that need to be viewed, but in no set order, provides a sense of agency and control over presented material. And, when interactives provide opportunities for self-exploration and personalized feedback, participants are better able to make connections to their own lives, making content more interesting and relevant. Therefore, the use of interactives is important not only for achieving particular intervention goals but also for maintaining interest and fostering motivation to continue engaging in the intervention.

Although digital delivery of MH intervention lowers mental healthcare access barriers, such as scheduling and financial challenges, benefits will not be realized if youth do not engage with and complete the program. The online MH intervention should purposefully integrate elements that engage multiple sensory modalities (visual, auditory, and experiential) to enhance engagement and increase the probability of significant treatment benefits (Shams & Seitz, 2008). The lower the end user’s intrinsic motivation to participate in the MH intervention, the greater the need for online engagement strategies. Structuring content into small sections with clear and achievable activities allows youth to experience success in the program early on and supports continued engagement.

Selecting a Software Development Partner

Creating an online MH program can be a daunting and overwhelming endeavor. Most intervention developers have no experience with software development, and professional education programs commonly do not provide training in digital strategies for MH intervention. Therefore, it is not reasonable to expect an intervention developer

to be able to independently design a digital EBP for youth MH. The essential foundation for an effective and engaging program is a strong collaborative working relationship between the intervention developer and the software developer. The intervention developer brings their subject matter expertise in the target MH domain and an understanding of the core components needed to realize positive impact on youth MH. They also bring a deep understanding of the target youth population that will ultimately use the online intervention. The software developer brings subject matter expertise in user-centered design, digital learning approaches, and various online and mobile user interfaces. They must also bring the requisite technology infrastructure and software development skills needed to build, deploy, and maintain the resulting digital EBP.

Collaboration between intervention developers and software developers requires regular joint meetings during which ideas, needs, and challenges are openly discussed and the team is able to produce mutually acceptable decisions through constructive negotiation and compromise. It is impossible to foresee all specifications for a software application, so an agile, iterative design and development process is needed to progressively refine the vision for the digital MH EBP. Draft content, such as outlines and storyboards, should be presented and reviewed. Only after revisions are made and approved by the team should software development proceed. It is costly, time-consuming, and frustrating to re-program software once built, so it is critically important that the team clearly specifies the end product before programming begins. It is also helpful to chunk development into components, such as intervention modules or sessions, so the team can experience moving from conceptualization to drafting to approvals to programming.

It is best to identify necessary revisions as early as possible, so collection and incorporation of end-user feedback are essential throughout development and particularly during early development. If pivots need to be made in the software or instruction, there will be less impact on timeline and budget if these are identified as early as possible. Again, an iterative, user-centered devel-

opment process using concrete samples that can be responded to and modified as necessary is recommended.

When selecting a software development partner, it is important to find a good fit for you. Key characteristics to look for are (a) competence, (b) technical capabilities, (c) flexibility, (d) a collaborative approach, and (e) related experience. We recommend talking to several companies before selecting your partner. Ask them to show you their “wares” with examples and demos of other similar or related software applications. Make sure you like what is presented. Specifically, is it visually attractive with a clean, easy-to-understand user interface? And, make sure they have the technical capabilities to achieve your vision for the end product. For example, if you want to incorporate tailored SMS messages based on participant input, make sure the software company is capable of automated logic-based text messaging. If participants will share sensitive information while completing online modules, make sure the software will adhere to stringent security and privacy requirements, such as HIPAA compliance.

Also, ask for references so you can talk with other intervention developers about their experience working with the software company. Ensure software development team members are respectful and responsive to input from the intervention developer and that the project experience is collaborative and productive, where all team members present ideas and work together to develop creative solutions. Make sure the team will include an experienced project manager, as this person is essential to keeping the design and development process on track.

Beyond the requisite technical skills/capabilities and positive project environment, look to engage a software company with experience creating digital interventions for youth in your field or related ones. This is a high bar because most software companies do not specialize in social, emotional, or mental health. However, given the collaborative nature of this work, it is very helpful to have software development team members who “speak your language” and understand core MH intervention components. Related experience

can make the design phase more efficient because team members on the software side will have a shorter learning curve and will be better able to recommend online features and functions to achieve your specific MH intervention goals.

Design and Development Framework

So, you've decided to create an online MH program and you have engaged an experienced software development company. Now what? In this section, the authors present the steps undertaken during design and development of an engaging and effective online MH program.¹ These steps apply to both green field and adapted EBPs and are based on our years of experience and lessons learned working with many different intervention developers on a wide range of social, emotional, and behavioral health programs. Online EBP creation is a joint effort, with team members from both intervention development and software development contributing to the coordination and completion of each step.

1. Identify your audience

- (a) **Define the audience:** Who do you want to reach? What is their age range? What will your program help them do? What is their experience with the content in your program? What is their experience with the technology necessary for online learning? Answering these questions will help you target intervention content to best meet the needs of your end users and customize content for participants at different skill or developmental levels.
- (b) **Develop user personas:** To help you more concretely envision your audience, it is useful to create a few user personas that represent users you want to reach

with your program. Give them names and a detailed backstory. Then, the team can keep these personas in mind while developing content for actual program users.

- (c) **Consider the intervention providers:** If a provider will be administering and overseeing use of the program by youth participants, consider what information they might need to track user progress. This is particularly important if the provider uses participant input to direct or prioritize delivery of intervention components within or adjunctive to the online program.
- ### 2. Evaluate existing content
- (a) **Gather program materials:** Collect all the materials used to deliver the program, including things like provider manuals, session outlines, handouts, and associated resources (e.g., websites or articles). If you are starting a program from scratch, gather as much relevant information as you can upfront to inform design, such as your theory of change and core components. Having everything in one place will help define what to include in your online program and help avoid revisions later on.
 - (b) **Review existing content:** Based on your experience delivering the program (or related ones) and working with youth participants, is the content in the correct order? Are there topics that should be removed, added, or expanded for online delivery? Are there components of your program, such as a group discussion or weekly check-ins, that would be challenging to implement via an online format?
 - (c) **Determine permission to use content:** During in-person sessions, you might have used others' content to demonstrate a concept or provide an example. Participants may have watched a YouTube video, a movie clip, or a role-play from a colleague. Maybe you shared an excerpt from a book, showed participants images from the Internet, or had them take an

¹As a reminder, discussion focuses on delivery of asynchronous intervention content that youth complete in an independent, self-paced fashion using any device with a web browser (e.g., Chrome, Firefox, and Safari) and an Internet connection.

assessment. You will need to get permission to include others' content in the online EBP, or the team will need to find or create different content to make those points.

- (d) **Determine branding:** A visually engaging brand can be a foundation for a visually appealing online EBP. Work with a graphic designer to develop or refine an intervention name and logo that will appeal to your target audience. Ideally, the software development team you choose will include graphic designers to guide you through the process of creating a cohesive brand identity and appealing graphics for your online program.

3. Define didactic content

- (a) **Establish clear learning objectives:** Review the learning objectives for each session and decide if they are appropriate for your online course. Tell participants at the beginning of a session how it will benefit them. Learning objectives can be bulleted statements, like *“By the end of this session, you’ll be able to...,”* but they don’t have to be. For example, they could be presented as a response to a situation: *“Has this ever happened to you or a friend? We’ll show you ways to manage this.”* Be sure to check that your final content fulfills the learning objectives and session goals you set.
- (b) **Script the content:** To capture the attention of participants, you need to ensure that your online program content and visuals are engaging. The framework for creating this engaging content is usually a detailed outline or script for each program session or module. The process of scripting and revising your sessions helps you efficiently deliver your content in a way that supports participants in achieving the program goals.
- (c) **Be realistic about the amount of content in a session and course:** An online session is often shorter than an in-person session and should include breaks from didactic content where users can process

the content, practice skills, and check their knowledge. Consider how much content participants can realistically absorb. When scripting the program sessions, intervention developers are sometimes tempted to give more details than a participant can easily process. Focus on the most important content for your participants.

- (d) **Consider who will present the online content:** Determining who will be the “voice” of the program, or narrator, can guide the tone of your content. Will your users respond better to a person they can relate to, like a slightly older peer, or does the content call for the authority of an experienced professional, such as a teacher or counselor? Although using a professional actor allows you the most flexibility to adjust your tone, many people prefer to use one of the intervention developers because of their content expertise. If you choose a project team member as the narrator, consider whether they are comfortable performing. Experience reading a teleprompter is a plus.
- (e) **Relate to your audience:** When scripting your online sessions, use conversational language that is appropriate for the audience’s age, literacy level, and experience with the topic. You do not want to talk down to the audience, but you will be introducing new vocabulary and concepts in your content, so avoid academic language, jargon, overly-detailed explanations, and examples that are not relevant to your audience. Also make sure presented examples feel current but not tied to a specific moment in time so that frequent updates may be needed (which can be costly).
- (f) **Check that your content is culturally sensitive and relevant:** Review the terminology and examples used in your content. Are they inclusive and diverse? Consider cultural representation when selecting a narrator or narrators. Using a combination of narrators can be helpful

for representing different perspectives. Make your content relatable. For example, talking about a person being upset that they did not get to choose the color of the car they got for their 16th birthday will not resonate with youth who do not have such resources, youth who live in an urban environment and do not drive, or youth who are dealing with much bigger concerns. Not all examples have to apply to all participants, but consider the likely range of their experiences and try to show sensitivity in the examples, photos, and artwork you present. If possible, youth focus groups can help your team quickly vet prospective scenarios, concepts, and images.

- (g) **Provide ways to practice concepts and skills:** Along with instructional content, offer participants opportunities to apply what they learn. Consider adhering to the “*Tell me, Show me, Let me try*” approach discussed earlier. Tie examples to things you think will be relevant to them. Think back to in-person sessions. If there are concepts participants tend to struggle with or information that is particularly crucial, be sure to include those concepts in practice exercises. Program development platforms contain a variety of tools for practice, from true or false questions to robust interactive scenarios.
- (h) **Support users as they go through the program:** When participants are learning independently online, they will not have a provider to support them along the way. Include scaffolding and personalized feedback to support the users. Consider whether content could be upsetting. For example, if you are discussing how to tackle negative thinking, instead of prompting participants to list all the negative thoughts that get in the way of them completing a task, you might say, “*Reframing can help change the pattern of negative thinking. Here is an example. Can you reframe a negative thought that keeps you from doing X to be a positive*

thought?” The online intervention can also be augmented by other digital strategies, such as text messaging; peer support methods, such as social media posts; as well as expert support methods, such as distance coaching.

4. **Technology and production considerations**

- (a) **Consider how users will access the program:** Will your audience be using a laptop? A tablet? On a phone? Mobile-first content is easily accessible by any user with a phone, but the screen size is quite small. If the majority of your participants will access the content on a phone, you might use less on-screen text and cleaner visuals than you might with access on a device with larger screen size. Course features, such as interactive exercises, feedback, and reports might also behave differently depending on the device. Identify how your users will access the program at the beginning of development to help you achieve the best experience for the greatest number of end users.
- (b) **Use technology to support engagement:** Online technology offers different ways to customize the participant experience. Providing interactive reports based on participant responses, branching course content based on a participant’s response to a single question or longer assessment, following and building on participant responses throughout the program, showing progress or achievement over time, and using SMS text messaging to communicate with participants are all examples of engaging technology features. Explore the features available in your development platform that fit your budget.
- (c) **Determine who will provide input and feedback on your program and include them early in the process:** Early in development, you should establish who needs to provide feedback. Common sources for feedback are advisory boards, colleagues, and end-users. Define how that feedback will be attained early

enough to avoid costly revisions or delays. Inviting new reviewers to provide feedback after content issues have been debated and resolved delays the process and increase expense. If someone new is added to the review process, be clear about the level of feedback you want from them and how it can be included. If a reviewer has an area of expertise, have them focus on the content for which that expertise is relevant. Check if you need approval from your organization's administration, IRB, or even legal counsel to collect this feedback.

- (d) **Pilot test early:** If you intend to get audience feedback on program elements—like the art style, tone, or practice exercises—plan to do that early in the development process. You can use mockups and wireframes of content to get initial feedback. Once you have gone through the process of branding your program and begun iterative development of the session content, it can be time-consuming and expensive to change direction. Pilot testing is particularly important if you are developing a program from scratch.

Conclusion

With research affirming both the dire need to increase the accessibility of MH EBPs for youth and the effectiveness of online MH programs to meet this need, digital delivery is a logical choice to improve youth access to EBPs. Whether adapting an existing in-person EBP or creating a new EBP from scratch, intervention developers must recognize that designing and delivering an MH intervention online will be quite different from an in-person program. Understanding this will help intervention developers embrace the technology available to them and the ways they can use it to meet the needs of their participants. In addition to expanding the reach of MH interventions for youth, an online format lessens the long-term time and cost burden on intervention developers to sustain and disseminate in-person EBPs.

Although dissemination costs for a digital EBP may be less than those for an in-person EBP, the time and financial costs to create an MH intervention for digital delivery are nonetheless substantial. This financial commitment makes it vital that an intervention developer choose a software developer with experience creating digital interventions in youth MH, the necessary technical capabilities, and a collaborative approach.

Illustrative Case Examples

CAMP Air is an adaptation of the successful school-based, in-person intervention *Asthma Self-Management for Adolescents* (ASMA), developed by Dr. Jean-Marie Bruzzese and colleagues at Columbia University. With support from the NHLBI (National Heart, Lung, and Blood Institute), Dr. Bruzzese and 3C Institute teamed up to create this dynamic online intervention tailored to helping adolescents in grades 9–12 with uncontrolled asthma manage their behavior and adhere to treatment. The original intervention model presented a challenge because it relied on responses gathered in one-on-one meetings and regular reporting of symptoms and behavior by youth. To solve the challenge, a secure mobile app was used to collect symptom and behavior data over time and online intervention content was personalized based on the youth's responses to various prompts (see www.campairprogram.com).

Drs. Bradley Stein, Lisa Jaycox, and Lynsay Ayer of the RAND Corporation partnered with 3C Institute to create *Life Improvement for Teens* (see www.3cisd.com/LIFT-case-study). To provide a more efficient and less costly alternative to in-person programs for schools, LIFT provides an online intervention to build stress-management skills for adolescents who have experienced trauma and high stress. An innovative aspect of LIFT is the personalized nature of the content presented to youth. Based on the youth's responses to an initial assessment, the presentation of intervention content, examples, and interactives are varied so as to be most relevant

for users who have versus have not experienced traumatic life events.

The *Unstuck and On Target* online program provides training to parents of children (aged 8–12) with Autism Spectrum Disorder to improve both executive functions and social skills. The authors of the *Unstuck and On Target* curriculum partnered with 3C Institute to adapt their existing content and develop an online version to increase accessibility for parents with geographical, scheduling, or financial constraints. The program provides robust lessons and supports to help parents learn and practice a new way of understanding their child's behavior, as well as ways to help their child respond flexibly, regulate their emotions, and manage and plan tasks (see www.unstuck-ontarget.com/).

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Supporting Scale-up of Positive Behavioral Interventions and Supports: A National Technical Assistance Model

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Introduction

The impact of unmet behavioral challenges displayed by children and youth across American schools has been long-standing. This is especially true for children and youth with Emotional/Behavioral Disorders (EBD), where poor within-school and post-secondary outcomes have been well-documented (Bradley et al., 2008; National Research Council & Institute of Medicine [NRCIM], 2009; VanAcker, 2004; Wagner et al., 2005). While scholars and advocates in special education, school counseling, school psychology and others have advocated for proactive positive instructional interventions and supports for decades (e.g., Peacock Hill Working Group,

1991; Lewis et al., 2019), the pre-K-12 educational settings in the U. S. continue to rely on reactive and exclusionary discipline practices in an attempt to address problem behavior (Lewis et al., 2017). The negative outcomes associated with exclusionary discipline practices have been well-documented (Lewis et al., 2017). In fact, students who experience frequent exclusionary discipline practices in response to challenging behavior, especially children and youth with disabilities, with elevated risk status, and from diverse racial and ethnic groups, have been tracked into the “school to prison pipeline,” reflecting the increased statistical probability that students who experience frequent exclusionary discipline practices are in correctional facilities (Christle et al., 2005; Hughes et al., 2020).

Understanding the myriad correlated factors that lead to children and youth displaying chronic and/or intensive behavioral challenges is complex. Risk factors such as poverty, substance abuse, or violence in the home are linked to increased social, emotional, behavioral, and academic difficulties in school (NRCIM, 2009). In addition, Mayer (1995) extended the work of Patterson and others (Patterson et al., 1992; Walker et al., 1995) on coercive cycles and illustrated how the early learning history of children and youth who engage in anti-social behavior is inadvertently strengthened through traditional school discipline. Mayer reported that schools often (a) have inconsistent and unclear expecta-

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tions across classrooms and school settings, (b) apply inconsistent enforcement or acknowledgment of rule violations, (c) use harsh disciplinary responses (e.g., zero tolerance policies, overuse of exclusionary responses), and (d) allow students to “fall through the cracks” due to lack of engagement and supervision. As noted by Mayer, schools characterized by these common patterns miss opportunities for positive prevention and early intervention strategies, fail to reduce significant problem behavior, and mirror coercive cycles that exacerbate behavioral challenges.

In response to frequent behavioral challenges documented in schools, the educational community continues to advocate for early intervention and prevention strategies (e.g., Conroy et al., 2004) and the adoption of evidence-based practices (e.g., Cook & Odom, 2013; Epstein et al., 2008). To implement both recommendations with fidelity, schools, districts, and state departments of education must make a concerted shift in moving from systems that potentially exacerbate problem behavior, such as exclusionary discipline, to comprehensive, system-wide, and proactive interventions and supports (Lewis, 2016; Lewis et al., 2010). Unfortunately, many educators continue to implement manualized or packaged “discipline” programs with limited professional development for teaching staff and little to no on-going technical assistance. In a review of the common discipline/classroom management programs 30 years ago, Chard and colleagues found that none had systemic school-wide features to simultaneously address and discontinue ineffective and/or practices that exacerbated problem behavior and provide sufficient ongoing support allowing educators to adapt strategies to meet the needs of all students within the school (Chard et al., 1992). Unfortunately, the majority of commercially available programs continue in the same vein.

The increasing amount of empirical evidence coming forth on the unintended consequences of relying on punitive or aversive practices at the individual to school-wide level in the early to mid-1990s led to a call in the disability community to move toward “non-aversive” interventions (e.g., Repp & Singh, 1990) and a call to

create sustained multi-element evidence-based interventions and supports that emphasize an instructional focus, along with the accompanying supports for educators to increase implementation fidelity (Peacock Hill Working Group, 1991; Tolan, & Guerra, 1994). Within special education and the mental health community, in particular, those working with children and youth with EBD, scholars began calling for the field to move beyond single isolated strategies toward creating school-wide systems that could promote a prevention and early intervention framework. Using a public health model that advocated “primary, secondary, and tertiary” prevention (Commission on Chronic Illness, 1957), Walker and colleagues outlined a similar logic of building a three-tiered continuum of support within schools (Walker et al., 1996). Likewise, the mental health community advocated a similar three-tiered continuum that included “universal, selective, and indicated” strategies (Mrazek & Haggerty, 1994).

The confluence of common ineffective approaches to school “discipline” that inadvertently exacerbated and intensified challenging behavior to the point of exclusion, including major disparities across disability and racial groups; the limited impact of “packaged” programs or implementation of evidence-based practices in isolation; and the failure of education systems to recognize the limited skillsets that most educators receive in pre- and in-service professional development (Lewis & Thomas, 2014), all led to a call for comprehensive school-wide systemic approaches to address problem behavior (Sugai & Horner, 2006, 2009).

School-Wide Positive Behavioral Interventions and Supports

School-Wide Positive Behavioral Interventions and Supports¹ (SWPBIS) is best characterized as a problem-solving framework educators use to

¹See pbis.org for additional information on key features of SWPBIS.

build a continuum of supports to promote social, emotional, and behavioral (SEB) growth for all students, including those who display high rates of problem behavior (Sugai et al., 2000). The problem-solving logic allows leadership teams within schools and districts to conduct ongoing reviews of student data, carefully select evidence-based practices derived from data patterns, progress monitor implementation fidelity and outcomes, and build or alter current school/district systems and practices to increase staff implementation fidelity and student benefit, respectively. School teams start building a continuum of SEB supports at the universal level, which focuses on all staffs, all students, and all school settings. Specifically, educators implement effective instructional and support strategies to teach critical SEB skills, prevent problem behavior, create a consistent positive environment, and create a context that promotes maintenance and generalization of small group and individualized student interventions (Sugai & Horner, 2006, 2009). For students who are not successful with universal or Tier 1 supports alone, school teams intensify supports through Tier 2 (targeted, small group or non-individualized) supports and Tier 3 (intensive, individualized) supports (Sugai et al., 2000).

Research to date on SWPBIS implementation has documented impact across a range of behaviors within schools (Horner et al., 2010; Mitchell et al., 2017, 2018). Studies have demonstrated improvements in school climate, perceptions of safety, reductions of problem behaviors, reductions in rates of exclusionary discipline, and improvements in social and emotional regulation, attendance, and academic outcomes (Benedict et al., 2007; Bradshaw et al., 2008a, b, 2010; Chaparro et al., 2012; Horner et al., 2009; Simonsen et al., 2010; Waasdorp et al., 2012). Recent research has also demonstrated that the systemic focus of SWPBIS leads to an increase in sustained implementation over several years (McIntosh et al., 2016, 2018a, b, c).

The Office of Special Education Programs Center on Positive Behavioral Interventions and Supports

As stated above, the early to mid-1990s saw a frequent call for educators to adopt evidence-based practices and to differentiate those practices across all students from universal prevention strategies to connected small group and individualized supports. In the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA), the requirement for special educators to use the principles and practices of PBIS to address chronic problem behaviors that led to student removal through repeated school suspensions first appeared. The Office of Special Education Programs (OSEP) also put out a request for proposal to fund a national technical assistance and dissemination (TA/D) center. First funded in 1998, the OSEP Center on PBIS began the task of translating current empirical evidence on effective interventions and supports related to the IDEA 1997 regulations as well as building system-wide capacity to increase implementation fidelity at the state, district, and school levels. While the requirements of IDEA on the use of PBIS are limited to individual student behavior support plans, the Center on PBIS expanded that focus to promote a continuum from school-wide to individual for all students, including those at-risk and with disabilities.

In the first 5-year funding cycle, building on previous systemic approaches to supporting at-risk learners (Colvin et al., 1993), Center personnel focused on establishing model-demonstration sites to create proof of concept examples of the problem-solving continuum approach and then translate and disseminate the essential features that led to implementation success and resulted in improved student outcomes. Within the initial exemplar implementations and material development, Center personnel set out to produce a knowledge base that had four key characteristics

to ensure wide-scale applicability and adoption. First, instead of producing a curriculum or packaged approach, the Center set out to identify and test essential features that could be universally applied while at the same time contextualized to the wide array of educational settings (e.g., pre-K through high school, small to large, rural to urban). Second, the Center focused all technical assistance and material developments for dissemination with an eye toward increasing school, district, and state capacity using existing school personnel and resources. Third, the Center identified existing data collection strategies commonly found in schools to start the data-based decision-making process. In instances in which new tools were created, a commitment to clear linkages between measure outcomes and action planning and progress monitoring was established. In addition, protocols for new tool use and companion professional development that could be conducted by school, district, and state personnel were developed. Finally, all promoted interventions and supports must build on and contextually fit within the instructional/educational framework that guides pre-K through 12 education.

These four guiding principles established in the first funding cycle continue to be at the core of the current iteration of the Center (currently in its fifth 5-year funding cycle). Given the sheer number, complexity, and varied communities of students that educators support, the Center was faced with four distinct and interrelated challenges. First, the Center had to design a set of professional development and technical assistance practices and materials that promote fidelity of implementation of essential features while allowing for the current phase of implementation and local adaptations given a wide range of behavioral challenges and educational contexts. Second, the Center was tasked to develop a set of core processes and materials that would allow best practices in professional development and technical assistance to occur both across and interconnected at the school, district, and state or territory level. Third, the Center has been challenged in each funding cycle to take Center-developed processes and materials to scale across all 50 U.S. states and territories. The final chal-

lenge in the Center's work is to ensure that responses to the first three challenges sustain over time.

The remainder of this chapter focuses on how the Center on PBIS uses core guiding principles generated from past and current research to organize its work to address the four listed challenges. References within the content related to the four challenges largely represent Center-developed materials and resources that are freely available on the Center's website, pbis.org. Concluding recommendations, the expansion of the Center's work over its history, and remaining challenges are also discussed.

Challenge One: Develop a Widely Generalizable Set of Materials and Processes for Dissemination

As stated above, the Center purposefully did not develop a standard curriculum or set of materials to be used by all Center personnel in their work to support schools, districts, and states. Starting with a robust knowledge base of effective interventions and supports, Center personnel developed local variations within and across geographic areas they supported as part of the Center's technical assistance mission. The initial work resulted in a wide range of examples of internal and external professional development supports across schools, districts, and states, and demonstration sites from early childhood to high school (Horner et al., 2014; Sugai et al., 2000). The range of work was continually analyzed through an iterative process to identify key and common features that led to success, as well as those that led to failure. As described throughout this chapter, the Center paid equal attention to the practices schools implemented, the data they used to guide decision-making, and the systems or supports they put in place to build implementation fluency among school staff. In addition to review the Center's impact among partner schools, districts, and states, Center staff incorporated empirical literature related to best practices in behavioral support, school leadership, organizational change, professional devel-

opment, and technical assistance into the iterative process. The culmination of the Center’s approach to TA/D resulted in an interrelated set of materials and processes. The first targets were the actual steps and essential feature’s schools must put in place to improve student academic and SEB outcomes. The second were a set of steps and essential features necessary to support school implementation that must be put in place internally within the school (e.g., establish a leadership team) and external to the school (e.g., target district and state resources to support schools) to promote implementation fidelity.

Near the end of the first funding cycle, the Center produced a *PBIS Implementation Blueprint*² (now in its 3rd edition; OSEP Center on PBIS, 2015). The blueprint format versus a standard curriculum allowed the Center to address the first challenge by offering a set of essential features that could be adopted and adapted across a wide range of educational settings and included the systemic supports that promote implementation fidelity (Sugai et al., 2000). Central to effective implementation was the establishment of a leadership team to guide implementation work at the school, district, and state levels. As illustrated in Fig. 35.1 from the *PBIS Implementation Blueprint*, the dual functions of the leadership team are highlighted with essential features to promote fidelity and student impact. The first are “executive functions,” ensuring essential features are embedded in school, district, or state policies and priorities. The second are “implementation functions,” which include professional development, ongoing technical assistance, leveraging existing behavioral expertise, and creating an iterative evaluation process that informs all facets of implementation. The Center’s work has demonstrated that the coordinated and connected implementation features result in schools implementing with fidelity, documenting improvements in student behavior across student groups, and sustaining implementation over time (Mitchell et al., 2018).

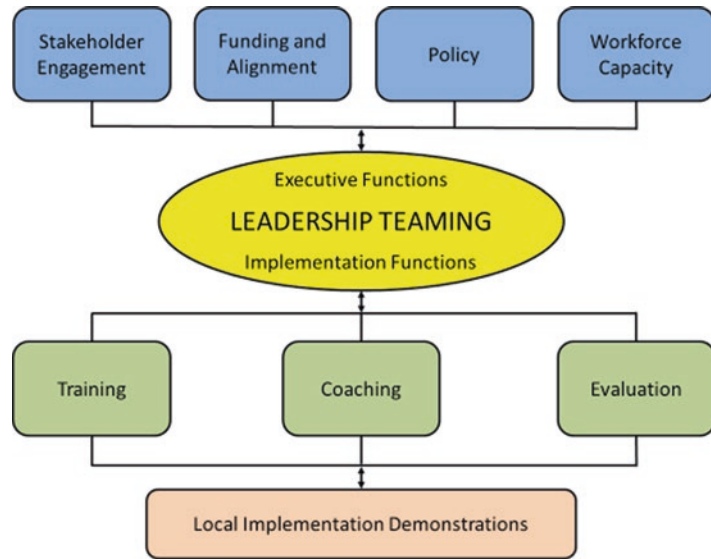
²see pbis.org for current versions of the Implementation, Evaluation, and Professional Development Blueprints.

As increasingly more schools implemented SWPBIS with assistance from the Center, and the Center’s TA/D expanded beyond individual schools to include a focus on the role of state and local education agencies (SEA/LEA), two additional blueprints were developed. The first is the *PBIS Evaluation Blueprint* (Algozzine et al. 2010; Center on PBIS, 2020a, b, c) which provides more specific information and guidance on data-based decision-making as part of the SWPBIS problem-solving framework at the school, district, and state levels. The second is the *Training and Professional Development Blueprint for PBIS* (Lewis et al., 2016), which provides information for LEAs and SEAs to set up effective professional learning and build technical assistance or “coaching” capacity. Across the additional two blueprints, the logic of highlighting essential features, accompanied by implementation examples, is followed. All three blueprints are revised and updated on a rotating basis to reflect the current knowledge base and continue to provide more in-depth strategies to address perennial challenges such as promoting equity across student groups. By focusing the Center’s vast knowledge base through essential features that are clearly tied to implementation exemplars, the Center has been able to meet the first challenge of developing and providing a set of supports for a wide range of educational contexts as well as nimbly respond to a crisis, such as school shootings and the COVID-19 pandemic, by promoting a framework instead of a set curriculum (see Center on PBIS, 2020a, b, c, 2021).

Challenge Two: Produce a Set of Practices and Processes that Allow for Various Outcome Priorities and Staff Configurations

The *Implementation Blueprint* outlines the executive and implementation functions of the school, LEA, or SEA leadership team. The *Professional Development* and *Evaluation* blueprints further expand on implementation functions. Center blueprints serve as the main approach to address the “systems” component of the problem-solving

Fig. 35.1 PBIS school, local and state education agencies leadership team core functions. (Reprinted with permission from the Center on PBIS)



framework. The second challenge required the Center to focus on data-based decision-making given the varied starting points of implementation and accommodate system and practice changes to reach locally established school and student outcome goals and resources through an action planning process. To assist in the action planning process, one of the first tools the Center developed was the Self-Assessment Survey (SAS; Center on PBIS, 2009).³

The original SAS, developed in 1994, had four sections, school-wide, non-classroom settings, classroom, and individual students with essential features focusing on data, practices, and systems across each of the four sections. All school staff were encouraged to complete the SAS anonymously to rate (a) the degree to which each of the key features was currently implemented and (b) their ranking of priority for improvement for those items partially or not in place. The aggregated results gave school teams a list of features and staff voice to build into action plans allowing them to start implementation based on need and priority versus a standardized list of steps. This use of data to guide and drive initial and ongoing implementation efforts allowed schools to build on strengths and increased the likelihood of staff

participation by building an action plan based on their voice.

Extending the data-based decision-making process to identify needed practices and create systemic supports, each blueprint also includes self-assessment measures along with guidelines to use other common school data sources (e.g., attendance, grades, behavioral infractions, and nurse visits) in the action-planning process. Likewise, the blueprints delineate key differences the leadership team should focus on across the school, district, and state levels, with the latter two focusing on how to support implementation at the school level. An early lesson learned borne out of initial work in small schools and districts, especially those in rural and remote areas, was to de-emphasize the need for traditional school positions related to the behavioral expertise implementation function (e.g., school psychologists, social workers), as schools frequently indicated they did not have many of those positions within their schools or districts and often relied on itinerant supports. Instead, Center products and processes began to emphasize the “function” those with specialized skills traditionally bring to a leadership team and encouraged schools and districts to use professional development blueprint strategies to build skillsets among existing staff and/or community resources.

³Available at pbis.org

Through the action planning process, the Center increasingly developed recommendations and strategies to use school data and the guiding principles of SWPBIS to address complex within-school challenges, such as well-documented inequities among student groups (e.g., race, gender, disability, and the intersection of those groups), and opportunities, to ensure practices, are responsive to the cultural contexts of the communities schools serve (see Fig. 35.2). Through the action-planning process, schools were encouraged to disaggregate academic, behavioral, and climate data for groups of students who have historically been overrepresented in exclusionary discipline practices, incidences of mental health concerns, and school drop-outs, such as ethnicity, disability status, cultural or linguistic, and sexual orientation and gender identification (McIntosh et al., 2018a). If patterns of inequity were observed, the Center recommended increasing the contextual fit of Tier 1 practices, as well as intensifying and targeting core interventions and supports for at-risk students. In addition, to ensure practices are relevant to all student groups, the Center recommends engaging all students and school stakeholder groups to provide input (McIntosh et al., 2018b) and promoting culturally responsive practices (Levenson et al., 2021).

In addition to ensuring Tier 1 practices and supports are culturally relevant, the Center also strongly advocates an examination of student groups currently receiving Tier 2 and 3 supports as an additional strategy to examine the impact of Tier 1 supports. Unfortunately, national data patterns indicate that students from ethnic and culturally diverse backgrounds are overrepresented in exclusionary discipline practices (Levenson et al., 2021). SEAs and LEAs are encouraged to look for similar patterns of sub-groups of students in Tier 2 and 3 supports. In other words, students from at-risk groups do not get isolated or different supports than their peers. Rather, culturally and contextually relevant supports are embedded within universal supports and then intensified along the continuum based on student need (Rose et al., 2020).

An additional facet within this second challenge was assisting various leadership teams in developing, implementing, and evaluating professional development and technical assistance based on individual school need. To assist in the process, the Center developed a series of implementation fidelity tools to provide additional data points used in action planning. One such tool, the SWPBIS Tiered Fidelity Inventory (TFI; Algozzine et al., 2019), is for use at the individual

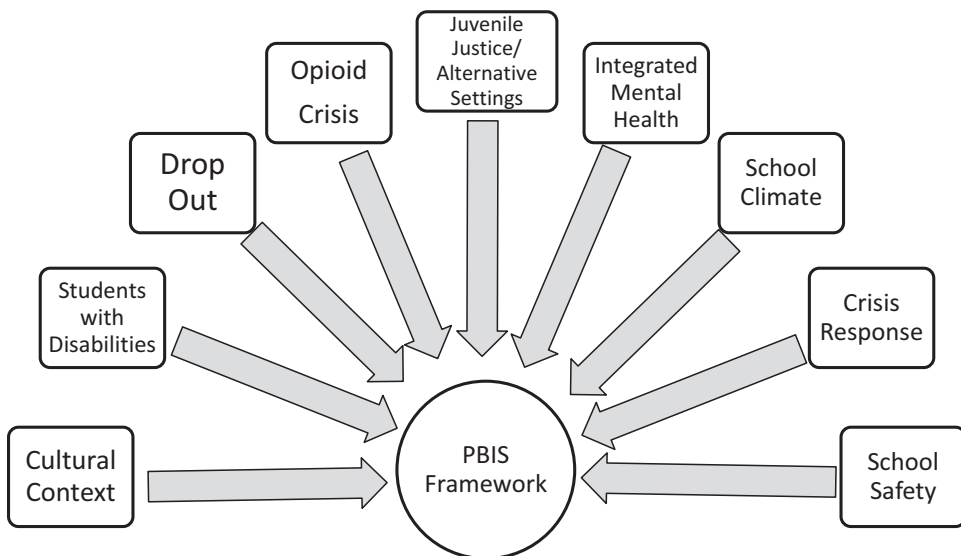


Fig. 35.2 Expanded PBIS Center foci over five funding cycles. (Reprinted with permission from the Center on PBIS)

school level. Using a combination of interviews, product reviews, and walk-through checklists, school leadership teams complete the TFI with an external coach to document sub-area and overall implementation fidelity at Tiers 1, 2, and 3. The TFI assesses the executive and implementation outcomes delineated in the *PBIS Implementation Blueprint*. The PBIS District Systems Fidelity Inventory (DSFI; Center on PBIS, 2020a, b, c) follows the school-level TFI format and assesses the district leadership team's executive and implementation functions. The tool is designed to assist LEAs in building within agency capacity to support individual school implementation fidelity. The PBIS State Systems Fidelity Inventory (SSFI; Center on PBIS, 2019a, b) is also constructed and formatted similar to the TFI and DSFI and is designed to assist in the action planning and evaluation of state-wide SWPBIS initiatives focusing on building capacity at the district/LEA level.

Challenge Three: Taking Center Technical Assistance and Dissemination (TA/D) Efforts to Scale

Initial Center work focused on establishing model demonstration sites, combining implementation lessons learned with the expanding PBIS literature base to continually improve and update Center blueprints, tools, and related policy, evaluation, implementation, and professional learning and coaching briefs. The combination problem-solving approach to build a school-wide continuum of supports coupled with parallel systems to increase implementation fidelity allowed the Center to continue to expand its outreach. However, several barriers remained—the largest was the simple reality of limited resources. At its maximum funding across 23 years, the Center supported approximately 15 FTE direct TA providers along with content experts who are tasked to develop related products (e.g., mental health, juvenile justice) and operational staff (e.g., web support, fiscal). Simply dividing 15 into 100,000 schools across the U. S., resources are quickly

stretched beyond reason. Three shifts in Center operations and foci, while retaining the core guiding principles and framework logic, allowed the Center to continue to work toward scaling up implementation efforts.

First, forming a partnership with the Center for State Implementation and Scaling-up of Evidence-based Practices (SISEP)—an OSEP-funded Center within the National Implementation Research Network—was essential. The work of Fixsen and colleagues within SISEP underscored the importance of addressing and understanding the phases of implementation that occurs within all organizations when a new initiative is adopted (Fixsen et al., 2005, 2013). Key for the Center's work was understanding that schools follow the progression of implementation phases each time that they move up the continuum working through each phase: exploration and adoption, installation, initial implementation, full operation, innovation, and sustainability (Fixsen et al., 2005). In other words, once schools reach readiness for building Tier 2 or 3 systems of support within their continuum, professional development, and technical assistance are needed to reflect and adjust based on the school's current phase of implementation (e.g., exploration). Understanding the phases of implementation had profound impact on the Center's district/LEA and SEA TA/D efforts. Assisting LEA/SEAs in their own school capacity-building efforts increased school implementation success.

Second, keeping school capacity building as the primary focal point of all Center activities, but understanding the Center did not have the resources to support all U. S. schools, the foci of the Center's work shifted over time from TA/D focused on individual schools to the necessary district/LEA and SEA supports to ensure school implementation. Continuing the promotion of using data to assist in the action planning process, the Center initially relied on the *PBIS Implementation Blueprint* self-assessment to assist LEA and SEA teams to action plan around the core executive and implementation functions. Through the Center's partnership with SISEP, additional tools including the District Capacity Assessment (DCA; Ward et al., 2019) and the

State Capacity Assessment (SCA; Ward et al., 2020) also allowed the Center to assist in action planning with the primary goal of building local implementation capacity. As outlined above, the Center on PBIS's DSFI and SSFI has allowed LEA and SEA leadership teams to focus on implementing necessary and key system's features with fidelity to support and scale school implementation specific to SWPBIS. The DSFI and SSFI complement the DCA and SCA, respectively, to assist in action planning related to systems-level implementation of SWPBIS given LEA and SEA capacity.

Third, with additional resources from the Office of Elementary and Secondary Education in 2014, the Center provided TA to LEAs and SEAs awarded School Climate Transformation Grants to implement the interventions each grantee proposed within their Multi-Tiered Behavioral Framework, or MTSS, to improve school climate. This opportunity pushed the Center to consider efficient ways to provide universal, targeted, and intensive TA to support a range of sites in monitoring fidelity, outcomes, and other key indicators of performance as they scaled their MTSS framework over the duration of the grants. This work re-emphasized the importance of key lessons learned about the importance of identifying outcomes, defining the work, leadership teaming, alignment and integration, using data to drive decisions, differentiating TA support, and developing local expertise and capacity throughout the implementation cascade (Center on PBIS, 2019a, b).

Finally, similar to its shift in focus on supporting LEAs and SEAs to build their own internal capacity to take school-level implementation to scale, the Center expanded its partnership with state, regional, and national organizations and agencies to create a shared knowledge base, locally developed resources and exemplars, and leveraged state and local funding (Horner et al., 2019). For example, the Center posts annual state evaluation reports and newsletters on its website to promote cross-state collaborations. The Center not only continues to designate a Center TA/D provider to all 50 states and territories but also began supporting regional cross-state collabora-

tions (e.g., Mid-Atlantic, New England, Midwest, and Northwest). In partnership with the international Association for Positive Behavior Support (APBS; see www.apbs.org), the Center coordinates a State Leaders Network, which meets in-person at both the National PBIS Leadership Forum and the APBS Annual Conference and through several virtual meetings annually. The network has established an independent electronic storage site to share state/regional resources and has established cross-state workgroups to address the network's self-identified priorities. Center partners have established similar regional networks, including, for example, in the Northeast (www.nepbis.org), Midwest (www.midwestpbis.org), and Mid-Atlantic (www.midatlanticpbis.org).

Challenge Four: Sustain Implementation with Fidelity

The challenge to sustain the potential impact of the PBIS Center was considered at the outset of the first funding cycle and continues to be a key focus of all Center efforts (McIntosh et al., 2010). To address this, and all of the other challenges, the Center has relied on the core features of school implementation, data, practices, and systems across a continuum of behavioral supports. Each of the above examples offered in response to the first three challenges have also guided efforts to sustain implementation. The Center has differentiated its own TA/D along a continuum of universal (e.g., website, tools, publications), Tier 2 in the form of TA/D to small groups (e.g., the annual National PBIS Leadership Forum), and Tier 3 (e.g., direct TA to individual LEAs and SEAs). The Center has shifted its focal point of differentiated TA/D efforts from individual school implementation to capacity building at the LEA and SEA levels to promote sustainability and remains focused on data to guide TA/D efforts that have been empirically documented to sustain efforts (Kittelman et al., 2020; Mathews et al., 2014; McIntosh et al., 2018c). The Center continues to expand and promote effective practices, including mental health strategies, effective

academic instruction, and a continued emphasis on teaching and practicing culturally and contextually relevant SEB skills. As described under Challenge Three, the Center maintains and expands its partnerships with other TA/D centers, state and regional PBIS initiatives, and professional organizations, such as APBS and the Council for Chief State School Officers (CCSSO). And finally, the Center continues to focus all TA/D efforts in a “non-parochial” manner, encouraging schools, LEAs, and SEAs to use the problem-solving framework and continuum of support blueprints, tools, briefs, and other materials offered by the Center to crosswalk-related efforts such as academic response to intervention or individual practices such as restorative or social-emotional-behavioral learning to build a sustainable multi-tiered system of supports (MTSS).

Conclusion and Remaining Challenges

A central theme across the 23 years of TA/D activities of the Center on PBIS has been an iterative expansion of leveraging the existing knowledge base and internal evaluation data while remaining true to promoting the core defining features of SWPBIS: a problem-solving framework that builds a continuum of supports for all children and youth, and systems that support educator implementation. The Center has embraced the framework and continuum logic in both promoting best practice at the school implementation level and within its TA/D efforts focusing on building capacity to sustain and go to scale at the LEA and SEA levels. As of August 2020, 29,083 schools across the United States were actively implementing Tier 1 SWPBIS (see Fig. 35.3 for total schools implementing across the life of the Center). Equally important, 68% of these schools were implementing Tier 1 SWPBIS with fidelity (see Fig. 35.4; Center on PBIS, 2020a, b, c). The recent shift in focusing TA/D on building LEA and SEA capacity should significantly increase the total number of schools implementing with fidelity.

The success of the Center in working simultaneously toward scaling up and sustaining implementation fidelity has led to an expansion of the Center’s original charge focusing on children and youth with disabilities and those at risk. For example, requirements as set by OSEP and recently the Office of Elementary and Secondary Education’s Safe and Supportive Schools have expanded the Center’s TA/D mission to include the integration of mental health and school climate within Center processes and products. Expanded implementation sites such as juvenile correction facilities and student impact targets including reducing drop-out rates and disproportionality rates of disciplinary practices for student groups including ethnicity and disability status are just a few examples of the expanding work scope the current PBIS Center is tasked to address (see Fig. 35.2).

The problem-solving logic driving the TA/D efforts of the Center on PBIS has documented an impressive history of sustained and expanded outcomes. However, the Center faces several remaining challenges. First, a perennial challenge is addressing the myths, misconceptions, and misrules about SWPBIS and the work of the Center (cf., Bruhn et al., 2014). These include false assumptions such as PBIS is designed to “control” children and youth through a unidimensional dominant cultural lens, or the simplistic view that what the Center promotes is a “program” or “package,” the disconnect with cognitive-based behavioral supports and mental health practices, as well as the misconception about “bribing” students to behave. Second, another ongoing challenge is to nimbly respond to new complex challenges, such as supporting at-risk learners through remote instruction during the pandemic of 2020–21 and assisting schools and LEAs to build recovery plans following a school crisis. Third, an additional ongoing complex challenge is addressing racial inequities within schools. Although implementing PBIS with fidelity is associated with lower racial inequities (McIntosh et al., 2018a; Vincent et al., 2011), a specific approach on equity with PBIS can further reduce these inequities (McIntosh et al., 2021).

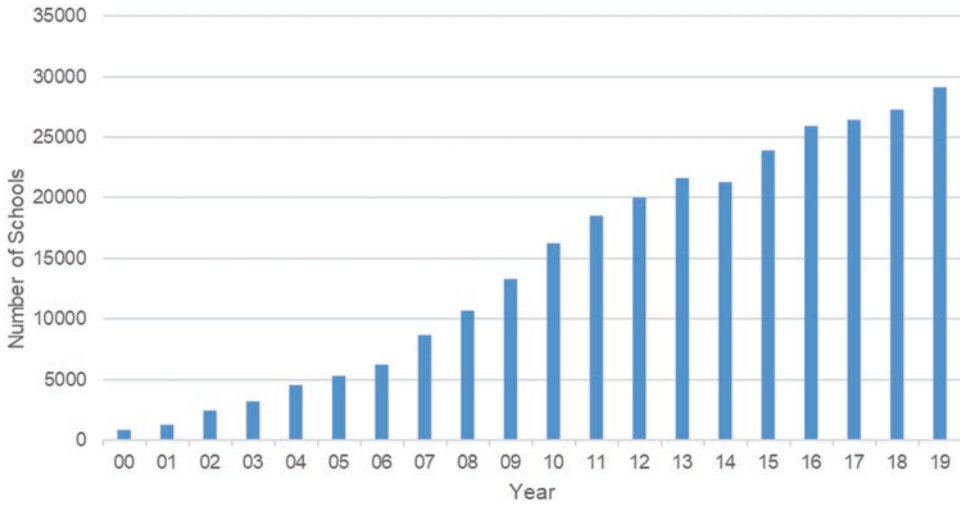


Fig. 35.3 Number of schools implementing PBIS since 2000

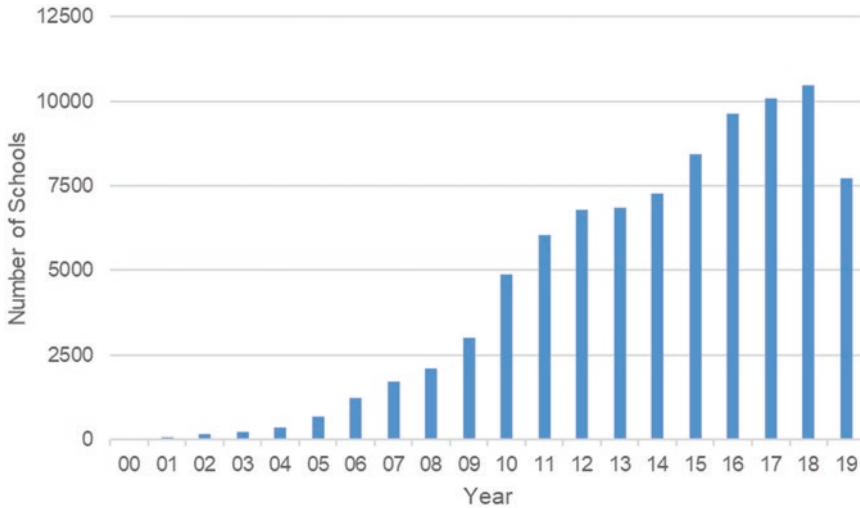


Fig. 35.4 Number of schools implementing Tier 1 with fidelity since 2000
 NOTE: the decrease in 2019 reflected a change in allowable scores to report fidelity

Although continued work in expanding and sustaining SWPBIS remains, the Center has begun to address some of the remaining challenges. With regard to the first remaining challenge, the Center continues to disseminate information to address misconceptions through multiple mediums (e.g., professional trainings and presentations, policy briefs, peer-reviewed publication, joint TA/D Center activities) while staying true to the core features and mission.

With respect to respond during the pandemic, the Center quickly produced a series of briefs and practice guides to assist educators with the move to remote learning as well as a set of recommendations to help educators respond in healthy proactive ways in response to crises. And finally, in response to the third challenge, the Center on PBIS continues to document the impact educators implementing SWPBS are making to close equity gaps among racial groups of students.

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Estimating the Cost of School Mental Health Programming to Increase Adoption and Scale-up of Evidence-Based Programs and Practices

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Childhood mental health problems that go unaddressed carry a significant financial cost and society burden (Barrett et al., 2020; National Academies of Sciences, Engineering, and Medicine, 2019). This includes cost to schools, such as the cost of lost instructional time due to discipline, staff turnover, and dropout, as well as costs to social welfare and justice due to entry into child welfare and juvenile justice systems (Kamal, 2017; National Academies of Sciences, Engineering, and Medicine, 2019). Any one of these costs alone should justify the critical importance of prevention and early intervention in schools. Unfortunately, economic evaluation, or the study of the costs and effects or economic benefits of a social program, is an underutilized approach in social science and education research (Levin, 2001). Having additional information on the costs of school-based programming, particu-

larly in relation to the benefits of such programming, may be especially helpful for gaining buy-in to scale-up evidence-based programs in schools (Barrett et al., 2020); this in turn may result in greater sustainability of these programs and increase the reach and broader societal impact achieved of school-based programs (National Academies of Sciences, Engineering, and Medicine, 2019).

In this chapter, we focus on the current state of the field in regards to the cost to society for childhood mental health problems and the costs and benefits of school mental health programming. We provide a summary of some tools to facilitate the calculation of costs of school mental health programming. These include a discussion of some of the common features and characteristics of programming as well as some approaches and strategies that can facilitate the capture of cost data. We highlight various tools and approaches that practitioners, educators, and researchers may find useful in tracking the costs of school mental health programs in relation to benefits achieved. We conclude this chapter with some important recommendations for advancing the collection of cost data in schools as well as strategies to leverage cost data to promote adoption and scale-up of school mental health programs.

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Costs and Benefits of School Mental Health Programming

Burden of Child and Adolescent Mental Health Problems

Each year, an estimated 89 billion dollars is spent on treating mental, emotional, and behavioral disorders in the United States (including adults, children, and adolescents; Kamal, 2017). In addition, mental, emotional, and behavioral disorders account for the highest rates of disability of any health problem, and contribute to school dropout, homelessness, and incarceration, all of which have a large cost to society both in terms of lost productivity as well as costs for related services (National Academies of Sciences, Engineering, and Medicine, 2019). While these outcomes mainly occur in adulthood, earlier in childhood and adolescence school behavior and performance, such as student academic problems, disruptive behaviors, and discipline problems, are correlated with these long-term outcomes. Both long-term outcomes and student behavior and performance in school carry costs or economic burdens to society and to schools when untreated (Barrett et al., 2020).

Estimates of the cost of unaddressed mental health challenges to schools have wide variability, with the largest costs coming from interruptions of academic performance. While these estimates were derived based on different criteria (see Bradshaw et al., 2021), most include impact on long-term outcomes and costs accrued across a broad group of stakeholders (i.e., schools, parents, and health/justice systems). For example, economists have estimated the cost of suspension at \$62,361 (in 2016 prices; Rumberger & Losen, 2016) and for achieving proficiency on statewide reading and math tests at \$12,307 (in 2018 prices; Baker et al., 2018). Estimates of the cost of delinquency behaviors such as bullying, aggressive and disruptive behavior, and truancy are, respectively, \$3,370, \$4,470, and \$2,380 (in 2015 prices; Belfield et al., 2015). Estimates of the per outcome cost of mental health problems such as Attention Deficit Disorder and Oppositional Defiance Disorder are \$2,490 and \$1,360 (in

2005 prices; Foster et al., 2005). Furthermore, as oftentimes these costs compound (e.g., students with mental health problems struggle academically), they illustrate the importance of investments in prevention and early intervention programs in schools, before the symptoms and related problems escalate to warrant out-of-school placement and more intensive service utilization (Crowley et al., 2018).

Costs of Supporting Student Social, Emotional, Behavioral, and Academic Outcomes

School-based programs vary in both their reach and intensity, which have implications for cost. Programs are commonly categorized according to the public health model of prevention, which is akin to the multi-tiered system of supports (MTSS) framework (see McIntosh & Goodman, 2016). This approach groups programs according to the intensity of services provided: universal programs (Tier 1) are for all students and are designed to promote or prevent social, emotional, behavioral, and academic outcomes and selected (Tier 2) or indicated (Tier 3) programs are used when a student appears at risk or has an identified problem, respectively (Barrett et al., 2013; Horner & Sugai, 2015). One of the most widely implemented MTSS approaches is Positive Behavioral Interventions and Supports (PBIS; see Horner et al., 2010), which provides support for the implementation of all three tiers of programs (see McIntosh & Goodman, 2016).

A recent cost analysis of PBIS estimated a total cost of \$48.67 per student per year (in 2019 prices; Lindstrom Johnson et al., 2020). Stakeholder analysis shows that the bulk of these costs is paid for by schools, primarily in the form of staff salaries to implement the intervention. However, these costs should be considered in relation to the improvements in student outcomes, including improved academic achievement and mental health and reduced delinquency (i.e., benefits) (Bradshaw et al., 2021).

A recent systematic review of universal prevention programs identified a small number of

economic evaluations related to school mental health ($n = 8$; Schmidt et al., 2020). These programs included universal social and emotional learning programs, bullying prevention programs, and mental health programs based on cognitive behavioral therapy. The costs for these programs (in 2016 prices) ranged from €103.92 to €3,406, which equated to roughly \$115.02–\$3,406. A separate study looking only at school-based social and emotional learning programs identified a cost range of \$130–\$680 per student for the life of the program (2013 prices; Belfield et al., 2015). Finally, the review included a study of integrated systems of student support that provides universal assessment, support, and referrals to appropriate community services cost \$4,570 per student over 6 years of involvement, of which the school only paid about 10% of that cost (2013 prices; see Bowden et al., 2020).

There is considerably less information available on the cost of school-based selected and indicated prevention programming, or school mental health services more generally. Recent systematic reviews that have looked at economic evaluations of child and adolescent mental health interventions have found the majority of the extant research has focused on community treatment (Kilian et al., 2010; Sung et al., 2021), with limited information about the cost of school mental health. The few programs that provide separate costs for schools indicate a per school per year cost of \$526.25 for a selected substance abuse prevention program (in 2000 prices; Dino et al., 2008) and between \$1,454 and \$3,003 per child for the Incredible Years Program, a program to reduce delinquency, substance use, and aggressive behaviors in children (in 2003 prices; Foster et al., 2007).

Benefits of Supporting Social, Emotional, Behavioral, and Academic Outcomes

The data summarized above on the costs of student academic performance and disruptive behaviors demonstrate the possible value of school-based preventive interventions. However,

it is important to consider how much of that is actualized through various intervention approaches (i.e., return on investment). For example, a recent study of PBIS suggests a possible return on investment of \$450,000 per 100 students in elementary schools and \$86,000 for 100 students in secondary schools (in 2019 prices, Bradshaw et al., 2021). It should be noted, however, this includes a wide range of benefits accruing over the lifetime of the student and actualized in different systems (see below sections for additional discussion of these issues). A comparison of benefits in this study further suggested the largest cost savings came as a result of improved academic performance, followed by reductions in aggressive behavior and bullying. Studies of more discrete intervention programs also support a return on investment. For example, Belfield et al. (2015) suggest an average return on investment of \$11 for every dollar spent on social and emotional learning programs in schools (in 2015 prices; Belfield et al., 2015). Universal assessment and referral to community services to address the comprehensive needs of students has a possible return on investment of \$3 for every dollar spent (in 2013 prices; Bowden et al., 2020).

Another form of economic evaluation, called cost-effectiveness, compares costs relative to the effects of alternative interventions to address a common goal or mental health outcome (Levin et al., 2017). For example, studies of bullying prevention programs have found a wide range in the cost per victim-free year (2016 prices; €742 and €12,977 [roughly \$821.25 and \$14,362.94]; Beckman & Svensson, 2015; Persson et al., 2018). Another example is a universal suicide prevention program that was found to cost €3,771 per suicide averted and €4,917 per severe suicide ideation averted (2016 prices, roughly \$4,173.74 and \$5,442.12; Ahern et al., 2018). These outcomes rely on a willingness to pay framework to justify costs, essentially how much averting each of these outcomes is worth to society or varying payers. An evaluation of the Fast Track Intervention, an aggression prevention program, found a high cost per child over 13 years of the program (\$58,283 in 2003 dollars). However, this investment would be cost-effective for high-risk

individuals (i.e., scored above 90th percentile on screening measure) if society deemed a high value on preventing conduct disorder, criminal acts, or interpersonal violence averted (Foster et al., 2006).

Important Economic Considerations for School Mental Health Programming

While several resources have detailed the basics of economic analysis for educational programs (Levin et al., 2017), compared to other fields such as medicine and public health, information about costs and benefits is less likely to be understood and, therefore, taken into consideration when making decisions regarding evidence-based programs and practices in schools (Barrett et al., 2020; Lloyd et al., 2019). In an effort to bridge this gap, the US Department of Education's Institute for Educational Sciences (IES) has identified cost-effectiveness analysis among its priorities and a core requirement in several grant programs. IES funded a training program in economic evaluation for researchers and school district or state-level analysis (www.cbcse.org), and recently developed a primer based on Levin's body of work, including Levin et al. (2017) and other CBCSE work (IES, 2020).

In this chapter, we focus more specifically on school mental health programming, with a particular emphasis on tracking personnel costs, distinguishing between universal (i.e., Tier 1) versus selected and indicated (i.e., Tiers 2 and 3, respectively) programming, considering induced costs, and actualizing monetary benefits. As such, we turn now to the process of costing out school mental health interventions and tools that may facilitate that process.

Costing the Components of Mental Health Interventions

The majority of school-based mental health interventions, particularly selected (Tier 2) and indicated (Tier 3), involve personnel using multiple

processes and practices (e.g., screenings, referrals, individual or group therapy, coaching; National Academies of Sciences, Engineering, and Medicine, 2019). These programs can be more difficult to cost out, as they typically require tracking people's time, which is less likely to have any systematic data available, versus specific material costs, which is more likely to be accounted for in budgeting. For example, a recent cost study of PBIS estimated 87.1% of the school-level costs to be related to time from coaches, teachers, and administrators (Lindstrom Johnson et al., 2020).

To capture these costs, so that practices can be understood, improved, and replicated, it is critically important to develop easy, efficient, and scaleable ways to implement systems to track time investment of school staff. Pas et al. (2020) document the use of a time-log approach for tracking the activities of implementation support coaches in relation to a school-based preventive intervention. Specifically, they used an online system, where coaches documented the type of activity they were engaging with in schools, the school personnel they engaged with, and the amount of time spent. This allowed for an examination of both the cost of coaching activities as well as the cost to the school of engaging with a coach.

Another potential strategy for tracking costs is to embed time and cost estimates into implementation fidelity measures commonly used in evaluations (Bradshaw et al., 2020). For example, using the School-wide Evaluation Tool, Bradshaw et al. (2020) asked a series of follow-up questions that allowed for the costing of PBIS. These included quantifying the number of hours of meetings and staff present as well as other personnel and material costs. This approach has the added benefit of leveraging data on the costs of an array of components of the intervention in relation to implementation of core components of a model, and differentiating an intervention from usual practice. This later point is particularly relevant for school-based practitioners, where a more valuable question may not be what is the cost of the intervention, but what are the additional costs (e.g., incremental cost), and ide-

ally the benefit of those investments (Detrich, 2020).

Universal (Tier 1) Versus Selected and Indicated (Tiers 2 and 3) Interventions

As noted earlier, it is common to use the public health model of prevention to conceptualize preventive interventions (National Academies of Sciences, Engineering, and Medicine, 2019), as well as have a process through which youth are referred to more intense interventions. This has unique implications for economic evaluation, because costs must reflect effects by corresponding to what was provided via an intervention relative and what was available without the intervention. To do this, the cost must reflect all of the resources that were allocated to the treated students relative to the control as a result of the intervention (Cost Analysis Standards Project, 2021). Practically, in the case of tiered intervention models, such as PBIS, it can be challenging to estimate costs, because the amount of services received varies at the individual student level. The effects reflect the range of services received, so the costs must account for all students receiving universal interventions and subsets of students receiving additional interventions (for another cost study of PBIS, see Blonigen et al., 2008).

The cost–benefit drivers also likely differ between selected and indicated (Tier 2 and Tier 3) and universal interventions (Tier 3; Detrich, 2020). As universal preventive interventions are often focused on the prevention of problem behavior, they are often fairly low cost, although the effect sizes are often relatively modest and the impacts may take years to turn up (see Actualizing Monetary Benefits section; Aos et al., 2004; Crowley et al., 2018). In contrast, indicated interventions are typically more costly, but are targeted for a more at-risk population, and in turn have the potential to produce larger impacts; these approaches often yield more immediate cost-savings in the form of a reduction of medical and educational costs and improve-

ments in school outcomes (see the Fast Track example above; Foster et al., 2006). This does speak to the importance of understanding variability in the conditions and time horizon (i.e., when benefits accrue) of the economic evaluation (Scammacca et al., 2020).

The Cost of Action

A common concept to consider in economic evaluations is “induced costs,” which refer to changes in non-programmatic costs due to the implementation of a school mental health program (Bowden et al., 2017; Levin et al., 2017). As the purpose of many interventions is to identify and provide services for students, this is an important consideration and relates to the later discussion around funding (see Implications for Funding of School Mental Health Programming). An evaluation of a program to identify and connect students to community-based programs and resources found that the direct costs of the program represented only one-third of the costs, with the additional costs coming from the provision of services (Bowden et al., 2017).

An additional-related tension is the connection between fidelity and cost. While programs that are implemented without fidelity or buy-in may result in an expenditure of money but no or limited results (Barrett et al., 2020; Detrich, 2020), another important consideration is the cost to implement the program well. For example, Bradshaw et al. (2020) used a well-established fidelity measure and cutoff for high-quality implementation of PBIS to document that higher implementation quality resulted in greater cost, but also likely translates into greater benefits achieved. Specifically, it is anticipated that the additional cost associated with achieving higher fidelity implementation would be translated into greater improvements in learning and/or behavior (Bradshaw et al., 2020). Additional work is needed to provide school-based practitioners with different options (i.e., levels of implementation) and the known benefits associated with these options (Detrich, 2020).

Actualizing Monetary Benefits

A potential value of economic evaluations is that they can assist in responsible decision-making when adopting a model and selecting among a range of possible evidence-based programs and practices. An important challenge, particularly when considering mental health programs for children and adolescents, is when and for whom benefits are gained. Early cost studies of mental health programs, mainly indicated (Tier 2) or selected programs (Tier 3), utilized a payer perspective; this approach only accounted for cost-savings to individuals paying for services, predominantly the medical system but also in some cases the parents (Kilian et al., 2010). More recent reviews of economic evaluations of child and adolescent mental health interventions (e.g., Belfield et al., 2015; Schmidt et al., 2020; Sung et al., 2021) have included costs from a societal perspective, which includes costs and benefits regardless of the sector (i.e., education, medical, and employer). While this can give a more accurate understanding of the total benefit of mental health programs, when it comes to school mental health, it is typically one sector (i.e., education) that bears the immediate cost of preventive interventions (Barrett et al., 2020; Bradshaw et al., 2020).

This is particularly important for school mental health programs, as they often translate into cost savings outside the education sector, including, for example, reduced medical costs or improved lifetime earnings, thus yielding a high return on investment. However, while school-based practitioners might recognize and value both the immediate impacts as well as the potential for long-term improvements and cost savings across multiple sectors, it may be challenging to accommodate the up-front cost of the intervention within finite school budgets and with limited school personnel (Detrich, 2020). Another budgeting consideration for school-based practitioners is that the benefits of educational interventions may not be immediate, but rather accrue over time following multiple years of investment to reach high fidelity and sustained implementation (Bradshaw et al., 2020; Horner

et al., 2012). For example, a recent study of the economic impact of the KiVa Bullying Prevention Program, as well as the Olweus Bullying Prevention Program suggested that cost-effectiveness might not occur until these models have been implemented for 6 years (Schmidt et al., 2020).

Use of Cost Data in Decision-Making Related to School Mental Health

Cost has been cited as an important factor in decision-making related to intervention adoption as well as intervention scale-up (National Academies of Science, Engineering, and Medicine, 2019). However, the utility of cost information is hindered both by challenges in collecting the data as well as considerations of local context (e.g., differences in prices, such as teacher salaries; Gerber, 2020). It is also important to consider who within the school is in the best position to collect this type of information, particularly as many decisions about school mental health programming originate at the district level (Detrich, 2020; Gerber, 2020). To help bridge this gap, we identify a number of tools that can be helpful in assisting school personnel, particularly decision-makers, with the collection of data to help them both track program costs and understand the investment in school mental health; these data, in turn, can help educational leaders and practitioners advocate for additional resources to address student needs and optimize benefits for all students.

Online Tool to Calculate Costs Based on Program Ingredients

Table 36.1 provides a basic worksheet template to guide the collection of data both related to the components of the intervention (referred to as program ingredients) as well as to the prices of those pieces. Specifically, data on program ingredients can be collected via a range of efforts, including fidelity tools, surveys, or time logs

Table 36.1 Ingredients and costs

	Description	Quantity	Details	Price	Total cost
Training/Professional development costs					
	People time				
	Materials/space				
Implementation costs					
	People time (preparing for, implementing, and collecting data)				
	Materials/space				
Coaching costs					
	People time (one-on-one coaching; team meetings)				
	Materials/space				
Other costs (volunteers, fees, data systems)					

(particularly for coaching or program implementers/trainers). As noted in the table, the main costs of the intervention will likely be concentrated on training/professional development, implementation of the intervention, coaching or other intervention supports (Bradshaw et al., 2020). Within these categories, it is important to account for personnel time as well as differences in the cost of time (i.e., administrators, school mental health professionals, and teachers' different hourly rates). Materials (e.g., workbooks, incentives) and space are also things that can be considered for each activity. The materials likely include any items that might need to be purchased to implement the program or service (e.g., manuals, lessons, curricula, posters, manipulatives, and site license for online programs), and usually represent a small portion of the total cost (Shand & Bowden, 2021). Space to implement the program is usually not considered, and in fact can be challenging to cost when it comes to school-based programming (Shand & Bowden, 2021). When completing this table, it is important to not double-count resources (i.e., the same staff time for implementing and coaching).

An online cost calculator tool has been developed to facilitate this process for schools and researchers (see Figs. 36.1 and 36.2). This tool is an electronic version of Table 36.1 that allows for an elucidation of common school mental health program ingredients as well as pairs them with information on average price values. Specific to some of the above challenges, information on staff costs is broken apart by role and available

in local and national prices. In addition, calculation of space is included and automated.

The online tool allows for information on the cost of a variety of school mental health programs, including PBIS, social and emotional learning, bullying prevention programs, other Tier 1 (whole school) programs, Tier 2 (small group, targeted) programs, Tier 3 (individual, indicated) program, and other programs (student-hunger, trauma-informed care, mentoring). Cost information is provided per program and per student and also aggregated across programs to consider the total school investment in school mental health programs. This information is contextualized with the common costs of student mental health problems and can be printed to facilitate investment in evidence-based school mental health programs and practices. It can be accessed at: <https://www.ruralsmh.com/cost-calculator/>.

Implications

In order to further support more generally the use of economic evaluation for child, adolescent, and school mental health we suggest the following as critical next steps.

Recognize That Program Costs Are Incurred at Multiple Levels

It is critical to understand that the implementation of school mental health programming is

Cost Calculator | Tier 2 Program

Check in, Check out

How many meetings per month are held to support program implementation?

1	Total
---	-------

On average, how long are the meetings?

1.5	Hour(s)
-----	---------

How many attend?

Administrators	1	Total
School Mental Health Professionals	1	Total
Teachers	3	Total
Other Individuals		Total

Back [Progress Bar] Next

Fig. 36.1 Sample data entry form for the online cost calculator

likely and should be supported at multiple levels. In a study of the distribution of the costs of the scale-up of PBIS in Maryland, a technical assistance agency occurred costs of \$740,657, the state occurred costs of \$152,257, and districts a cost of \$143,541 (in 2018 dollars; Lindstrom Johnson et al., 2020). While these costs are not insubstantial and are critical, as they provided the curricular development for PBIS trainings, professional development opportunities, and coaching and implementation support, they do represent only a small percentage of the cost of PBIS implementation. For example, this study concluded that 88% of the per student cost of PBIS was incurred by the

school. This highlights the critical value of building school capacity to understand costs and benefits of school mental health programming.

Build Capacity to Support Use of Cost Data to Inform Decision-Making

The need for prevention and early intervention to address mental, emotional, and behavioral disorders has been well-demonstrated (National Academies of Sciences, Engineering, and Medicine, 2019). More information is now needed to better understand the costs and effects

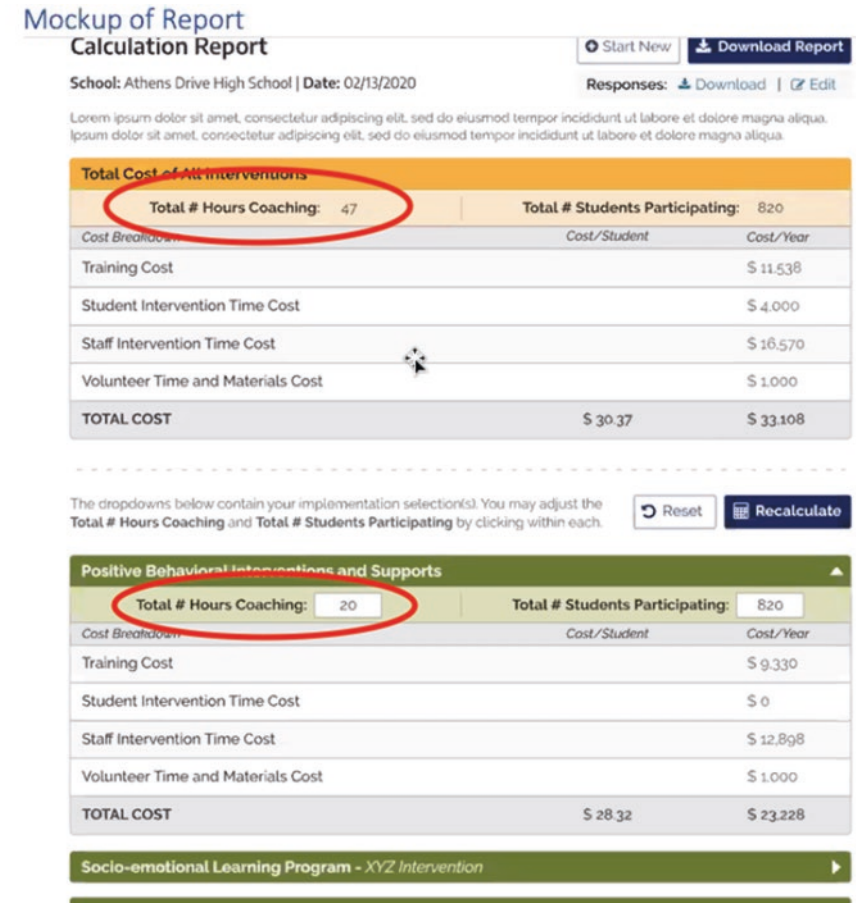


Fig. 36.2 Example report from the online cost calculator

of various approaches to support student social, emotional, behavioral, and academic outcomes in schools. As noted from the earlier review of the literature, information is limited to few specific interventions with estimates varying widely. Specific, consistent findings of low cost with a high return would help for a societal argument of investment (National Academies of Sciences, Engineering, and Medicine, 2019). To do this, we need to improve the capacity of both educational researchers and decision-makers in the collection and utilization of cost data (IES, 2020). It may also be advantageous for school-based practitioners to bolster their own skills and tools for collecting and using cost data to meaningfully understand their investment in school-based mental health pro-

gramming and advocate for additional resources. This is critical as economic evaluation has been argued to be a component of evidence-based education (Detrich, 2020). However, currently, few schools and districts have the capacity to collect and use these data to inform decision-making.

Collect Cost in Conjunction with Implementation Fidelity

It is helpful to leverage the collection of program fidelity data to support the tracking of programs costs; mapping what implementers do with their associated costs may prove efficient and helpful for making a compelling case

for the link between investments, implementation, and outcomes. Therefore, fidelity tools should be designed to help researchers and practitioners collect these cost data by adding more specific questions about who, how many, or how much (Bradshaw et al., 2020). Because “business as usual” in a school includes a range of interventions and student participation in these services is changed by an intervention model, it is difficult to parse out both the costs and the benefits related to the model of interest, because it is intertwined with the other interventions present in schools (Bradshaw et al., 2020; Lindstrom Johnson et al., 2020). This implies the potential importance of understanding incremental costs, or the difference between the cost of mental-health programming before and after (or in control and intervention groups). Ongoing collection of fidelity data can be an important tool to assist with this assessment.

Understand the Benefits of Investment in Universal Prevention Programming

Consistent with the public health approach, investment in less-costly universal interventions has the potential to prevent the need for more-costly intensive interventions and thus translate into a high benefit-to-cost ratio. Arguably, a high-quality education in a school with a positive school climate is in itself an investment in prevention of mental, emotional, and behavior disorders. Additionally, the provision of comprehensive mental health services at schools is an important component of creating a more effective population-level approach to mental health (National Academies of Science, Engineering, and Medicine, 2019). While programs can certainly be more or less cost-effective, given the high cost of outcomes associated with mental health problems (i.e., drop out, treatment costs, incarceration), investment in mental health promotion is likely to provide a return on investment for society.

Partner as the Benefits of School-Based Programming May Be Realized in Other Sectors

It is important to note that the benefits of investing in school-based mental health programming extend beyond the education system. While some studies do show the largest cost savings in terms of educational outcomes, the majority of some outcomes assessed in terms of cost-savings may occur outside of the educational system, such as juvenile justice, mental health, and employment (Bradshaw et al., 2021). This speaks to the relevance of investments in school-mental health coming from outside of traditional funding mechanism, for example, alternative payment mechanisms for healthcare (Kelleher et al., 2015) or local business funding, as employers are increasingly paying attention to employee wellness (Osilla et al., 2012).

Conclusion

Given the significant financial cost of child and adolescent mental health problems, economic analysis can therefore be an important approach to both operationalize the cost of investments and to justify the benefits achieved. In turn, this has the potential to increase buy-in for scaling up evidence-based programming in schools to broadly address students’ social, emotional, behavioral, and academic needs. However, as this chapter notes, the field would benefit from additional economic evaluations of school mental health programs, particularly those that elucidate school costs and benefits. We have provided suggestions of practical tools that can help more broadly facilitate the collection and use of these data; however, we recognize that additional capacity building for schools and researchers is needed.

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Supporting the Scale-up of School Mental Health Systems Through Evidence-Based Policy

37

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Despite growing recognition of the important role mental wellness plays in supporting academic achievement (Shaw et al., 2015), state and federal policymakers have only recently begun to enact policies to explicitly support school mental health. Even then, much of state and federal policymaking around school mental health has been reactive in nature—enacted in piecemeal ways in response to emerging fears, such as those related to school safety, with minimal grounding in effective practice (Temkin et al., 2020b). For example, responding to calls for schools to have more of a role in addressing student trauma, many states are adding policies requiring trainings on trauma, despite there being few rigorously evaluated trainings available for non-clinical staff despite existing mandates for staff trainings on a multitude of related issues, such as overall mental health and suicide prevention (Stratford et al., 2020; Temkin et al., 2020a, 2021).

Creating policies that focus explicitly on promoting the implementation and scaling of evidence-based programs and practices helps ensure that scarce resources are used effectively to achieve desired goals (Fagan et al., 2019). This

means not only using policy to encourage or require practices that are grounded in evidence but also creating the conditions and providing the resources to allow schools to both implement and sustain such practices over time. Establishing effective school mental health systems requires overcoming a longstanding mentality that mental health services are a useful “add-on” for schools, but only when they do not take resources or attention away from the core academic mission of schools (Adelman & Taylor, 2003). Indeed, the lack of policy attention to date has resulted in siloed and *de facto* mental health supports in schools, rather than the coordinated approaches supported by research (Fabiano & Evans, 2019).

In this chapter, we consider how policy can better support the creation of effective and equitable school mental health systems by applying an evidence-based policy-making framework. More specifically, we first explore the tenants of the evidence-based policy movement and what it means to embed evidence into policymaking including considerations for implementation supports drawing upon a model developed by Fagan et al. (2019). Next, we explore how policy has been used to support school mental health to date and the limitations of current approaches. We then propose a set of guiding principles to help policymakers create school mental health policy that is grounded in evidence but allows necessary considerations for schools’ unique needs and contexts.

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Evidence-Based Policy Making

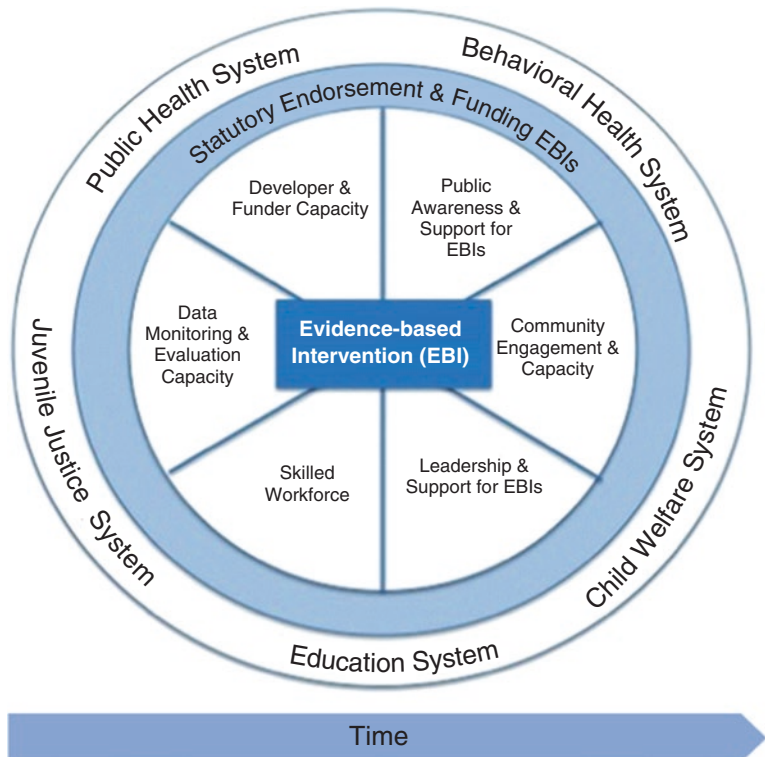
The evidence-based policy movement emerged out of evidence-based medicine, the belief that decisions on practice should be made based on the best available evidence in combination with clinical judgement and patient input (Sackett, 1997). The idea behind the movement was that implementing practices, programs, or policies grounded in evidence will improve outcomes for children, youth, or families (Haskins & Margolis, 2014).

Fagan et al. (2019) provide a useful framework for considering the role of policy for effective scaling of those programs and practices that have been empirically shown to improve outcomes (i.e., evidence-based interventions; EBIs) (see Fig. 37.1). EBIs are represented by the box in the center of the figure with a series of six critical implementation supports forming an inner circle. These implementation supports are the foundational elements to the success of EBIs that federal, tribal, state and local policy—represented by the middle circle—plays a role in facil-

itating or inhibiting. The outer circle highlights that schools are just one of several contexts that influence children and youth, and such systems must also be supported to work together to achieve common goals. The arrow across the bottom is a reminder that evidence and policy are evolving over time and that historical context—such as the global COVID-19 pandemic—can be critical for understanding the current landscape as well as for assessing which policies may have the greatest potential for creating sustainable improvements over time.

Focusing first on policies that promote the use of EBIs, evidence-based policy often takes one of three forms: requiring the use of evidence, encouraging the use of evidence, or allowing the use of evidence (Fagan et al., 2019; Pew-MacArthur Results First Initiative, 2017). Policies that require the use of evidence are generally quite prescriptive and focus on implementing specific evidence-based programs, often supported by independent systematic reviews of the evidence on specific programs (Fagan et al., 2019; Nilsen et al., 2013). While these types of

Fig. 37.1 Ecological model identifying the factors that affect EBI scale-up in five public systems. (Adapted from Fagan et al., 2019)



policies work well for programs and practices that have substantial evidentiary support, they often do so at the cost of considering the fit of such programs to the local context.

Evidence-based policies that encourage or allow the use of evidence, on the other hand, are far more flexible in defining what constitutes evidence-based (Fagan et al., 2019; Nilsen et al., 2013). Policies that fall into this category may specify particular actions (as opposed to specific programs), provide general principles to be followed, or only specify a goal of the policy (Nilsen et al., 2013). While there are benefits to allow state and local education agencies and schools to tailor implementation to their unique circumstances, the same flexibility can make it difficult to assess the level of evidence behind the policy in question.

The evidence requirements described above are often tied to funding, whether requiring funds to be spent in a certain way or allowing funds to be spent on certain activities (Fagan et al., 2019). Policies that are not tied to funding are often referred to as “unfunded mandates” and are discussed later in this chapter. Funding is often issued through one of two forms—large, stable funding, such as block grants or smaller, and short-term funding, such as discretionary grants. Discretionary grants are generally more prescriptive in what evidence can be used and often have more flexibility for funding agency staff to integrate evidence, because they can be revised each grant cycle. The challenge with the use of discretionary grants is their short-term nature and the fact that they are awarded competitively, meaning that a school may not have continued funding over time. Given the estimated 2–4 year minimum necessary to reach optimal implementation to achieve outcomes (Metz & Bartley, 2012), in a 4- or 5-year grant, the funds will end as success is being achieved. While the ideal is that recipients of short-term grants will build sustainability into their implementation plans, in reality, the end of grant funding often means the end of the intervention.

Longer-term funding usually comes through formula funding, such as block grants, which are often given to states through a pre-specified for-

mula but then have broad flexibility for how the funds are spent. Block grants may include language encouraging evidence broadly but with little motivation to use evidence in funding allocation (there are a few notable exceptions, such as the *Title V* Maternal and Child Health block grant). We note these differences in funding mechanisms, because, as we describe further later in this chapter, much of the existing support for school mental health at the federal level has historically come from time-limited discretionary grants or as one of many allowable uses for large block grants. Evidence-based policymaking can be most effective if discretionary funds are reserved for testing innovative approaches and more stable, block grant funding promotes wide-scale implementation of approaches backed by evidence (Fagan et al., 2019).

As noted in the introduction, however, effective policymaking requires a focus not only on promoting the use of evidence-based programs and practices, but also ensuring that schools have the contexts and resources that support high-quality implementation. Moreover, evidence-based policies intended to govern and support programs and practices at the school level should consider schools’ complex systems, structures, and governance (Keshavarz et al., 2010). In fact, Fagan et al.’s (2019) model for scaling evidence-based programs and policies calls out factors that are important for implementation of evidence-based policies and programs, including the importance of developer and funder capacity to support infrastructure necessary for quality implementation, public awareness and support for evidence, community engagement and capacity to select and implement interventions, leadership support for evidence, skilled workforce to implement the program or policy, and data monitoring and evaluation capacity to know if the program is achieving the intended outcomes.

We build upon Fagan and colleagues’ framework by proposing three additional considerations for the content and structure of the policy itself, particularly the level of prescriptiveness necessary to promote evidence-based practice while also allowing schools flexibility to embed new strategies within their existing systems,

including targeted systems for impact, ability to make adaptations, and centrality of control. Each of these elements will be briefly described and further elaborated within school mental health policy below.

Implementation Supports for Evidence-Based Policies

Developer and Funder Capacity

Effective implementation requires supporting schools through evidence-based guidance and training. In the case of scaling up a specific program, this guidance is often provided by the program developer through training, coaching, and other support. In the case of scaling of a broad practice or policy, policymakers should work collaboratively with state health and education agencies—including state boards of education—to provide local education agencies, schools, and community-based providers of mental health services with the guidance needed to successfully implement the policy, including through technical assistance providers (Hudson et al., 2019). Finally, funders need to be aware of the infrastructure and training supports necessary for success and ensure that the funding and program regulations align with quality implementation.

Public Awareness and Support

This component focuses on whether schools or agencies know what the evidence says and how to select among options to align with their specific needs. This might mean training for leadership in understanding and interpreting evidence or the support of practitioner-driven systematic evidence reviews. In the case of school mental health, this component can also refer to support for the promotion of mental health as an integral—or even appropriate—function of schools. Even when there is agreement, the cross-sectoral nature of school mental health requires health and education stakeholders to establish a com-

mon vision on the role schools play in supporting mental health (Kataoka et al., 2009).

Community Engagement and Capacity

In the case of school mental health policy, it is important for policymakers to keep in mind that schools can vary drastically in the populations that they serve and the strengths and challenges of those communities. Policies that fail to create opportunities for community involvement—or that fail to dedicate funding to support that involvement—can run the risk of no or even negative effects. For example, requiring schools to implement only rigorously evaluated interventions can lead to reliance on programs or practices that do not respect the cultural strengths of marginalized communities (McNulty et al., 2019).

Leadership and Support

Public system leadership and support emphasizes the importance of leadership to successful implementation given their central role in allocating resources and prioritizing training and workforce for implementation. When leadership—either at the district (George et al., 2018) or school level (Iachini et al., 2016)—is not supportive, evidence-based initiatives are frequently not successful. This includes actions, such as supporting staff professional development time, integrating the program or practice into performance reviews, and highlighting successes.

Skilled Workforce

The workforce is also a critical element of success in delivering, supporting, and monitoring the quality of implementation. The workforce needs training and leadership support to be successful. This also includes workforce identity and whether they see their role as central and aligned with

what they are being asked to implement. This is a critical aspect of policies that seek to expand mental health knowledge and capacity beyond mental health professionals. For example, most school mental health systems have only recently begun to formally integrate educators within the system and few teacher training programs address mental health literacy. As such, teachers may be hesitant to take on a new role when it comes to mental health (Graham et al., 2011).

Data Monitoring and Evaluation Capacity

Data monitoring and evaluation capacity are critical to know if implementation is achieving outcomes. This means schools or agencies need to have effective management information systems and have staff who can use the data to monitor implementation quality and whether outcomes are being achieved. While schools may be accustomed to collect and analyze academic achievement data, efforts to establish standard performance measures for school mental health are nascent and many schools may lack the capacity to collect and analyze relevant data (Connors et al., 2016; Solomon et al., 2022). In addition, some sources of data, such as universal trauma screenings, should be considered with great caution as there is no clear evidence about their effectiveness in school settings (Temkin et al., 2020a).

Considerations for Policy Content and Structure

In addition to the implementation supports outlined above, there are additional considerations for policies that are intended to influence dynamic systems, such as schools. These considerations are intended to be cross-cutting and can serve as reminders for policymakers to assess the potential for unintended negative consequences. Below, we briefly describe each consideration and subsequently apply them to recent trends in school mental health policy.

Targeted Systems for Impact

Schools contain a multitude of sub-systems that are constantly interacting. These sub-systems can include the different roles within a school (e.g., administrators, classroom teachers, health staff, students, parents, etc.) as well as sub-groups, such as reading teachers, or fifth graders. Sub-systems can also be based on identities—such as race, gender, sexual orientation—as well as the intersection of those identities. Membership in a particular sub-system is not exclusive, and the salience of those memberships may shift depending on the circumstances. The response of a particular system to a new intervention may not only have implications for the outcomes experienced by members of that system. The interconnected nature of these subsystems means that the presumed response to the intervention within a completely different subsystem within the school may shift as a result of the response from the first subsystem.

For example, a policy to expand school behavioral health by promoting partnerships between schools and community mental health providers may seem like a logical solution to improving access to mental health services for students. However, it is important to consider what supports would be required to ensure that both schools and community mental health providers have the necessary skills and knowledge to successfully establish an effective partnership, including how to ensure the services truly meet the needs of students and families. When policymakers fail to consider the needs of the multiple subsystems in a school, they run the risk of setting schools up for failure which can ultimately cause more harm than good.

Ability to Make Adaptations

New groups of students, families, and staff cycle through schools on a regular basis, necessitating some level of adaptation, as members of the school community interact. Additionally, the environments outside of schools also change over

time as the communities in which they are located change. Such changes can impact who attends the school over time, the resources allocated to a school, as well as the expectations of state and local leaders. The COVID-19 pandemic serves as an extreme example of how schools adapt to the changing needs of the communities they serve. Given that the natural state of schools is continuous adaptation, it is important for policymakers to consider the effects that prescriptive policies can have on a school's ability to adapt in positive ways to changing circumstances.

One way that policymakers can promote mental health in schools without stifling their ability to adapt is to focus on evidence-based practices, as opposed to prescribing specific programs. For example, research suggests that there are some foundational strategies to influence behavior—referred to by multiple terms including core components—that can be employed in a variety of ways to support behavioral health. Policymakers can consider ways to encourage schools to implement effective practices that can be adapted over time in response to changes within their school and community. For example, requiring schools to establish systems for collecting behavioral health data, and then using the data to assess whether specific school mental health programming is working or not for their students, encourages schools to engage in a strategy that is based on sound implementation science while also allowing flexibility for schools and communities to make adaptations over time. Chorpita et al. (2013) have developed a structured support system for community-based and school mental health providers to adaptively select evidence-based guidance that matches the individual needs of the youth. This structured support has been found to be more effective than mandated, specific evidence-based programs. Policymakers should also consider the infrastructure that will be needed to increase the capacity of schools to establish these sorts of feedback loops that are critical to making data-driven decisions when it comes to adaptations.

Centrality of Control

While schools generally have hierarchies of leadership, it is important for policymakers to recognize the role of informal control when implementing new policies. For example, school administrators and school mental health professionals may be identified as the most relevant school staff to lead the establishment of mental health treatment services within a school. However, many other individuals and subsystems across the school can influence the effectiveness of establishing mental health treatment services in a school. Classroom teachers may not understand the role of mental health in schools, resulting in a lack of appropriate referrals. On the other hand, a policy that recognizes the role of classroom teachers as gatekeepers to school mental health treatment might also address their need for increased mental health literacy to increase the chances that they would be effective in linking students to mental health services. Similarly, a policy that understands the role of stigma as a barrier to access mental health services might ensure schools have the support they need to engage in anti-stigma campaigns as a way to increase access and reduce unmet mental health needs among students. Ultimately, policies that take a multi-pronged approach that equip schools to leverage formal and informal sources of control are likely to be more effective.

School Mental Health Policy to Date

The principles of evidence-based policymaking present an idealistic picture of how policy should both be based on, and encourage use of, evidence-based practices and consider the factors necessary to support implementation at scale. Yet, policies to support school mental health do not often embrace these ideals. Understanding the current piecemeal nature of policies to support school mental health requires, first, an understanding of the history through which such policies were established.

Although the formal acknowledgment of schools' role in supporting students' mental health in codified policy is a relatively recent phenomena (Temkin et al., 2020b), the idea that schools have a role to play in supporting mental health goes back more than a century. Progressive Era reformers, such as John Dewey and Jane Addams—an early leader in the social work movement—sought to create community schools to meet student needs beyond academics (Flaherty & Osher, 2003). In the early part of the twentieth century visiting teachers, the precursor to school social workers, engaged with students' families to better understand and address social conditions that might contribute to behavior and learning problems in school, and to help schools learn how to better meet those students' needs (Culbert, 1921). Around the same time that visiting teachers were appearing in schools, cities such as New York and Los Angeles began placing nurses in schools to improve attendance through addressing primary health concerns, including making house calls (Wyche et al., 1997).

In the 1960s, school-based health centers emerged in a few urban communities to provide more comprehensive health services and heightened awareness of unmet mental health needs as nearly one in five visits were related to mental health concerns (Flaherty & Weist, 1999). School mental health programs began to emerge around the same time in response to the unmet mental health needs, especially within urban communities (Weist, 1997). Despite growing recognition of the promise of school-based mental health programs as a way to reduce unmet mental health needs (Costello et al., 1997; Kataoka et al., 2002; Garland et al., 2005; Evans, 1999; Armbruster et al., 1997), policies to encourage or require schools to address the mental health needs of students beyond the responsibilities outlined in the Individuals with Disabilities Education Act (IDEA) only started to emerge as a part of efforts to reduce school violence, particularly in response to high profile school shootings (Morrison et al., 1994; Griffiths et al., 2019).

In 1999, Congress enacted the Safe Schools/Healthy Students (SS/HS) initiative in response to a series of school shootings. The initiative—a col-

laborative, discretionary grant program issued by the federal Departments of Education (ED), Health and Human Services, and Justice—became one of the first programs to specifically support school mental health services beyond those specified in individual education plans for students with disabilities under IDEA. SS/HS is an early and successful example of evidence-based policy-making, requiring schools to conduct a needs assessment and implement evidence-based interventions to address identified needs that resulted in significant increases in mental health utilization among students in participating schools (Derzon et al., 2012). Yet, SS/HS, as a discretionary grant program, was time-limited and funding for the program ended by 2010.

Since then, several other discretionary grant programs administered by ED and HHS have helped support school mental health, including ED's Elementary and Secondary School Counselor grants, Safe and Supportive School grants, School Climate Transformation grants (SCTG), and Project Prevent grants as well as the Substance Abuse and Mental Health Services Administration's Project AWARE (Advancing Wellness and Resiliency in Education) grants. SCTG and Project AWARE both emerged out of the Obama administration's response to the 2012 school shooting in Newtown, CT, and focused resources on developing coordinated systems in school, with an emphasis on establishing Multi-Tiered Systems of Support (MTSS) and effective referral pathways to better link students with the supports they need. Yet, as discretionary grant programs, many of these grants were time-limited, and available only to a small number of local and state education agencies. With the 2015 reauthorization of the Elementary and Secondary Education Act of 1965, the Every Student Succeeds Act, school mental health was specifically noted as an approved use of funds, particularly under Title I and Title IV. More recently, federal pandemic relief funds distributed through the Elementary and Secondary School Emergency Relief (ESSER) Fund, the Coronavirus Aid, Relief and Economic Security (CARES) Act, and the American Rescue Plan (ARP) made mention of school mental health when outlining eligible

expenditures. Still, mental health is just one of the myriad uses for these funds.

At the state level, policy attention to school mental health was similarly linked to responding to school violence, and such policies have only limited grounding in evidence-based policymaking. The first three state laws to reference school-based mental health programs emerged in the late 1980s and early 1990s (Temkin et al., 2020b). Shortly after the school shooting at Columbine High School in 1999, several more states began adding language to either encourage or require schools to create school-based or school-linked mental health programs. The majority of states (27), however, did not include references to such programs in their laws until after the 2012 school shooting in Newtown, CT and the 2018 school shooting in Parkland, FL. As of 2019, 43 states referenced school-based or school-linked mental health programs in codified laws (Temkin et al., 2020b). Beyond the simple provision of mental health services, state policies and school programming alike have expanded their focus to embrace Multi-Tiered Systems of Supports (MTSS) that address promotion and prevention as well as early intervention and treatment services (Fabiano & Evans, 2019; Temkin et al., 2020b). Indeed, as of 2019, 40 states have laws that address specific MTSS frameworks and/or components consistent with the approach, all but three of which were enacted since 2005 (Temkin et al., 2020b).

Some states have started to take steps toward incorporating an evidence-based lens. For example, several states now require school staff to be trained in mental health and a handful go a step further to require the specific use of Youth Mental Health First Aid, an intervention with at least preliminary evidence suggesting the intervention is effective (Sánchez et al., 2021). At the same time, many states have also enacted policies requiring schools to train staff on trauma (Temkin et al., 2021). Generally, these policies simply state that staff should be trained in trauma and leave the specifics of training up to local education agencies. Even when policies outline specific criteria for the content of the trainings, they rarely mention other evidence-based components of adult

learning such as trainer qualifications or the need to provide opportunities for practice and ongoing support (Knowles et al., 1973). A further complication when it comes to training non-clinical staff on addressing trauma is the dearth of rigorous evidence on how to effectively implement such trainings (Stratford et al., 2020). We return to these policy movements later in this chapter.

In general, school mental health policymaking at both the state and federal levels has not served as a consistent mechanism for scaling effective practice. At the federal level, most support has come by way of time- and resource-limited discretionary grants that, while embracing of evidence-based policymaking principles, do not provide the resources needed for schools to sustain these efforts over time. While school mental health can be supported by select formula grant programs, it must compete with many other priorities within the limited pot of funds. At the state level, many policies focus on unfunded, prescriptive mandates with limited reference to evidence-based practices, limited inclusion of the full spectrum of implementation supports needed for comprehensive school mental health systems, and limited consideration of the complex systems and needs at the school level.

Applying Evidence-Based Policymaking to Recent Trends in School Mental Health

School mental health has received additional attention from policymakers in the context of the COVID-19 pandemic. As policymakers enact policies to further the implementation of school mental health, taking into consideration the available evidence-base, the implementation supports noted by Fagan and colleagues, and the complexity of school systems noted earlier in this chapter will be needed to truly ensure identified strategies can be effective. Yet, applying these principles is not straightforward; many policies may have both strengths and weaknesses for each principle. In this section, we analyze three recent policy trends related to school mental health and their alignment with each of these principles:

- Requirements that school staff receive training in mental and behavioral health
- Encouragement to develop and implement trauma-informed practices
- Expansion of school-based health services eligible for reimbursement through Medicaid

Each of these policy areas is complex and deserves considerably more attention than is feasible in this chapter. Consequently, the discussion presented in this chapter is abbreviated and primarily intended to demonstrate the benefits of application of the principles for policymaking.

Mental Health Training for School Staff

A growing number of states have enacted legislation addressing training for school personnel on topics related to mental health. Some state legislatures have directed education departments and boards of education to develop and provide training on specific topics including trauma and adverse childhood experiences. Other state legislatures have directed teacher credentialing bodies to incorporate new competencies for educators. In addition, some states enacted legislation requiring educators to be trained on mental health topics but to be advised against practicing medicine, diagnosing students, or providing treatment. Below, we apply some of the principles for policymaking to this intervention.

Implementation Supports

Potential Strengths Providing training on mental health for school staff helps ensure the core implementation support of “skilled workforce”, such that staff are better prepared to implement other evidence-based mental health strategies.

Potential Challenges At the same time, such policies do not address whether schools will have access to skilled trainers to actually deliver the trainings, a core implementation infrastructure related to developer capacity. Further, most proposed or enacted mental health training poli-

cies do not have specific provisions to monitor the effectiveness of such trainings and many schools may not have the capacity to collect and analyze data to conduct such monitoring, another core element of implementation infrastructure. Further, as noted earlier in this chapter, mental health is just one of many required topics for professional development in many states, reducing the buy-in and support for their implementation.

Evidence Base

Potential Strengths There is preliminary evidence that Youth Mental Health First Aid—a specific intervention—was associated with improved knowledge among educators and increased intentions and confidence with respect to helping students they perceived as experiencing mental health challenges (Sánchez et al., 2021).

Potential Challenges There is little research that documents actual changes in behavior or improved mental health outcomes for students as a result of mental health trainings for educators (Sánchez et al., 2021).

Policy Implications Across Multiple Systems

Potential Strengths Increasing mental health knowledge among school staff could help to reduce mental health stigma among staff and ultimately foster a school culture that reduces mental health stigma. Workforce capacity is a key implementation infrastructure element.

Potential Challenges Training requirements could be perceived by local education agencies (LEAs) and schools as an unfunded mandate, because while the trainings may be made available at no cost, schools must account for personnel time to attend a training. Additionally, without adequate planning and collaboration with school-based and community-based providers, increased referrals for mental health treatment could overwhelm the existing mental health system in the absence of additional funding for treatment.

Ability for Adaptations

Potential Strengths Requirements to include information about community-based services creates an opportunity to highlight local services that are equipped to meet the diverse needs of students in the community. Ensuring community input is a core piece of implementation infrastructure.

Potential Challenges Developing a single training can have the unintended consequence of focusing on the needs of some groups or populations over others. When decisions about content leave out marginalized groups such as youth of color and lesbian, gay, bisexual, transgender, queer and/or questioning (LGBTQ+) youth the training could ultimately widen rather than shrink existing gaps in mental health supports.

Centrality of Control

Potential Strengths Policies to train non-clinical school staff can serve to distribute control by increasing mental health literacy among all staff. When more staff have knowledge of mental health, they will not only be better equipped to identify distress among students and make appropriate referrals, but they may also feel better equipped to take an active role in promoting mental wellness. This is connected to workforce capacity, a core implementation infrastructure element.

Potential Challenges It is unlikely that a training done in isolation will result in significant changes in behavior without ongoing support. Schools will likely need to integrate the training into a larger effort in order to adequately support school staff in achieving desired behavior changes.

Summary

This policy has potential to increase mental health awareness among staff that could contribute to reductions in mental health stigma. However, LEAs and schools will likely need to invest additional resources and determine how to balance the new training requirement with existing requirements. Additionally, one-time train-

ings are unlikely to achieve long-term changes in the absence of a larger, coordinated effort. To increase the potential for supporting equitable and effective school mental health systems, training requirements should be tied to broader efforts, such as those associated with Multi-Tiered Systems of Support (MTSS) that engage students and families as well as school staff and mental health professionals.

Trauma-Informed Practices

A growing number of states have enacted legislation to encourage schools to increase their capacity to meet the needs of students experiencing trauma. Notably, many of these policies are part of school safety bills, rather than stand-alone school health or school mental health bills. Few states allocate additional funds to LEAs to conduct this work, although some bills have included caveats such as “as funds and qualified personnel become available.” Additionally, many of these bills direct state education agencies or state boards of education to develop and disseminate toolkits and require LEAs to develop plans for implementing a trauma-informed approach.

Implementation Supports

Potential Strengths There is growing demand for schools to address trauma and recognition from key stakeholders about the potential negative outcomes associated with experiencing trauma (Temkin et al., 2020a). Public awareness and support is a key implementation infrastructure element.

Potential Weaknesses The availability of trained, clinical staff to implement evidence-based, trauma-informed interventions in schools is limited. Fewer than half of schools in the U.S. offer mental health services (Diliberti et al., 2019) and there is an overall shortage of trained school mental health professionals available (NASP, n.d.-a). Workforce capacity is a key implementation infrastructure element.

Evidence Base

Potential Strengths There are several evidence-based, clinical interventions to address trauma that have been rigorously evaluated in schools among a diverse set of student populations (Stratford et al., 2020; Jaycox et al., 2012; Rolfsnes & Idsoe, 2011; Zakszeski et al., 2017).

Potential Challenges Very little rigorous research has been conducted to determine effective strategies for addressing trauma in schools that can be delivered by non-clinical staff (Stratford et al., 2020). Additionally, few comprehensive, whole-school interventions have been rigorously evaluated. As a result, there is a lack of evidence that state and local education agencies can draw upon when developing guidance documents or developing implementation plans. This last aspect is connected to awareness as a key element of implementation infrastructure.

Policy Implications Across Multiple Systems

Potential Strengths Requiring LEAs and schools to develop plans for implementing a trauma-informed approach has the potential to focus attention on the importance of engaging multiple perspectives during the planning process. Such an approach can create opportunities for identifying potential barriers and unanticipated negative consequences.

Potential Challenges Schoolwide efforts to address trauma are likely to require considerable time and resources—including consistent leadership—given the multiple competing interests that schools experience. Schools that are struggling academically may experience particular difficulty in implementing a policy that requires sustained efforts in the face of competing academic interests (such as a need to improve standardized test scores) that can have severe consequences. This is a particular concern with respect to addressing well-documented gaps in mental health access, given that academically underperforming schools often serve larger proportions of students at risk for experiencing trauma due to

systemic discrimination that increases their exposure to poverty as well as their involvement in child welfare and juvenile justice systems. Without adequate leadership support, a key implementation infrastructure element, it seems unlikely that policies to require a trauma-informed approach can be effectively scaled up to all schools.

Ability to Make Adaptations

Potential Strengths Many state policies allow significant flexibility when it comes to supporting trauma-informed practices in schools. For example, some policies direct state education agencies to establish guidance on trauma-informed practices, while other policies require schools to train staff on trauma-informed practices without specifying the content of the trainings. By not specifying the exact content of guidance or training efforts, these policies allow education leaders to determine what works best for the communities they serve.

Potential Challenges Leaving LEAs to establish their own processes can present challenges for LEAs and schools with limited capacity, either due to a lack of staff with appropriate expertise or due to limited infrastructure to collect and monitor implementation data. Data monitoring and evaluation capacity is a key element of implementation infrastructure.

Centrality of Control

Potential Strengths When policies to encourage schools to implement trauma-informed approaches emphasize the need to develop teams that include multiple perspectives, there is an opportunity to ensure that implementation allows members of the school community to make contributions that are aligned with their roles and abilities.

Potential Challenges Ensuring that all members of the school community can make contributions to create an environment that meets the needs of individuals experiencing trauma requires a coordinated effort. Such efforts can be difficult to launch and maintain. In the absence of such

efforts, it can be difficult to address pervasive mental health stigma which can ultimately derail efforts to foster schoolwide shifts in how trauma is addressed.

Summary

This policy has potential to shift attitudes with respect to the role schools can play in supporting individuals that are experiencing trauma. However, there are also a number of challenges that policymakers should consider. Of particular concern is the lack of evidence-based approaches that schools can select from to move beyond trauma-informed mental health treatment to a more comprehensive, whole school approach. One potential solution to this challenge is to establish a pilot program through a discretionary grant program to provide a set of schools with resources to collect and analyze data related to their efforts to implement trauma-informed approaches. An investment of this nature could allow policymakers to make data-driven decisions and contribute to the establishment of evidence for what works in schools. Such an approach could also support schools and policymakers in better understanding the effects on different types of schools as well as different groups of students, thus contributing to the knowledge needed to better address persistent gaps in mental health access.

Expanded Medicaid Reimbursement

Nearly a dozen states have taken steps to expand the school-based health services that are eligible for Medicaid reimbursement in response to guidance released by the Centers for Medicare and Medicaid Services in 2014 (Mays, 2020). The guidance, often referred to as the “Free-Care Reversal,” clarified that states have the authority to determine whether to allow reimbursement of school-based health services that meet all other requirements (previous guidance suggested that the only school-based services that could be reimbursed by Medicaid were those delivered as a part of special education services). This policy change presents an opportunity for schools to

request reimbursement for eligible school-based mental health services delivered to general education students.

Implementation Supports

Potential Strengths Experiences in states that have already implemented an expansion suggest that there is broad support among multiple stakeholder groups for this approach. Public awareness and support are key implementation supports.

Potential Challenges School systems may not have staff with capacity to administer medical insurance billing. Without adequate funding to either establish or scale up medical billing capacity, schools with limited resources may find it too burdensome to expand Medicaid reimbursement.

Evidence Base

Potential Strengths There is preliminary evidence that state and local leaders perceive the expansion of Medicaid reimbursement as an opportunity to increase access to mental health services. Medicaid as a stable source of funding can support the long-term scale-up of programming (Wilkinson et al., 2020).

Potential Challenges Most states have only recently begun to implement approved changes to their Medicaid State Plans. As a result, it is likely too early to determine whether changes have resulted in the anticipated increase in access to mental health services (Wilkinson et al., 2020).

Policy Implications Across Multiple Systems

Potential Strengths Increasing the number of students that can access school-based mental health services has potential to reduce the number of students with unmet mental health needs. Increased access to school-based mental health also has the potential to reduce mental health stigma.

Potential Challenges Medical insurance billing is complex and schools generally do not have billing capacity. In addition, many communities

are experiencing shortages of mental health professionals, which could mean that schools will not be able to offer mental health services if they do not have adequate staff that meet their state's qualified provider licensure requirements. It can be challenging to bridge the divide between education and health sectors to ensure that all members of the school community are aware of the change and how it might affect them.

Ability to Make Adaptations

Potential Strengths Many states are allowing LEAs significant flexibility in developing processes that work for their circumstances. Some LEAs are starting with a small number of providers to pilot the expanded reimbursement prior to large-scale implementation.

Potential Challenges Leaving LEAs to establish their own processes can increase the chance that the processes that they establish are not compliant with their state's Medicaid plan, especially in smaller districts with fewer resources and less experience with the complexity of medical insurance billing.

Centrality of Control

Potential Strengths Many states are allowing LEAs significant control in setting up their systems which affords opportunities for local input and increased buy-in.

Potential Challenges In the absence of a coordinated effort, such as a Multi-Tiered System of Supports (MTSS), it can be challenging to create buy-in across the school community, so that staff, students, and family members are aware of the expansion. While this is often true for new initiatives in schools, it can be particularly challenging given the complicated nature of medical insurance and the potential for miscommunication across education and health sectors.

Summary

This policy has potential to increase access to school-based mental health services, especially for students in low-income households. However,

there are a number of logistical challenges that can significantly diminish the benefits of this policy. To increase the potential for supporting equitable and effective school mental health systems, state policymakers should address logistical challenges through training and ongoing technical assistance, including peer learning exchanges to help troubleshoot implementation challenges at the local level. Additionally, LEAs should be provided with guidance in leveraging existing mental health initiatives, such as Multi-Tiered Systems of Support (MTSS), to engage students and families as well as school staff and mental health professionals to develop and implement their Medicaid expansion efforts.

Conclusion

Often the push for evidence-based initiatives focuses too much on the research and not on the balance between research, practitioner, and community-input into evidence-based policy. This chapter has highlighted the importance of all three of these elements and what infrastructure is necessary to implement and scale-up evidence-based policies. The specific examples within school mental health highlight the complexity of designing effective policy for the available research, complexity of school environments, and the need for the engagement of all school staff for success. While school mental health has received increased attention from policymakers in recent years, the resulting policies have not always relied on the best evidence nor has critical implementation infrastructure been adequately considered. In order for school mental health systems to reduce gaps in unmet mental health needs for the nation's youth, policymakers must account for the complex nature of schools. Failure to do so runs the risk of amplifying, rather than ameliorating, well-documented inequities in mental health access—especially among Black, Hispanic, American Indian and Alaska Native, and LGBTQ+ youth—that are the result of longstanding institutional discrimination and oppression.

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