Irina Catrinel Crăciun

Fostering Development in Midlife and Older Age

A Positive Psychology Perspective

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Foreword

Ageing populations are now a well-established part of the cultural, economic, and social landscape. All societies are involved in urgent debates about issues such as: how to provide appropriate social protection? How to ensure that older people have meaningful lives? And how to foster connections across the generations? Yet, there remains limited discussion about how people in mid- and later life can realise their potential, how they can best use the resources at their disposal, and how they can build the personal and social connections appropriate for an extended life course. These are the vital concerns explored by Irina-Catrinel Crăciun in her book '*Fostering Development in Middle and Older Age*', a unique and comprehensive survey of the tasks associated with achieving fulfilment in later life. The book provides a highly original review of the contribution of positive psychology to our understanding of individual well-being and the steps necessary to helping individuals and couples flourish as they move through different phases of the life course. The importance of the book is on viewing ageing as a period of development but also a period when there may be significant barriers and stereotypes which impede personal growth.

The author asks challenging questions about the meaning and nature of development in later life: What does development look like? How might it be measured? What kinds of interventions are necessary to support people in times of difficulty and distress? It is extraordinary in some way that such questions are very rarely asked: and certainly not asked in the systematic way presented in this book. Dr. Crăciun takes us on a fascinating journey in responding to these issues, asking us to image the kind of developmental changes we might want to achieve in our lives, our own potential and resources, the challenges ahead, and the relationships we build with significant others along the way. This is a vital journey to consider both for those entering mid- and later life but for social institutions generally to consider.

Society itself has a vested interest in ensuring that people do indeed 'develop' and reach their potential in later life. The fact that many fail to do so underlines the importance of Dr. Crăciun's study. There is much talk of promoting 'active ageing' but '*Fostering Development in Middle and Older Age'* provides a road map for achieving this: it is an exceptional book.

Professor of Sociology and Social Gerontology Chris Phillipson
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Preface

The present handbook integrates and discusses the growing evidence base concerning development in midlife and old age. The focus lies on individual development across middle and late adulthood, by analysing what development implies within these life stages and by taking into consideration how different developmental areas are intertwined (i.e., physical, cognitive, personality, social, and emotional development). Since the gap between theory and practice still constitutes an issue in developmental research, the handbook also aims to provide illustrative examples of prevention and intervention actions. These were selected to represent a variety of development-relevant topics where research informs practice, ranging from love, happiness, and sexuality to loneliness, pain management, and death.

The structure of the book includes three distinct parts. Part I, entitled "Imagining and Planning Development", synthesizes the main theoretical models and paradigms that attempted to define and explain development in middle and older age. Also, this part includes information of how to measure growth in midlife and older age and intervention frameworks that help design developmental interventions targeting middle-aged and older adults. Part II called "Understanding and Exploring the Developmental Potential", goes on to explore what does development in midlife and old age imply for different areas (physical health, cognitive skills, personality, social relations, emotional well-being) and the ways in which these domains are interlinked. In addition, it discusses the main factors that are considered responsible for development in middle and old age. Part III "Implementing Positive Developmental Changes", focuses on how one can intervene to foster development in middle and old age. The theoretical knowledge presented in the first two sections is applied to real-life contexts and concrete developmental tasks. A series of examples of effective interventions are described for 12 relevant developmental targets concerning midlife and old age (e.g., preventing ageism, fostering happiness, reducing anxiety and depression, encouraging a fulfilled sexuality, preventing illness). The handbook concludes with suggestions for future research and practice in the context of individual development in midlife and older age.

All in all, the handbook is a must-have resource for students and researchers working in the field of developmental psychology, health psychology, gerontology, public health as well as practitioners such as counsellors, life coaches, psychotherapists, organizational psychologists, health professionals, social workers, or public health planners. Moreover, it represents a resource for any individual who seeks to continue to develop in midlife and older age. As a first exercise, you can think of at least five people who inspired your daily development in several life domains during the last three months. It is best to think of people whom you met in person or know personally (e.g., friends, family, colleagues, etc.), not stars, influencers, or famous individuals (i.e., unless your best friend also happens to be a famous influencer). Reflect on what inspires you in these individuals and how their example made you feel, think, and act. If you are lucky, you will discover that you have these great, lovely people in your life and they are part of your developmental assets (i.e., social network, social support resource). Also, you will see how you changed because of the interaction with these wonderful people in your life.

This book would not have happened without the constant encouragement and help of several people who also constitute role models of continuous development for me. In this sense, I want to give a special thanks to Maria Crăciun, Anca Stan, Joseph Kiggundu, Silvia Făgărășan, Hernán Biava, and Viola Lechner who read and provided helpful feedback for improving the book chapters. Also, I want to express my gratitude to Chris Phillipson who encouraged this project and kindly agreed to write a foreword for this book.

Berlin, Germany Irina Catrinel Crăciun

Contents

About the Author

Irina Catrinel Crăciun is teaching developmental psychology, positive psychology, and qualitative research methods at Freie Universität Berlin where she has also been guest professor of health and gender. Additionally, she works as a researcher and practitioner in the fields of health promotion and positive development. She received her PhD in health psychology at the Freie Universität Berlin (supervised by prof. Dr. Ralf Schwarzer) and subsequently held a post-doctoral research grant on resources for positive ageing, sponsored by the Alexander von Humboldt Foundation. Project findings were published as a book called "*Positive Aging and Precarity. Theory, Policy, and Social Reality Within a Comparative German Context*" (published in 2019 by Springer) as well as in several prestigious journals such as *The Gerontologist*, *Journal of Aging Studies*, *Journal of Health Psychology* and *Journal of Women and Aging*. Her research interests include a wide range of topics from fostering development across the lifespan to health communication and exploring aging, gender, and psychosocial health determinants. Her recent studies focus mainly on ageing, development and health perceptions in vulnerable populations, prevention of gender and social inequalities in health, and representations of ageing on social media.

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Chapter 1
Introduction: Applying Positive Psychology Principles to Foster Development in Midlife and Older Age

As we go through life, we continue to develop. But what does development across the lifespan mean exactly? In her book entitled *This too shall pass. Stories of change, crisis and hopeful beginnings*, Julia Samuel (2021), a renowned British therapist, describes change as an inevitable feature of being alive. Samuel also points out that people have an innate capacity to adapt to changes that occur in their lives as this guarantees their survival (2021). Despite the significance of the topic, it is only recently that researchers have started to become more interested in development in midlife and older age (Nakamura & Chan, 2021; Crăciun, 2019; Lomas et al., 2016; Baltes & Baltes, 1990; Baltes & Smith, 2003). For a long time, the focus of developmental studies has been on children and young people (Seligman et al., 2009; Kirschman et al., 2009). While this is important and also sets the stage for development in later life, it is relevant to identify and understand the specific developmental processes that take place in later life. From a research perspective, since midlife and older age are less researched, this opens an interesting field of study and innovation. From a practice point of view, one needs to design interventions to *add more life to years not just more years to life* (Vaillant, 2004 p.561).

During the twentieth century, progress in medicine has led to a steady increase in life expectancy, especially in western countries (Mathers et al., 2015). Longer lives have implications both for individuals (e.g. they need to take care of their health in older age, need to find meaning, and achieve well-being also in late life) and for society as a whole (e.g. how older people live their lives can be regarded as a burden for health and pension systems or as a resource for the community). Consequently, longer lives pose various challenges for individual development (e.g. how to be a good grandparent, how to cope with retirement, how to maintain one's social networks and avoid loneliness in older age, etc.), for institutional development (e.g. how to integrate older people in work teams, how to provide the best health communication for older age groups, how to help middle-aged individuals deal with parenthood and caring for their parents at the same time, etc.), and society level (e.g. how to design equitable policy for all ages, how to design age-friendly cities, how

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to provide care services for an increasingly old population, how to prevent ageism at society level, etc.).

While thinking about development comes naturally when one talks about children and young adults, midlife and older age tend to be associated with decline and at best with stagnation (Heckhausen et al., 1989; Kite et al., 2005; Nakamura et al., 2014; Marks, 2021). Taking this into consideration, some important questions arise, namely:

1. Do middle-aged individuals and older people continue to develop on a physical, cognitive, social, emotional, and personality level?
2. What does individual development mean in later life?
3. What factors influence development in middle and older age?
4. How can one foster development among middle-aged and older individuals?

Since findings from developmental studies point out a heterogeneity in what concerns these life domains among middle-aged and older people (Baltes & Smith, 2003; Nakamura et al., 2014; Levy, 2009; Wurm et al., 2017; Marks, 2021), one can consider this as evidence that individuals evolve in different ways across the various stages of their lives. Individual development does not stop when one reaches the age of 25 or 30 years old but goes on over the entire lifespan. While in young years development follows some patterns and implies specific milestones one needs to reach at a certain age during childhood or adolescence (i.e., developmental milestones can include the age children begin to walk or talk, the age children develop abstract reasoning, the age girls get their first menstruation, etc.), studies highlight large differences in terms of physical, cognitive, social, or emotional functioning in older age (Boehm et al., 2021; Wurm et al., 2017; Bar-Tur, 2019; Nakamura, 2011). Such findings highlight the importance of understanding how to help people make the most of their potential and resources. Also, if in younger years there are other people who are responsible for our education and development (e.g. parents, siblings or other family members, teachers, or other significant adults in our lives), as we grow older, it becomes more and more our own task to develop ourselves. This implies that we get to choose what aims we set for our individual development (e.g. do we invest in our careers, in our family life or trying to find a balance between both), to select contexts (e.g. join a sports club, join a book club, etc.), activities (e.g. join a walking group to increase our social network, learn to play the piano as adults to increase our musical ability) and choose the people (e.g. choose friends or a life partner who stimulate our personal growth) that can enhance our development.

However, with the freedom to develop as our heart desires, also comes the burden of responsibility to do so. If we are not satisfied with how we evolve during our 30s, 40s, 50s, and so on, there is the danger of self-blame and "if only" thinking patterns (e.g. if only I had studied something else, chosen another career path, taken more care of my health, married someone else instead of my current partner, travelled the world before I started a family, etc.). Self-blaming can lead to depression and low self-esteem and hinder personal growth. Furthermore, we develop together with others (life partners, family, friends, colleagues). This means that the people who accompany us on our life self-development journey will act as facilitators or

barriers to our personal growth. For example, some life partners will encourage us to improve and make the most of our potential and provide concrete emotional (e.g. support us when we doubt ourselves) and instrumental support (e.g. spend time with the children so that we can continue our studies), while others will constantly criticize our choices and question our capability to change (e.g. "do you still think you can learn to play the piano in your thirties?", "are you not too old for a career change in midlife?"). Additionally, as adults, we usually have less time to invest in our personal development compared to childhood and early adulthood. If as teenagers or young adults one could still just hang out with friends and talk about life, as middle-aged individuals usually one has several responsibilities to juggle (e.g. children, ageing parents who need assistance, work tasks, etc.). In contrast, in our old age, we may have the time to invest in self-development (e.g. one is retired, the children have left home, etc.), but we may lack the necessary energy or health to invest in our self-improvement. Last, but not least, with adulthood, we become models of development for our children, for colleagues at our workplace, and for our friends and family members. Thus, development in midlife and older age is both an individual and a social responsibility.

So why do some people develop more than others during their midlife and older age? For instance, in accordance with the capabilities, opportunities, motivation, and behaviour (COM-B model), development depends on our capabilities (e.g. we need to have the skills or competencies needed to develop), opportunities that come our way (e.g. the social context that fosters development or not), and our own motivation to change (e.g. our own reasons that stimulate making an effort to change for the better). The required skills, the opportunities that would help them flourish, and what enhances their motivation for personal growth differ according to each person. Therefore, interventions need to be designed to boost individual capabilities, create tailored opportunities for growth, and raise people's specific motivation to change. Theoretical models are relevant in this sense because they provide evidence-based guidance on how to identify what competencies people need, what social opportunities stimulate self-improvement, and what motivates people to take on the challenge of change in older years. For example, based on social identification and social learning theories, role models for positive ageing were found to assist individuals to formulate goals, find strategies for healthy ageing, and increase their self-efficacy towards applying these to age well (Jopp et al., 2017). Furthermore, theories can help define the meaning of development in midlife or older age in what concerns several life domains (e.g. cognitive domain, physical realm, emotional domain, social sphere, or in terms of personality growth).

Developmental changes often happen fast and are easy to notice in children and adolescents. For example, according to research at the centre for the developing child at Harvard University, between birth and the age of 5, the human brain develops faster than at any other life stage[1]. Nevertheless, this does not mean that people stop developing once they reach the age of 18, 25, or 30 years old or even later in

[1] See https://developingchild.harvard.edu/resources/inbrief-science-of-ecd/

life. During adulthood and late adulthood, changes may take place at a slower pace and can be less visible (e.g. subtle changes in personality, slight increases in cognitive competence, or emotional regulation). In this sense, defining development for midlife and older age constitutes a challenge for researchers, practitioners, and individuals who want to self-improve. Negative stereotypes about ageing (e.g. older people cannot learn new things) can constitute barriers towards growth in older life stages (Levy, 2009; Wurm et al., 2013; Jopp et al., 2017). In contrast, positive stereotypes on ageing or self-perceptions of ageing can constitute a resource for health and well-being in older age (Levy, 2009; Craciun et al., 2017; Crăciun, 2019; Kornadt et al., 2019).

Change is usually associated with something positive. Sometimes, people endure difficulties in the present moment with the hope that things will get better sometime in the future. For example, a person may study hard for exams to enter a university that will enable better job opportunities or will go jogging every day to train for the marathon. However, when it comes to ageing, people usually fear change since they associate it with decline and decreases in health and appearance. For example, change is associated with getting wrinkles, white hair, and several pain and aches in one's body as one ages. When asked about expected changes in older age, few people will mention positive aspects such as being more satisfied with one's life, having more life experience to share with others, or developing wisdom (Crăciun, 2019; Nakamura et al., 2014; Heckhausen et al., 1989). Furthermore, as Julia Samuel (2021) explains based on her vast experience as a therapist, change is sometimes hurtful and requires commitment and effort from the person who wants to improve. Change means giving up old patterns and risking the unknown, and according to Samuel, this is most difficult to achieve in periods of life transition that are connected to uncertainty (e.g. becoming a parent, changing jobs, getting married, entering retirement, etc.). Nevertheless, an important point to keep in mind is that even when painful at a certain point in time change can have several positive consequences (e.g. happiness, better health, increased well-being, enhanced social connectivity, etc.) once people decide to make the first step towards embracing it. Achieving happiness or well-being also often requires some sort of change on a personal level and getting out of one's comfort zone. Another thought pattern that is connected to development across the lifespan and requires change concerns thinking about development as a staircase where during young years one goes up and during older life stages one inevitably stagnates or goes down. In contrast, development was defined to include a dynamic balance of gains and losses at every life stage, and achieving balance was proposed as a lifelong goal (Baltes & Baltes, 1990). Therefore, how we understand and perceive change as well as how we represent development in connection to ageing is relevant for our motivation and action towards personal growth.

Positive psychology focuses on how to achieve individual well-being and optimal functioning in various life domains (Ho et al., 2014; Nakamura & Chan, 2021; Bar-Tur, 2021). Rather than placing importance on reducing negative emotions (e.g. depression, anxiety) or on diminishing illness or disability, positive psychology concerns itself with enhancing positive emotions, fostering

individual capabilities, and identifying strategies that help people flourish (Seligman & Csikszentmihalyi, 2000; Seligman, 2008; Seligman, 2011). In this sense, positive psychology is regarded as useful for providing strategies that assist people in coping effectively with transitions and challenges across the lifespan (Bar-Tur, 2021; Seligman, 2008; Seligman, 2011; Diener & Biswais-Diener, 2008; Lyubomirsky, 2008). Positive psychology interventions (PPIs) were described as activities that are created to stimulate positive emotions and to motivate behaviours and psychological capacities that help individuals, families, organizations, or communities to flourish (Seligman & Csikszentmihalyi, 2000; Nakamura et al., 2014). With the evolution of positive psychology as a discipline, there is a rising interest in its application to different life stages such as positive education for children, positive parenting, flourishing at work, or positive ageing (Lomas et al., 2016; Nakamura et al., 2014; Ho et al., 2014; Rothmann et al., 2019). This has led to the contouring of a *positive developmental psychology*, as an umbrella term that includes positive psychology research and interventions across the lifespan (Lomas et al., 2016).

Aims of the Present Book

The present book will apply a positive psychology approach to development in middle and old age focusing on those positive changes that individuals can expect, or that they can work on to achieve and, consequently, experience well-being in later life. In this sense, the present book aims to bring a contribution to the field of positive psychology (e.g. Nakamura & Chan, 2021; Nakamura et al., 2014; Layous et al., 2011; Lyubomirsky & Layous, 2013; Lyubomirsky, 2008; Seligman & Csikszentmihalyi, 2000) and positive development (e.g. Lomas et al., 2016; Ho et al., 2014; Nakamura et al., 2014; Baltes & Baltes, 1990) by focusing on what constitutes development in older age and how to foster it. By doing so, it will provide some answers to questions such as what is development in midlife and older age? What does it mean to develop at older life stages, as seen from the perspective of older individuals themselves? What are the barriers and facilitators of development across midlife and older age? How can one apply positive psychology principles to foster growth at cognitive, emotional, social, personality, and physical levels among middle-aged or older adults?

The main assumptions of the book are:

1. There is development in midlife and older age.

   People continue to develop after the age of 30, and there is an evidence base to prove that personal growth in several life domains is possible in midlife and older age.
2. Development happens across a longer timespan as we constantly evolve until the end of our lives.

Development across the lifespan implies continuity with gains and losses at every life stage. Investing in our personal development in childhood and youth has effects in later life.

3. Development is *multidirectional*, meaning that it happens differently in various areas of our self-improvement such as the physical, cognitive, social, emotional, and personality domains.

   We may choose which areas constitute a priority for our personal growth. Also, some changes happen more rapidly and are more visible than others. For example, while physical changes may be more rapid and noticeable, the ones in personality may be subtle and happen more slowly.
4. The developmental areas are interconnected.

   This means that, for example, development at the cognitive level can stimulate emotional development and the other way around. Thus, improving assets in one developmental area can stimulate personal growth in others. For example, investing in one's health makes it more probable that one will be sociable in older age and consequently have a larger support network and avoid loneliness.
5. Positive psychology principles can be applied to foster development during middle and late adulthood.

   Individual strengths such as optimism or self-efficacy can still be enhanced in midlife and older age by applying positive psychology interventions (PPIs) such as gratitude exercises, self-compassion activities, or acts of kindness exercises. By employing positive psychology interventions (PPIs), one can build a developmental-assets reserve for experiencing health, happiness, and well-being in older age.

How to Use the Present Book

The present book is organized into three larger parts, each seeking to answer specific questions related to development in middle and older age. The first part of the book aims to answer questions regarding *what is development in midlife and older age*? and *how to operationalize and measure development among middle-aged and older individuals*?. To provide answers to these questions, it focuses on theoretical models that seek to explain development in midlife and old age. Chapter 2 provides an overview of how development in later life stages became a topic for developmental research and interventions. Furthermore, it discusses why a shift in paradigm, from a focus on the decline to an emphasis on growth, was necessary to implement and stimulate the positive development of research and practice. The chapter also addresses the links between the concepts of development and ageing and describes different methods for studying these issues, such as the biological, sociological, and psychological ageing approaches. Chapter 3 is dedicated to exploring questions such as how to measure development in middle and older age, how should one operationalize change, and what methods need to be applied for the assessment of self-development. To answer these questions, several theoretical models referring to

criteria and processes regarding positive ageing are summarized, and different quantitative and qualitative methods for measuring development are proposed. Chapter 4 addresses the issue of how to design interventions to foster growth in midlife and older age. In order to do so, the chapter includes several theoretical frameworks and discusses how these can be used to formulate intervention aims, identify the necessary positive psychology principles and strategies, as well as evaluate the intervention effectiveness.

The second part of the present book includes five chapters and seeks to answer questions such as *how does development in several life domains happen in midlife and especially in older age*? (e.g. changes in the cognitive, emotional, social, physical, and personality realm), *what factors influence change in several life domains among middle-aged and older individuals*?, *how are the various developmental dimensions linked (*e.g. *cognitive and physical evolution or social and emotional growth*?. Each chapter included in this second part of the book addresses a specific area of development, namely, physical development (Chap. 5), cognitive development (Chap. 6), social development (Chap. 7), emotional development (Chap. 8), and personality development (Chap. 9). The structure of each of these chapters incorporates theoretical definitions of development within the targeted life domains (i.e. physical, cognitive, social, emotional, personality), evidence-based characteristics of development (i.e. what do research findings show concerning what changes happen at each particular life stage, as well as what are the barriers and facilitators of self-improvement), meanings of development from the perspectives of middle-aged or older individuals (i.e. what do findings from qualitative studies show concerning individual experiences with change and growth in that specific area), and explanations concerning why development is relevant and how it is interconnected with other realms of personal growth (e.g. how social and emotional growth are interlinked or how physical and cognitive development boost each other). Finally, each of the five chapters includes some guidelines regarding interventions intended to foster change in that particular life realm (e.g. how to stimulate cognitive improvement or social network enlargement in older age).

Questions such as *how to be happy in old age*?, *can one still fall in love in one's 60s*?, how *to have a fulfilling sexual life in older age*?, *how to deal with one's own mortality or the death of loved ones*?, and *how to cope with physical or emotional pain in older years*? are among the topics that preoccupy many individuals when they reach middle age. Thus, the third part of the present book comprises 11 chapters that examine several specific examples of challenges occurring in various developmental areas (e.g. loneliness, love relationships in older age, sexuality in older age, pain management, etc.) and how one can intervene from a positive psychology perspective and foster growth (e.g. increase social skills, encourage health behaviour, enhance emotional regulation skills, boost cognitive training, increase optimism, etc.). These topics were selected to be included in this part because of their evidence-based relevance for growth in all life domains, namely, ageism, love, sexuality, happiness, loneliness, pain management, anxiety, depression, suicide prevention, and dealing with death and bereavement. While ageing and development obviously involve several other relevant challenges, a careful selection needed to be

made, and thus, the present handbook does not claim to handle all possible topics concerning positive development in later life. Nevertheless, the chapters provide a model of thinking about development that can easily be applied to other topics when designing research or interventions.

For each chapter included in part III, the issue is defined and described (e.g. what is ageism and how does it manifest itself at different levels: individual, organization, community, society; what is anxiety and what are its main features in case of older individuals as compared to younger people that are affected by this condition), what factors influence it (e.g. theories that explain why ageism happens, theories that describe how sexuality occurs in older age, theories that explain why people are happier as they grow older, factors that may lead to depression in older age etc.), why intervention and prevention are relevant (e.g. to prevent the effects of ageism on individual development across life domains, to reduce the consequences of depression on cognitive competence in older age; to enhance the benefits of happiness on personality growth, to promote a fulfilled sexuality and love relations in older age, etc.), and how to intervene to prevent or reduce it (e.g. how to prevent loneliness among older individuals, how to reduce depression among older people) or intervene to increase it (e.g. how to boost happiness in older age, how to increase social support for older adults, etc.).

Each chapter includes some reflection questions that help to process the material in more depth. There are no responses provided in the appendix of the book since the information offered in the chapters should be sufficient for answering the reflection questions. Also, often, the questions do not require an exact answer, but a creative application of the knowledge gained after reading the chapter. Furthermore, these questions can be used as guidance for one's own personal development or that of significant others if one wishes to use the present book to embark on a journey of self-development or help others to do so.

Reflection Questions

1. Who is your role model for development in middle age and older age? Explain your choice.
2. Is personal development important for you? What are you doing to foster your personal growth at the moment? Give three examples.
3. Explain in your own words why development in midlife and older age is relevant.
4. Name three evidence-based arguments to demonstrate that people can still develop after the age of 30.
5. Explain what a positive psychology approach to development means and why it is important to apply positive psychology principles to development research and practice concerning middle-aged and older individuals.

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Part I
Imagining and Planning Development

Chapter 2
A Change in Paradigm: From Disengagement Theory to Positive Ageing Models

Introduction: Ageing and Development

Both ageing and development represent topics that have preoccupied and fascinated people for centuries. Already in ancient Rome, Cicero wrote in his essay *On Old Age* about the potentials and pitfalls of an advanced life stage (Agronin, 2013). In his essay, Cicero praised an old age where people are still independent and self-reliant (Agronin, 2013). This is actually very similar to modern ideas that are included in the active ageing policy (WHO, 2002, 2009) that promotes an active life for older individuals (see also active ageing policy, Chap. 4 in the present book). However, old age and ageing are seldom related to the concept of development, and even if the idea of development is implied when talking about ageing, it is not necessarily directly addressed. Agronin (2013) argues that some ideas about development were already mentioned by philosophers from the antiquity. For example, in ancient Rome and Greece, it was discussed that a persons' life implies several stages with different tasks and that in order to reach integrity in old age, one neds to reflect upon one's life experience. In a similar manner, self-cultivation has always been an important topic in Asian cultures, where a balanced life was considered to be a life-long task (Liang & Luo, 2012). This means that development does not stop once a person reaches adulthood but goes on as a person faces particular challenges that characterize each life stage. Moreover, if self-reflection and a desire for personal growth are present, then development occurs also in later stages of life.

Because of the overall increase in lifespans, old age and older individuals as a group have become more visible in society (WHO, 2018). This happens nowadays even on social media networks which used to be the expression channel preferred by younger age groups (Ng & Indran, 2022). Thus, the development of older persons, both as individuals and as a group, has become the focus of research and policies (Bar-Tur, 2019; Crăciun, 2019; Craciun et al., 2017; Craciun & Flick, 2014, 2016). Following an increased interest in ageing and older individuals, many attempts have

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been made to define and redefine old age as a life stage and ageing as a process. Therefore, before I explore what development means or could mean in midlife and old age, I will attempt to summarize definitions of old age and ageing. This is meant to provide an overview of different ageing theories from the perspective of personal development and is by no means meant to be exhaustive.

When trying to find the best definition for ageing, one will come across different meanings and explanations depending on the research perspective of the authors who formulate it. Consequently, in the following I will describe how ageing is approached from various research perspectives, namely, biological, sociological, and psychological. Before defining what ageing is, one needs to acknowledge that a person has at the same time a chronological age, a biological age and a psychological and social age. The *chronological age* refers to the years lived since birth and is usually included in our IDs, whether one likes this or not. According to their chronological age, people can be categorized as "young old" (i.e. early old age from 60 to 74), "old-old" (i.e. from 75 to 90), and "long-lived" (i.e. over 90 years old) (Dziechciaż & Filip, 2014). The *biological age* concerns different biomarkers related to our state of physical and mental health. The *psychological age* comprises the capacities (e.g. cognitive, emotional, behavioural resources) of an individual to deal with the internal and external demands of ageing. The *sociological age* includes the social roles and habits that reflect the norms of the society where a person lives and grows old (e.g. what is expected of an old person in a certain society, what do grandparent roles mean in different cultural contexts, etc.). The different research approaches to ageing are all linked with distinct research questions to investigate what old age and ageing are. In the following, I will explore ageing definitions and explanations from the biological, sociological, and psychological perspectives and illustrate these with examples of theories that attempt to define ageing and its connection to development.

The Biological Approach to Ageing: Looking for the Longevity Gene

The biological perspective concerns itself with questions such as "why do people age?", "how old can people get?", and ultimately "can we slow down or alter the process of biological ageing?". Thus, it comes as no surprise that researchers working from this perspective are looking for the longevity gene or trying to identify biomarkers that characterize the biological ageing processes. From a *biological perspective*, ageing is defined as an accumulation of damages to molecules, cells, and tissues that occur during the entire lifespan and often lead to frailty and malfunction. As one can observe from the definition, biological ageing is linked with decline and illness, and the focus is placed mainly on chronological and biological ageing. Because health and optimal functioning are important, the heterogeneity of ageing is recognized from this perspective, namely, that some people manage to stay

healthy until an advanced age while others experience illness and disability already in their midlife.

Researchers working from the biological perspective are trying to identify the genes that make some people live longer and healthier lives as compared to others. Nevertheless, the theories that were formulated from this biological viewpoint focus mostly on decline and what causes damages to the human body (e.g. to cells, tissues, bones) as people grow older (Adams, 2004). Also, researchers are interested in how one could slow down or modify the ageing process altogether. Among the best-known theories that were formulated from a biological perspective are the so-called programmed and error theories of ageing (Adams, 2004; Rattan & Clark, 2005; Lange & Grossman, 2014).

The *programmed theory* of ageing assumes that the human body is designed to age and that the ageing process is natural and is "programmed" into our body (Lange & Grossman, 2014). Ageing is supposed to follow a biological timetable. Cells are believed to have a limited replication potential, and when this runs out, they cannot replicate anymore, leading to cell death. Human cells age each time they replicate because the telomers (i.e. the most distal extremities of the chromosome arms) shorten with each replication sequence. Our genes recognize when the telomers become too short and cause the cell to die. Apoptosis is defined as the mechanism of cell death (Thompson, 1995). However, its causes are still unknown (Thompson, 1995). Changes that occur in our gene expression over the lifespan affect the body's system that is responsible for several maintenance, repair, and defence responses. For example, the *gene or biological clock theory* states that each cell has a genetically programmed ageing code that is stored in our DNA (Slagboom et al., 2006). Several chronic diseases such as hypertension, arthritis, or sensory decline processes such as hearing loss are supposed to include a genetic component. Another theory, namely, the *immunological theory* (Effros, 2004), asserts that the immune system is programmed to deteriorate, leaving our bodies vulnerable to diseases and infections, and eventually leading to our death. For instance, the shrinking of the thymus gland leads to impaired immune function among older individuals (Lange & Grossman, 2014). This puts them at risk to get several diseases that can lead to their health aggravation and death. For example, for some older individuals, even a seasonal flue can turn out to be fatal if it comes on top of other health conditions that a person suffers from. Nevertheless, this theory allows some room for prevention as one can engage, for instance, in health behaviour (e.g. physical exercise, healthy diet) to prevent the rapid decline of the immune system (Venjatraman & Fernandez, 1997).

The *error theories* (Lange & Grossmann, 2014; Orgel, 1970) emphasize the damages inflicted by the environment on human bodies, and how these damages accumulate over time at multiple levels in our organism and cause it to age. For instance, the *free radical theory* (Hayflick, 1985; Jin, 2010) postulates that free radicals from the environment cause damage to our cells and eventually impair their proper functioning. According to the *somatic DNA damage theory*, genetic mutations take place and accumulate over time and cause cells to deteriorate and malfunction (Jin, 2010). Similarly, the *wear and tear theory* proposed by Weismann in

1982 (see Sattaur et al., 2020) postulates that cumulative changes occur at cellular level as people age and damage the cellular metabolism. For instance, cells from the hearing muscles or from the brain cannot replace themselves once they are destroyed following the wear and tear processes (Lange & Grossman, 2014). The *connective tissue/cross-link theory* (Bjorksten & Tehnu, 1990) says that, with ageing, proteins impede metabolic processes and cause difficulties concerning getting nutrients to cells and removing cellular waste products. All in all, one can notice that all these different biological theories describe some form of damage that happens within the body and causes it to age and eventually die.

The Sociological Perspective: Acknowledging the Crucial Role of the Social Context

The sociological perspective is concerned with the social reality of ageing and how it shapes individual ageing trajectories. Researchers ask questions about the role of social contexts for ageing, the evolution of social roles and norms concerning ageing, as well as how social relations and networks look like for older individuals. Some sociological theories aim to explain how the changing roles, relationships, and status within a society influence the capacity of older people to adapt to the social reality of ageing. Social norms can shape how older people assume their role within the community where they live. For example, do older people actively participate in the social life of the community? Are older people expected to be active grandparents? Can older people rely on their families for care or are they expected to be self-reliant in older age? Furthermore, one main point of interest is how to shape the social reality in order to increase the chances of more people to age well. For example, critical gerontologists often address issues such as "is positive ageing really for all individuals?" and "how to prevent social and health inequalities among older people by making changes in the social environment?" (Crăciun, 2019).

From a sociological viewpoint, there are three main categories of theories: those that focus on the ageing individual, those that concentrate on the individual within the social system, and critical gerontology theories. Among the theories that focus *on the individual*, the best known are the disengagement theory, the activity theory, and the continuity theory. The *disengagement theory* (Cumming & Henry, 1961) postulates that when approaching old age, people tend to withdraw from society and their social roles and slowly prepare themselves for death. This theory was originally proposed by Elaine Cumming and her colleagues in the 60s. According to the authors of this theory, ageing is defined as an inevitable withdrawal from the world. Arguments for this theory are focused on losses and deficits, namely, on the cognitive abilities that people lose with ageing, on the social skills they lose, and the social roles that they abandon. Moreover, the focus on decline was often seen as somehow the "natural order of things" where older individuals give up their place so that the young ones can take on their roles (e.g. old people retire so that young

ones are hired). This idea is connected to goal theories, and how goals change over the lifespan. For example, according to goal disengagement, older people do not invest in certain objectives anymore such as work goals because they do not have the resources any longer. In contrast, they start investing more in goals connected to their health since illness management or prevention of further health problems become priorities in their lives. In this context, goal disengagement is considered to be an adaptive self-regulation strategy since it makes no sense to chase unattainable goals. The theory implies that only through goal disengagement can people achieve successful development.

The disengagement theory fuelled a range of studies that tested its assumptions. In this sense, it is relevant because it stimulated a valuable intellectual dialogue and thus nurtured progress for research. On the one hand, the assumptions of the disengagement theory inspired criticism and a quest for bringing counter arguments. On the other hand, the theory's adepts tried to find ways to prove its assumptions. Disengagement theory was criticized for discriminating older adults, for assuming that all older individuals disengage from life and thus ignored the heterogeneity of the ageing population. Even if biological ageing is inevitable, people can still live active lives and have large social networks in their old age and important social roles within their family or the community in general. Researchers focused on gathering evidence to prove these points, and as a consequence, alternative theories were generated such as the *Activity theory* and the *Continuity theory*. These theories also do not place all responsibility for development on the individual but stress the roles of social and economic factors as well.

The *activity theory* (Havighhurst & Albrecht, 1953) assumes exactly the opposite from the disengagement theory, namely, that it is important for people to remain active and socially engaged in their old age in order to experience well-being. Critics of this theory highlight the fact that the activities that older people can choose are often limited by the social context where they are ageing and the economic and physical resources that older individuals possess. For example, if older individuals are poor, they will most probably not travel the world when they retire but will try to find additional sources of income or be dependent on their families. However, the idea that activity is an important component of a happy old age survived and is a component of theories of successful ageing. Other researchers suggested that the type of activity is important. A more satisfied old age depends on pursuing social activities and hobbies (Harlow & Cantor, 1996).

The *continuity theory* (Havighurst, 1961) states that people tend to remain constant in their choice of activities over the lifespan. This theory is already more psychological in nature, since it assumes that personality influences what kind of activities a person selects, what kind of roles a person chooses, and how these roles are enacted. Thus, a persons' personality shapes what kind of social environment he or she creates for ageing and the latter affects the ageing person's well-being. Havighurst suggests that an individual's personality offers clues concerning how they will adjust to changes in health and the environment and the social conditions (e.g. retirement, grandparenthood, etc.) that come with older age. The continuity theory is also regarded as the first theory that acknowledges that people react

differently to their social environment resulting in the heterogeneity of the ageing experience.

The *Socioemotional Selectivity Theory* (SST, Carstensen, 1993, 2006; Carstensen et al., 1999) also focuses on the individuals and their social networks. The SST theory assumes that with age, social networks shrink in size, and social interactions tend to become less frequent, thus leading one to assume that older people are lonelier and unhappy. However, research results prove this is not necessarily the case. Carstensen et al. (2003) argue that when realizing that one has limited time left, one reshapes the social networks in order to maximize the well-being experience (see also chapter on social development in the present volume, part II). As people grow older, they are motivated to invest their time and resources more selectively. For instance, older individuals tend to spend less time with casual acquaintances, and they are inclined to spend their time with close friends and family who represent relevant emotional connections for them. The SST also explains how changes in goals occur within the social domain. People tend to turn away from expansive, information-related goals that could help them achieve success in their future (e.g. for their careers), to select more emotional-related goals that contribute to their well-being in the present (Carstensen et al., 2003). For example, older people may prefer to meet their close friends for a comforting chat (i.e. emotional goals) than to start new activities to make novel acquaintances (i.e. informational goals).

Among the theories that focus on the *individual within the social system*, the *modernization theory* (Burgess, 1960) proposes that with the industrialization, many older people have lost their roles within the social system. A similar theory is the *age stratification theory* (Riley et al., 1972), which states that society is stratified into different age categories. These categories constitute the basis for acquiring resources, roles, or social status. Consequently, people born in the same generation may have similar opinions, experiences, values, and expectations of life-course transitions such as adapting to retirement (e.g. people of the same generation may find it normal to have an active retirement where they continue to work from home, may consider online dating normal, may earn an income as granfluencers, etc.).

Critical gerontology theories such as the *precarious ageing theory* (Grenier et al., 2020; Phillipson et al., 2020) postulate that ageing is shaped by the neoliberal policies that create a context of insecurity for people to grow old in. Precarity was defined by sociologists such as Bourdieu to be a social condition (see Millar, 2017), a social class (Standing, 2011; Millar, 2017), or an ontological condition (Bulter, 2006, 2009; Millar, 2017). These theorists are concerned with the changes that take place in the social context of ageing that cause disadvantages and inequalities in the well-being of old people (Grenier & Phillipson, 2018). Precarity refers to insecurities crated by the context of global economic and social changes, as, for example, the unwanted risks of contemporary life that are the product of globalization, neoliberalization, and decline in social protection systems. According to Guy Standing (2011), the inequalities in late life are the result of the accumulation of inequalities across the lifespan. Butler argues that all people experience precarity at some point in their life since it is a human condition of being dependent on others (e.g. in older age). Grenier and Phillipson (2018) suggest that precarity implies more than poor

economic conditions. Furthermore, as the need for care increases with older age and the disadvantages accumulate, this results in greater risk for older people to experience injury, neglect, or unmet needs. Authors make the point that precarity is political and that it leads to widening inequalities (Grenier & Phillipson, 2018). Life itself is precarious since it involves a certain degree of risk. However, the social and political conditions sustain or heighten the perception of risk (e.g. political or economic instability, pandemic, wars, etc.). Researchers working from the perspective of the precarious ageing theory raise issues related to the creation of social conditions that are fair and ensure active ageing also for vulnerable subgroups of older individuals (Crăciun, 2019).

The Psychological Perspective: Ageing Well as Personal Choice

The psychological perspective of ageing is nicely captured in the well-known quote of adding life to years not just years to life (Vaillant, 2004). In an earlier work, Vaillant (2002) also declares that successful ageing means more than just dying last, it means living well. When trying to approach ageing from a psychological perspective, researchers often concern themselves with questions about the meaning of ageing, or how old does a person feel as compared to their chronological age. One also notices a preoccupation with the idea of ageing well, not just of why people are growing older (i.e. biological perspective) or which social conditions influence ageing (i.e. sociological perspective). Thus, it comes as no surprise that one main concern among psychologists who study ageing is "how to help people age well?". The focus often lies on identifying the psychological resources that people have at their disposal in order to age well (e.g. cognitive, emotional, social resources). From the psychological perspective, the emphasis is placed more on subjective ageing (i.e. how old does a person feel) rather than a person's chronological or biological age. The heterogeneity among old people is recognized, but compared to the biological and sociological perspectives, from the psychological viewpoint, it is assumed that people can influence their own ageing. According to Baltes, individual differences in development are shaped by life experiences (Baltes, 1997), namely, the experiences one chooses to have during a lifetime (e.g. choosing to study or to learn a practical trade, having children or not, etc.).

When defining ageing from a psychological perspective, researchers regard old age as a time of growth and great potential as well as decline that needs to be compensated for. Also, it is assumed that ageing is a lifelong process that implies several life stages with typical challenges and transitions for each stage. One of the best-known psychological theories is that of *Erickson eight stages of the lifecycle*. This theory is also known as the stages *of personality development theory* that names several life stages with their corresponding tasks (see also Chap. 3 and the chapter about personality development in part II of the present book). One main assumption

of this theory is that the transition to another life stage involves a crisis that needs to be resolved in order to experience well-being. Each crisis is described as being typical for a certain life stage. For instance, for older age, Erickson describes the generativity vs. stagnation and the integrity versus despair as tasks to be resolved in order to tackle the crisis in development. *Generativity* represents the feeling of contributing to educating the next generation. This has been found to be a predictor of ego integrity development (Chan & Nakamura, 2016). Researchers point out that people who do not develop ego integrity in their fourth age tend to regret their life's choices or to feel that their lives have been lacking a clear purpose. Especially, inaction-based regrets seem to have more negative effects in the long run as compared to action-based regrets. According to Erikson (1959), *generativity* is a developmental task associated with midlife. If the crisis of generativity is resolved, then people develop care as a strength. Those who do not manage to resolve this crisis turn to self-preoccupation and end up in a state described in the literature as stagnation (i.e. they cease to develop altogether). Generativity can be achieved by caring for children or other family members, but it can also be accomplished on a social level by doing something creative, or giving back knowledge to other generations (e.g. educational activities). Generativity can be achieved through several socially meaningful roles or civic engagement but also through grandparenting. Being a grandparent provides a sense of purpose and plenty of opportunities to manifest generativity on a daily basis (see chapter on grandparenthood in part III).

Ego integrity represents a task for the fourth age and refers to the evaluation of one's past life as being meaningful or not. The development of generativity was found to be a predictor of ego integrity in older age (Chan & Nakamura, 2016). The opposite of ego integrity is despair, namely, the inability to resolve past life regrets and the feeling that life has been lived without a purpose. Regret is defined as an emotional and cognitive state that emerges as a consequence of realizing that one could have reached better decisions in the past with a better outcome in the present (Nakamura & Chan, 2021). Studies concerning regret have shown that inaction-based regret (i.e. not adopting certain behaviours that may have led to better outcomes) are more likely to be relevant in the long run as compared to action-based regrets (i.e. regretting actions that one has taken) (see Nakamura & Chan, 2021). How older people resolve life's regrets is associated with their well-being (Nakamura & Chan, 2021).

Other psychologists like Vaillant paid more attention to the specific *developmental tasks* one needs to perform as compared to focusing on the developmental stages themselves. Vaillant believed that developmental tasks are typical but not necessarily sequential (Vaillant, 2002), meaning they do not need to happen in a certain prescribed order. Also, according to Vaillant (2002) not all people go through the same stages at the same time, as it usually happens for children and adolescents. For middle age, Vaillant describes tasks such as building and keeping significant emotional relationships and consolidating one's career. For old age, he depicts tasks such as "keeper of meaning" and "integrity". For instance, the task of achieving integrity is very similar to the challenges described by Erickson (1959), namely, that a person needs to invest the years one has lived with meaning.

Another gerontologist working from the psychological perspective, Cohen (2005) concentrated on the human potential phases. For Cohen, these potential phases "reflect evolving mental maturity, ongoing human development, and psychological growth as we age" (Cohen, 2005 p. 7). Cohen supported his ideas about development with research results from neuroplasticity studies that show the brain is continuously sculpting itself as a response to learning and life experiences. Cohen also sustained the idea that creativity grows with age and leads to developing and exploring one's potential. In his studies on artists, Cohen observed how several artists became more creative with age because they drew on their life experiences. Cohen also supports the idea of postformal thinking. This type of thinking implies the ability to understand and compare conflicting sets of relationships and systems, think more relatively and less universally, and value the tension between one's own perspective and that of other people and systems (Agronin, 2011). Cohen proposes a series of human potential phases: the midlife re-evaluation phase (30–60 years old), the liberation phase (60–70 years old), summing up (70/90 years old), and encore phase for 90+ individuals (Agronin, 2013). The re-evaluation phase implies an internal quest for reassessment, transition, and exploration. The liberation phase is characterized by the idea of "if not now, then when?" and an internal drive for exploration, liberation, or innovation. The summing up phase is characterized by an internal drive for recapitulation, life review, impact, and altruism. The encore stage, being the last one in the lifecycle, is characterized by an internal drive for reflection and continuation and celebration of self, family, community, and culture (Agronin, 2013). Cohen even proposes a solution to how to stay active and engaged in one's old age, thus integrating ideas of personal growth and ageing. He suggests that a person can have a social portfolio, meaning an individualized list of vital activities that one can practice even in old age when facing losses or disabilities (Agronin, 2013).

As stated above, when studying ageing from a psychological perspective, one major question is "how to age well?". Several theories were formulated in response to this question. Among such theories of positive ageing, the most popular are the Successful Ageing Model by Rowe and Kahn (1997, 1999) and the Selection, Optimization and Compensation Model (Baltes & Baltes, 1990). These models will be described in more detail in the next chapters (see Chaps. 3 and 4 as well as the chapters in part II of this book).

Bringing the Perspectives Together: The Need for a Paradigm Change

While reviewing the biological, sociological, and psychological perspectives on ageing, we can notice that they have several ideas in common as well as distinctive features. First, all definitions of ageing from the different perspectives entail a *balance of gains and losses* that also stands at the core of understanding development as a concept. In this sense, development in middle and older age can be understood

as a successful management of gains and losses that occur at a biological, psychological, and social level (see also Chap. 3). Second, all perspectives on ageing research imply a *lifespan approach* in the sense that losses or gains accumulate across a persons' life and result in certain outcomes in old age. Third, all perspectives accept the *heterogeneity* of the ageing experience, even if the causes are biological, social, or a matter of one's own subjective perceptions and actions. The acceptance of the heterogeneity of the ageing experience means that people develop differently and implies that there is still the possibility of development in midlife and older age.

The differences among the three perspectives are related to how decline and growth can be explained from the viewpoint of each approach. From the biological perspective, decline is imminent with old age as it is depicted as being preprogrammed or the result of errors that occur across the entire life. However, some hope lies in neuroplasticity, namely, the capacity of the brain to reshape itself after trauma or illness (Langen & Grossman, 2014; Colombo et al., 2018; see also chapter on cognitive development in part II). From the sociological perspective, decline and growth are both influenced by the social context that facilitates or hinders development. Development in middle and older age may be possible, but it depends more on the social context (e.g. the social norms and roles that are attributed to older people in a certain society) than on the individual. The psychological perspective implies that the perception of environment is relevant as well as how people chose to act in order to experience more growth than losses as they age. Ideally, one should combine the three perspectives (i.e. biological, sociological, and psychological) when studying ageing and development. This would help gain a better understanding of the processes that are responsible for development in older age and encourage finding the right solutions for interventions that foster it.

For a long time, thinking about development in connection to middle and old age meant only thinking about decline and loss and how to prevent illness or disability. It was considered that a person has reached his or her full developmental potential by the age of 30 if not earlier and after that one could only focus on losses and how to compensate for them in different areas of one's life. This meant, for example, that researchers working in the area of developmental psychology either totally ignored the life period of 30+ or studied it with a focus on decline rather than on development (e.g. formulated research questions regarding what older individuals cannot do anymore in the cognitive realm, investigated whether older people are unhappier and lonelier than at younger life stages or compared to young individuals, etc.). The way that researchers think about development is in this sense closely related to how they define ageing. Studying development and ageing as interlinked processes makes sense since both occur over the lifespan and imply a series of gains and losses that influence each other. For the present book, I will examine development and ageing from a positive psychology viewpoint. This has several reasons which I will summarize in the following paragraphs.

As briefly discussed also in Chap. 1, *positive psychology* explores the pursuit of happiness (Seligman & Csikszentmihalyi, 2000; Seligman, 2011; Lyubomirsky et al., 2005), namely, it attempts to understand what makes people happy and how to achieve

happiness at different life stages. It seeks to counteract the focus on negative emotions (e.g. depression, anxiety) that are often the main topic of study for psychologists. Positive psychology addresses topics such as subjective experiences, desirable individual traits, and positive aspects that ageing and adult development bring with them (Baltes et al., 2002; Lyubomirsky et al., 2011). Development is usually a process that leads to greater happiness even when facing challenges or changes are involved. Also, people want to be happy in old age, and they can achieve this through constant self-development. Second, positive psychology implies the study of human strengths (Lyubomirsky et al., 2005; Petersen & Seligman, 2004; Petersen et al., 2007). Development in this context means identifying and fostering resources in order to improve one's strengths. Positive ageing models imply that one focuses on assets and their development or compensating for resources that one does not have anymore. Positive psychology emerged as a branch of psychology in an attempt to focus on positive emotions and human strengths (Seligman & Csikszentmihalyi, 2000; Seligman, 2011). Thus, one important assumption of positive psychology is that people have a natural tendency for growth and development. After the emergence of the discipline of positive psychology at the beginning of 2000, scientific evidence has started to add up to support the relevance of positive psychology interventions (Parks & Biswas-Diener, 2014; Lyubomirsky & Layous, 2013; Lyubomirsky et al., 2005; Seligman et al., 2005) (see also Chap. 4). For example, there is evidence that fostering gratitude is as effective as focusing on reducing negative automatic thoughts (Geraghty et al., 2010a, b). Using individual strengths across a series of developmental domains (e.g. cognitive, social, emotional) leads to an increase in overall well-being (Peterson & Seligman, 2004; Peterson et al., 2007) which also implies positive ageing experiences.

Positive psychology principles are created to increase happiness by stimulating positive experiences and encouraging positive emotions (Parks & Biswas-Diner, 2014). According to the broaden and build theory (Fredrickson, 2006), positive emotions stimulate the use of several strategies to boost functioning and increase well-being. Experiencing positive emotions helps to enhance creativity, broaden cognition and behaviours, and promote better health and social relations (Johnson et al., 2010; Hasson, 2010; Kok et al., 2013). Because of the broadening process, people can build resources in the cognitive, social, health, personality, and emotional domains of development. This can prove very useful in older age when developmental resources tend to decline. Thus, positive emotions enhance development in older age, and the other way around, developmental resources can enhance well-being. The lifespan developmental psychology suggests that positive and negative aspects, gains as well as losses, are always intertwined within every life stage and involve both benefits and costs. The positive psychology approach also acknowledges the existence of negative emotions and adversity but encourages a focus on increasing the frequency of positive emotions rather than concentrating all effort on decreasing the frequency of negative feelings (Lambert D'raven & Pasha-Zaidi, 2014). Researchers and practitioners working from a positive psychology viewpoint encourage a balanced approach where they aim to build individual strengths (e.g. optimism, resilience) while also acknowledging the existence of decline and hardship. In case of ageing, loss and negative emotions are not ignored, but the focus of

interventions is placed mainly on increasing individual strengths and boosting developmental assets to help deal with ageing, foster personal development, and increase well-being.

Conclusion

All in all, research about development in middle and old age needed a shift in the thinking paradigm from theories concentrated on decline to those focusing on growth across the lifespan. Moreover, for each individual wishing to change something in their lives, development requires a readjustment of their mindset from a focus on deterioration and how to prevent it to an emphasis on growth and how to foster it. In the present chapter, I explored how development and ageing can be understood and what are the links between these two complex and multifaceted concepts. Also, some different perspectives on defining and researching ageing were described as well as how the concept of development can be regarded as part of the process of ageing. In the next chapters, I will go on to examine how we can think about development in middle and older age, illustrate how development can be measured, as well as describe principles of intervention to foster development in midlife and older age.

Reflection Questions

1. What is your own definition of ageing?
2. How would you define development in your own words?
3. If you think about your personal development at present, do you think this will change somehow when you are older? Explain your answer.
4. Explain the links between ageing and development from a biological perspective.
5. Explain the role of the social context in shaping ageing and development.
6. Explain the associations between ageing and development from a psychological perspective.
7. Think about a topic that you would like to study concerning ageing and development. Formulate research questions from the biological, sociological, and psychological perspectives.

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Chapter 3
Thinking About Development: Defining Criteria, Exploring Processes, and Evaluating Change

Introduction: How Can We Measure Development in Middle and Old Age?

Julia Samuel, a renown British therapist, in her book *This Too Shall Pass. Stories of Change, Crisis and Hopeful Beginnings* (2021) says that any change in our lives begins with an assessment. When we first start thinking about change, we picture what the results may look like, and this stimulates us to search for information concerning how the change will affect our lives. This can refer to any changes from trying out a new hairstyle (e.g. we dream about how the new hairstyle will improve our looks, and we search for the best hairdresser that could cut and style our hair the way we desire) to searching for a new apartment (e.g. we picture where we would like to live, how many rooms we need, and start seeking real estate agencies that can help us find our dream apartment) to looking for a new job (e.g. we first think about our ideal type of work, the preferred work schedule, the desired payment and then look into possibilities regarding how to find the envisioned job) or a new relationship (e.g. think about our ideal partner and explore where and how to find him or her). Personal development is not that different, even if it may seem overwhelming at first. When we want to change something about ourselves at a physical, cognitive, social, emotional, or personality level, we start with an assessment of what we want (e.g. what skills, competences we want to learn, if we want to be more optimistic or outgoing, etc.), then we start looking for information on how these changes would affect our lives, how to achieve the changes, and who may help us accomplish the desired changes. The assessment of change implies that we think about some criteria (e.g. what we want to achieve in terms of quality and quantity of developmental change, some standards that would signal that we have accomplished our change goals) and process (e.g. how to achieve the developmental change, what factors can influence the desired developmental change, etc.).

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In the previous chapter, I discussed what development could mean in middle and old age, and how it can be linked to the concept of ageing. Also, I described several perspectives for researching ageing and how these include the concept of development. In the present chapter, I will go on to examine how we can measure development in middle and older age. Since development and ageing are closely linked, I will first summarize how people thought to define and measure positive ageing and what the implications are for evaluating development in midlife and older age. Then I will go on to discuss how quantitative and qualitative methods can be used to study development in middle and older age. Nevertheless, the present book does not represent a methodology handbook. Thus, for those who are interested, I will reference other works concerning research methodology.

As mentioned in the first chapter of the present book, for childhood and adolescence, there are certain milestones that mark individual development. However, such milestones are more difficult to define for middle-aged or older individuals. Thus, one important question that I will address in the present chapter is *how can one tell that someone is developing*?. This question is linked to that concerning *how do we measure development*?. In an attempt to answer these questions, one possible solution is to set some standards of development and estimate if a person has reached them or not. Another option would be to look at the *process* of development, namely, the evolution of a person during a certain time frame (e.g. from 20 to 30, from 30 to 40, and so on). Both quantitative and qualitative research designs are useful when studying if developmental standards have been reached or when trying to understand the processes of self-development in later life. In case of qualitative research designs, we can ask people to reflect on their development, their goals for change, and how they plan to accomplish change in the future. With quantitative methods we can, for example, establish some improvement criteria and measure these parameters before and after an intervention targeting development. Such parameters can be general, like experiencing an increase in well-being or self-efficacy, or more specific such as an improved performance for a certain skill that a person learns in an older age (e.g. getting better at solving crossword puzzles, learning a new language, improving assertiveness enhancing communication skills, etc.). In the following, I will address such issues as setting criteria for measuring development and choosing research designs to evaluate self-growth in older age.

Defining Criteria for Positive Ageing and Setting Standards for Development

Positive ageing, by definition, can be regarded as a form of successful development. Several researchers set out to identify what makes a happy old age. The literature describes two large directions that try to answer this question. The first focuses on successful ageing as *an outcome* and describes *criteria* for what makes a happy old age. The second direction focuses more on the *processes* that are associated with

ageing well. In the following, I will address both approaches and look at how these are connected with the idea of development in middle and old age. As described in the first chapter, once researchers decided that it was time to leave the negative perspective on ageing behind, they started asking questions such as "who is a successful ager?" and "how do those who age well differ from those who do not?". Several authors attempted to define successful ageing or positive ageing by formulating criteria for who ages successfully. Such criteria are similar to developmental milestones that are set for younger ages.

When thinking about criteria regarding how to age well, one of the most popular models is the *successful ageing theory* formulated by Rowe and Kahn (1998). The authors started off from the assumption that one can be successful at ageing just as one can successfully master other life tasks (e.g. successfully find a job or a life partner). Their definition of successful ageing mainly implies that a person avoids illness and disability in older age. Later in their careers, the authors expanded the model to include the maintenance of cognitive and physical abilities, and engagement in social and productive activities (Rowe & Kahn, 1997, 1998). Thus, they set out to define a set of *criteria* that help to establish who is a successful ager and who is not, namely, who is just a "usual ager" and who falls into the category of pathological old age (Rowe & Kahn, 1987). All in all, Rowe and Kahn (1998) identified three criteria for successful ageing: (1) the absence of disease and disability, (2) the maintenance of cognitive and physical functioning, and (3) active engagement with life. These criteria were developed based on the results of the Mac Arthur Foundation Study (Rowe & Kahn, 1998), where they determined who among a sample of 70- to 79-year-olds could be described as ageing successfully. Within the Mac Arthur Foundation Study, the authors tested 4030 participants and found that 1931 met the three main criteria of successful ageing, namely, they were healthy, and they maintained their cognitive abilities and were socially engaged (Rowe & Kahn, 1998). Although the model was later often criticized, one important contribution to the scientific literature is that it promotes a positive view on ageing and marks a shift away from a predominantly pathological view of old age where older people are seen as frail and ill. Furthermore, the successful ageing model recognizes the developmental potential of older adults and of old age as a period of opportunity and well-being. Although it does not directly address the concept of development in older age, it implies that development means to maintain ones' cognitive abilities and remain socially engaged and active. Thus, successful ageing is associated with maintenance rather than continuous development in older age.

Another model that focuses on criteria that define successful development is the *Erikson Stage Model* (see also Chap. 2 for a description of the model and the chapter on personality development in part II of the present book). According to Erikson's model of development (1959), people go through different stages with characteristic tasks. Each stage also implies certain crises that one needs to resolve in order to move on to the next stage. If people manage to master these specific tasks successfully, then they develop and are ready to move on to the next stage. If a person does not manage to master the different tasks that characterize each stage, they will remain stuck in the crisis situation. In contrast, the successful crises resolution helps

people to develop certain strengths that are characteristic for each developmental stage. In the specific case of older age, generativity and ego integrity are described as relevant criteria for solving the identity crisis (see also Chap. 2). For example, *generativity* represents the feeling of making a contribution to the next generation. This has been found to be a predictor of ego integrity development (Chan & Nakamura, 2016). Researchers point out that people who do not develop ego integrity in their fourth age tend to regret their life's choices or to feel that their lives have been without purpose. Especially, inaction-based regrets seem to have more negative effects in the long run as compared to action-based regrets. This means that we tend to regret more the things we have not done than the ones we have accomplished.

According to Erikson, generativity represents a developmental task associated with midlife. If the crisis of generativity is resolved, then people develop care as a strength. Those who do not manage to resolve this crisis turn to self-preoccupation and stagnation. Generativity can be achieved by caring for children or other family members, but it can also be achieved on a social level by doing something creative, or giving back knowledge to other generations (e.g. educational activities). Generativity can be achieved through several roles of keeper of meaning, through civic engagement, but also by assuming social roles such as those of grandparents. Being a grandparent provides a sense of purpose and many occasions to manifest generativity (see chapter on grandparenthood in part III). Thus, the important feature here for measuring development is the existence of a crisis inherent to the life stages and the existence of means to manage the crisis. Also, it is relevant to note that this model recognizes the potential of self-development and change in middle and older age. However, Rowe and Khan consider successful ageing as an outcome that is different from pathological and usual ageing (Rowe & Khan, 1998) thus implying that some people use their development potential (i.e. the successful agers) while others do not. Moreover, as mentioned above, it is not clear to what extent people really continue to develop or just maintain their prior abilities (e.g. in the cognitive, bodily, or social realms).

The models of successful ageing that focus on criteria for ageing well were often criticized. One point of critique refers to the fact that setting successful ageing standards has a potential for discriminating those who do not manage to meet all the desired criteria of successful ageing. Some authors have particularly criticized the criteria of successful ageing for being too rigid and exclusive (Martinson & Berridge, 2014). For instance, some people may experience well-being in old age despite having a chronic condition. However, according to the model, these people would not be described as successful agers. Subjective criteria such as well-being or self-perceptions of ageing are not included in the model (Liang & Luo, 2012). Moreover, the model does not take cultural settings into account even though the social and cultural contexts where a person is ageing may shape both criteria and means of ageing well such as resources and obstacles that people need to face in their older age (Villar, 2012; Craciun, 2016a, b). Liang and Luo (2012) argue that successful ageing is a Western concept that does not necessarily apply to more Eastern cultures and propose the concept of harmonious ageing instead. In their view, harmony

stands for attaining a balance between all spheres of life (Liang & Luo, 2012). The concept of harmony includes both the idea of continuity and change.

Critical gerontologists go as far as to say that the whole idea of success is faulty since it places a lot of pressure on older individuals to be productive (Martinson & Berridge, 2014). Similarly, it places the responsibility on older adults to be successful and implicitly also the fault of failing to do so. However, older individuals should be valued within a society even if they are not as productive or useful as before. In this sense, also the quantifiable concept of activity is criticized, since authors argue that it is not as important in how many activities a person is involved, but how people qualitatively value a particular activity. For example, if some older persons treasure meditation or reading, this should not be considered less valuable than being socially engaged, having lots of active hobbies, or participating in lucrative activities. Martinson and Jodi (2011) suggest that there is a pressure for older people to volunteer to show that they are still socially active and valuable. In their opinion, this means that if older persons chose to spend time with friends or engage in contemplative activities, this would be considered less valuable from the point of view of successful ageing discourses. Furthermore, some authors argue that successful ageing as a concept is ageist, because it denies the physical decline that happens with ageing and advocates an unrealistic cultural ideal of agelessness or the pressure to stay young (Liang & Luo, 2012). From the successful ageing perspective, old age is ultimately regarded as something bad and preventable (Kaufman et al., 2004). This phenomenon is regarded as dangerous because it encourages older people to disregard "normal ageing" and fear pathological ageing (Kaufman et al., 2004). Also, it prompts older people to struggle hard to achieve successful ageing. Further critiques mentioned that the successful ageing criteria, as described by Rowe and Kahn, are too simplistic. Researchers identified other variables that can play a role for a happy old age such as spirituality (Crowther et al., 2002), self-efficacy (Strawbridge et al., 2002), or value orientation (Torres, 2002).

Another main critique point is that such criteria-based models set a standard for older age or for certain developmental stages, but they provide little or no information on how to age well or, for that matter, how to develop in later life. Villar (2012) argues that Rowe and Kahn in their model only focus on the absence of negative attributes such as illness or disability and pay little attention to development and acquiring new skills while ageing. Even if successful ageing is seen as a way of adapting to old age (Torres, 2002), it implies that some people fail at adapting and does not recognize the heterogeneity in "successful adaptation". Villar (2012) argues that growth is also part of ageing and defining solely successful ageing as an outcome means that people do not develop past the limit of these criteria. Linked to this point, I would argue here that the models of successful ageing that are based solely on criteria imply that there is potential in old age but do not really focus on development. From a developmental perspective, it is more important to go beyond the idea that there is potential for development in older age and understand how development happens in middle and old age. In this sense, understanding development means also making sense of how people deal with losses, how they adapt their

goals to their current circumstances, and how they take action to achieve their new aims in older age.

Focus on Process: Understanding How to Develop and Age Well

In response to the above-mentioned critiques, theoretical models emerged that focus on processes of development, namely, on how individuals adapt to changes across the lifespan and age well. The *Selection, Optimization, Compensation (SOC) Model* (Baltes & Baltes, 1990) represents a model that sets out to explore processes that are responsible for positive ageing. Additionally, it highlights how people can reach a positive old age and, thus, goes beyond criteria of what being successful in old age means. The SOC model is described by its authors as a developmental model, thus implicitly confirming the link between ageing and development. The processes of selection, optimization, and compensation indicate formulating goals, pursuing these, and maintaining personal goals even when facing obstacles. *Selection* refers to identifying, articulating, and committing to a set of personal goals. Life offers an infinite range of goals that we can pursue. However, we have limited internal and external resources to do so, and thus we need to identify which are the most important goals for us to pursue and commit to doing so. We do this across our lifespan, but the process is especially important in old age when our resources decline, and it becomes relevant where we invest these diminishing assets. Personal goals direct and organize our behaviour and thus are essential for our personal development. The SOC model differentiates between elective selection and loss-based selection of personal aims. Elective selection refers to formulating goals so as to match our motivations with our available resources. For example, we select our leisure time activities based on our external resources (e.g. our work schedule, how much does the equipment for a certain sport cost) and internal resources (e.g. how physically fit we are to practice a certain sport). Loss-based selection refers to changes in our goals and goal systems, such as what goals we prioritize, adapting our standards or replacing goals that are no longer achievable. For example, when people become parents, they have less free time for all their hobbies, so they will select those that are important to them or those they can integrate in the daily routine of raising children (e.g. going on a family bike tour instead of embarking on an expedition of mountain biking; going to a museum that includes programme activities for children). Feeling committed to goals is very important for investing life with meaning. Thus, the process of goal selection plays an important part in guiding our personal development process and implicitly in ensuring a good old age. The process of *optimization* refers to constantly improving the means of achieving the desired goals. Optimization implicates allocating time, knowledge, and effort to achieve one's goals (Freund & Baltes, 2000). Thus, optimization implies development since in order to reach our goals, we need to identify and refine our means to do so.

Optimization is related to growth-oriented goals, which are particularly important in older age when losses unfortunately become prevalent. Focusing on growth in older age is associated with positive emotions, self-efficacy, and well-being (Freund & Baltes, 1998). The process of *compensation* refers to how we deal with losses (e.g. loss of health and physical strength in older age, loss of time for oneself when we become parents, etc.). Compensation implies the acquisition of new internal and external resources or reactivation of unused resources when formerly used resources are no longer available (Freund & Baltes, 2000). Maintaining positive functioning when facing losses is relevant across the lifespan but even more in older age in order to ensure well-being. Important personal goals are relevant to our well-being, and therefore simply giving them up is not really a good option. However, we can compensate by finding alternative means to achieve our goals or by identifying new resources to do so (e.g. after becoming parents, middle-aged individuals can find hobbies to do together with their kids or can hire a babysitter from time to time in order to have some leisure time; grandparents who live far away from their grandchildren may learn to use social media and do videocalls to keep in touch with them when travelling becomes more difficult with age). Optimization is very much growth oriented (e.g. learning a new skill to function better), while compensation is more focused on counteracting or avoiding losses (e.g. getting a babysitter to avoid loss of time for one's hobbies).

The SOC strategies are suggested to be particularly adaptive and result in successful development when demands are high and resources are low, as, for example, in older age. Baltes and Baltes (1990) initially conceptualized their model as a meta-theory of development, thus indicating that ageing and development go hand in hand. The authors also argued that the SOC strategies can be analysed at different levels (individual, organizational, societal) or in various domains (work, family, leisure time, etc.). All the above-mentioned strategies, namely, elective selection, loss-based selection, optimization, and compensation are strategies that people apply when they face situations with high demands and when they are lacking resources to achieve optimal functioning and well-being. Drawing on the SOC model, Schulz and Heckhausen (1996) combined the SOC strategies with a lifespan perspective. In their view, successful ageing represents the optimization of human development over the life course. The authors suggest that individual ageing is the result of developmental process across the lifespan. According to Schulz and Heckhausen (1996), development happens in a bell curve with specific gains and losses. Also, in their view, sociocultural contexts matter because these shape the way that individuals develop across the lifespan. For example, developing selection strategies depends on having the opportunity to do so. Thus, Schulz and Heckhausen (1996) define context-dependent criteria for success in what concerns ageing. Other authors such as Baltes and Carstensen (1996) cautioned against putting too much emphasis on structural factors and pointed out that definitions of successful ageing differ between cultures. The authors define some criteria such as generativity or self-development as important for successful ageing, but they also emphasize the relevance of processes concerning how people maintain or reach health, autonomy, and happiness in older years.

The lifespan perspective on development suggests that changes occur over time, are multidimensional and multidirectional, and take place at any life stage (Baltes, 1987; Nakamura & Chan, 2021). The positive psychology perspective builds on this and postulates that there are several opportunities for growth in various domains (e.g. cognitive, emotional, social, physical, personality) along the lifespan (Nakamura & Chan, 2021). Change depends on the personal attitude towards it, namely, on engagement, passion, and purpose, that affects how people respond to their environment (Nakamura & Chan, 2021). Another important aspect is that change pathways are individual and they can differ at various stages in life. Thus, there is not one single solution to development in older age, but each person can identify what best suits him or her. The positive psychology of adulthood examines such topics as plasticity, personal growth initiative, post-traumatic growth happening at later stages in life (Nakamura, 2011). Studies conducted from this perspective showed that, for example, emotional life seems to thrive among the people who find themselves in the third age as compared to young adults (Carstensen et al., 2011; Scheibe et al., 2013). This phenomenon of maintenance of positive emotions despite the decline experienced in older years has been called the paradox of ageing. Nevertheless, this terminology is also disputable since it implies that old age is normally associated with illness and decline, and positive emotions come as a surprise. Research in the area of socio-emotional development has also pointed out that although social networks of older people tend to be smaller than those of younger individuals, this does not mean that old people are necessarily lonely. Older individuals were shown to favour strong emotional connections over large social networks with more superficial relations. The perception that one has less time left to live motivates older adults to shift their goals towards emotionally meaningful connections that they usually enjoy with a smaller number of significant people such as close friends or relatives (Carstensen, 1993, 2006). With the shift in time perspective, older people tend to value more emotional goals over information seeking aims (Carstensen et al., 2003). Emotional goals influence the experience of well-being in the present and help older individuals maintain positive feelings and attitudes towards life (Carstensen et al., 2003). Older people also report less interpersonal discord, more positive relations, and receiving more social support compared to younger adults (Luong et al., 2011). Social roles like grandparenting can also contribute to a feeling of well-being among older adults (Thiele & Whelan, 2008) as well as to development in several life domains from the cognitive to the physical realm (see also chapter on grandparenting, part III of the present book). In terms of emotional development, the positivity effect (Mather & Carstensen, 2003) shows that older adults tend to favour positive information over negative one (i.e. tend to remember positive information or to focus their attention on positive stimuli). This constitutes a developmental feature that can help to maintain their positive emotions in older age. Concerning personality development, people who are at a middle stage or older stage in their lives can develop generativity, namely, bringing a contribution to the next generations. Generativity can contribute to their well-being in older age (Schocklitsch & Baumann, 2012) illustrating how personality development can influence how older people feel.

Positive psychology focuses on positive emotions, positive individual traits, and civic virtues (Seligman & Csikszentmihalyi, 2000). In this sense, it explores the processes of reaching well-being and happiness across the lifespan. For instance, one can experience well-being by building one's individual strengths such as gratitude or optimism. In the conception of Seligman (2002), a fulfilled, happy life means the pursuit of meaningful, pleasant experiences and, thus, implies a process of development. Searching for pleasant, meaningful experiences and positive emotions can act as a motivator for personal growth. Positive individual traits include, for example, optimism, courage, and curiosity (Seligman et al., 2005), and their improvement implies a certain process. Courage was shown to involve a lifelong learning process (Finfgeld, 1995) and therefore illustrates the relevance of lifespan models of development. Individual strengths can be applied to address specific challenges at different stages in life and also can grow or decrease with age. Individual strengths can act as buffers against the negative effect of illness and stress (Krause, 2006) and can represent a component of wisdom (Choi & Landeros, 2011). Thus, they can represent an important facilitator for development. For example, if people are healthy and less stressed, they are also likely to invest more resources for their personal growth.

How to Evaluate Development: Examining the Potential of Qualitative and Quantitative Research Designs

As mentioned above, defining criteria for development for middle and late adulthood represents a challenge. One can concentrate on different life domains and design specific criteria for cognitive, emotional, physical, social, or personality development. Nevertheless, several questions arise regarding what one should evaluate exactly? Should one focus on the maintenance of skills or on learning new abilities? Should one measure change or stability or both? What does successful development mean? Does it imply an effective transition from one stage to the next one, such as solving crises in the Erikson model (1959) or does it represent a successful management of resources in late life as suggested by the SOC theory (Baltes & Baltes, 1990). Next, one needs to ask what are the best evaluation methods for development among middle-aged and older adults? Should one use quantitative, qualitative, or mixed methods designs to capture change and growth in older age?

Before thinking about the right designs and methodology, one needs to decide what perspective to development in older life one aims to support. For example, from a positive psychology perspective, researchers will focus on gains rather than on losses and on development as compared to decline. In this sense, not just the maintenance of certain skills (e.g. what older people can still do) into old age is considered relevant but also what a person achieves (e.g. what they acquired as novel skills in older years) in older age or how do they manage to grow despite some form of experienced decline (e.g. successful management of diminishing resources).

This has implications for what kind of research questions one formulates (e.g. inquiring about development rather than decline that comes with growing older) or what type of outcomes one chooses to examine (e.g. looking at well-being and positive emotions rather than negative emotions). The design and corresponding research method depend on the research question and aims. Thus, to sum up, there is no normative, correct answer to the question of what the best research methods are for studying development in middle and older adulthood.

As mentioned above and in Chap. 2 (see Chap. 2 in the present volume), there are several ways to age well (Martinson & Berridge, 2014; Liang & Luo, 2012). Thus, research methods should help explore individual differences in what concerns the experience of ageing and development (Nakamura & Chan, 2021; Liang & Luo, 2012). Researchers can make use of existing data bases that capture development in older age in different life domains, such as the Health and Retirement Survey, the Survey of Health, Ageing and Retirement in Europe, Midlife in the USA, or Midlife in Japan (Nakamura & Chan, 2021). To understand the different experiences of ageing and development, one can apply certain statistical models such as latent class analysis or growth mixture modelling (Nakamura & Chan, 2021). Additionally, individual differences in experiences of ageing and development can be explored with qualitative designs (e.g. case study, comparative design) and methods (e.g. interview, observation, etc.).

When asking research questions such as "what does the positive ageing and development mean to older individuals themselves?" and when aiming to explore experiences of ageing and development in older years, *qualitative designs* are the most appropriate. If one is interested in how older people perceive change and development, what are the barriers and resources towards growth in several life domains, then qualitative designs are the best option to explore such issues. For example, one study explored the positive aspects of ageing by conducting in-depth interviews with older adults aged 65–85 and analysing these using the interpretative phenomenological analysis (Kirkby-Geddes & Macaskill, 2016). Findings comprise four themes referring to psychological strengths (e.g. lay descriptions and examples of strengths), benefits of old age, relationships, and attitudes towards ageing (Kirkby-Geddes & Macaskill, 2016). The authors emphasized the importance of making the voices of older adults heard in ageing studies where most of the research on individual strengths was quantitative (Kirkby-Geddes & Macaskill, 2016). Crăciun (Craciun, 2019; Craciun & Flick, 2014, 2015, 2016) used a qualitative comparative design to study views on ageing and preparations for old age among middle-aged precarious workers as compared to those who had secure work contracts. Episodic interviews (Flick, 2018) were conducted with middle-aged German adults who had either a secure or insecure work contract. Episodic interviews provide the advantage of gathering semantic knowledge (e.g. what are the subjective definitions of ageing or health given by the participants themselves) and episodic knowledge (e.g. narrative information about concrete preparations for older age). A thematic analysis according to Flick (2018) was conducted with the data, and findings revealed that individuals with precarious work contracts had more negative representations of ageing and did not really feel prepared for older age. Nevertheless,

they had coping mechanisms to deal with their work situation and also tried to activate several resources that could be useful for old age (e.g. social networks, work skills, cognitive training, health behaviour, etc.). More information about qualitative research designs that can be applied to research with older individuals, their advantages as well as their drawbacks, can be found in a chapter written by Crăciun (2022).

When asking research questions referring to predictors of development in older age, *quantitative designs* are the most suitable. Research aims may target changes in individual strengths or abilities (e.g. cognitive capacities, social skills) over time. In this case, longitudinal statistical designs would be the best option for answering questions regarding the evolution of individual strengths and abilities. Statistic designs can also be applied when one wants to compare the performance of older adults on cognitive tasks and contrast it to that of younger people or when one would explore how older adults respond to negative and positive stimuli as compared to younger adults (Mather & Carstensen, 2003; Reed & Carstensen, 2012; Reed et al., 2014). Quantitative data can be used to examine how people cope with life transitions such as retirement. For instance, making use of data from American and German retiree survey studies, researchers showed that older individuals can adapt to retirement and maintain well-being (Wang, 2007; Pinquart & Schindler, 2007). Some studies looked at the role of an important developmental resource, namely, self-perceptions, or views on ageing, for health and longevity (Wurm et al., 2007, 2010, 2013; Levy et al., 2002; Levy & Myers, 2005). Quantitative designs can be applied to see which factors predict development in midlife and older age. For example, one can identify mediators of change, such as looking at the role of views on ageing as a mediator between health and physical activity in older age. Moderation analysis can be used to investigate whether the relation between two variables (e.g. health and social engagement) depends on (i.e. is moderated by) the value of a third variable (e.g. views on ageing, optimism, self-efficacy).

Quantitative and qualitative methods can also be combined in the same research design to answer specific research questions. Likewise, qualitative data can be used to understand the quantitative findings better, or, the other way around, one can use qualitative data to explore a phenomenon before conducting a quantitative survey or to help develop a questionnaire. For instance, one mixed-methods study asked what the successful ageing role models of young people are as compared to those of middle-aged and older individuals (Jopp et al., 2017). The authors were interested whether the three age group categories had a successful ageing model, what the characteristics of this role model would be, the reasons for choosing the particular role model, and the associations between the role model features and the persons' views on ageing and attitudes towards their own ageing (Jopp et al., 2017). The study had a mixed methods design. Qualitative data about successful ageing role models were collected in face-to-face interviews and coded using methods applied by Glaser and Strauss (1967) and Miles and Huberman (1994). Views on ageing and attitudes towards one's own ageing were assessed with questionnaires. Coded data from the interviews were transformed into categorical variables so as to be integrated in the quantitative analysis with views on ageing and attitudes towards one's own ageing. Results pointed out that most participants mentioned family role

models (e.g. parents, grandparents). Also, the role models were gender matched, and the most frequent reasons for choosing a role model were health, activities, and social resources of the selected model (Jopp et al., 2017). Mediation analysis showed that family role models were associated with more reasons for selecting that particular role model and with less negative views on ageing (Jopp et al., 2017).

A specific type of design is the *experimental design* that can be applied to examine if positive interventions work in older age and help older individuals to develop strengths and experience positive emotions. In this sense, one can test the effectiveness of a positive psychology intervention against a control group who is on a waiting list or only receives a form of educational programme. One can use randomized controlled trials (RTC) to look at how an intervention affects developmental outcomes. For example, one study examined the effect of programmes that help older adults to manifest their generativity outside the grandparent role (Freedman, 1999). Older participants were paired with public school children in a volunteer tutoring programme called the Experience Corps. The programme aimed to benefit both parties by encouraging intergenerational communication and promote development for both older and younger participants. Findings from an RCT study showed that even 2 years after the programme, older participants reported more generativity relative to a control group (Gruenewald et al., 2016). Also, participants reported lower depression levels, fewer functional limitations, and even some small increase in the brain volume of the regions that were vulnerable to dementia (Carlson et al., 2015; Hong & Morrow-Howell, 2010). The tutored children also registered increases in reading ability compared to children in the control group, after taking part in the programme (Lee et al., 2010). These different studies based on the same intervention programme illustrate how development can happen both ways, namely, how older adults shape the development of children and, the other way around, how the interaction with children can enhance the development of older people.

Another study evaluated an intervention programme (9 weeks of group sessions) for older adults that included several themes such as raising individual strengths (i.e. courage, curiosity, gratitude), improving civic virtues (i.e. altruism and meaning in life), and enhancing positive emotions (i.e. happiness, savouring, optimism) (Ho et al., 2014). Outcomes were measured with the Geriatric Depression Scale (Sheikh & Yesavage, 1986), Life Satisfaction Scale (Diener et al., 1985), Gratitude Questionnaire (McCullough et al., 2002), and Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). The intervention was shown to increase levels of gratitude, happiness, and life satisfaction and decrease depressive symptoms among participating older Chinese individuals (Ho et al., 2014). Beyond looking at the effectiveness of the intervention in producing the desirable outcomes (e.g., an increase in positive emotions and strengths), one can also examine what processes are responsible for the intervention success. In case of positive psychology interventions, components such as self-awareness, education, and self-reinforcement were proposed to explain the effectiveness of interventions (Ho et al., 2014). Self-awareness refers to reflecting on ones' own experience; the education component indicates the fact that participants get to understand what happiness means to them and how to achieve it and self-reinforcement refers to the take home exercises that

older adults receive to practice the newly identified individual strengths in their daily life (Ho et al., 2014). Additionally, concerning the intervention delivery, one can use experiments to test what is the most effective way to deliver an intervention or what are the best components to include. One could do this by performing a qualitative needs assessment. This can be done by organizing, for example, focus groups with experts or by interviewing the target population and using findings to inform the intervention design and content (e.g. the duration of the intervention, the mode of delivery, and the aims and strategies). Within a quantitative experimental study design, one can manipulate the methods and strategies used in the intervention. For instance, an experimental study examined an intervention where participants had to write about their best possible selves once a week for a duration of 4 weeks (Layous et al., 2013). The researchers manipulated two factors that could have affected the effectiveness of the intervention, namely, the mode of delivery (i.e. online or in person) and using peer recommendations to manipulate assessments of activity efficiency (Layous et al., 2013). The latter implied a condition where participants read a persuasive peer testimonial before completing the task versus a group who read neutral information or performed a control task (Layous et al., 2013). No differences were found between those who completed the task online versus in person (Layous et al., 2013). Those participants who read information about the benefits of writing about the best possible self experienced the highest well-being after the intervention compared to the other groups (Layous et al., 2013). Findings lend support to the importance of participants believing in the effectiveness of the intervention (Layous et al., 2013). In addition to a quantitative evaluation of the effectiveness of the intervention, one can plan to conduct a process evaluation with qualitative methods (Craciun, 2022). For example, one can interview participants to see what they liked or disliked about the intervention, what components they found useful, what they apply in their daily lives, what barriers and resources they encountered when trying to apply what they learned during the intervention, and so on.

Sometimes intervention methods can also act as means to collect data about the target group, in this case middle-aged or older individuals. For example, a positive psychology intervention strategy such as expressive writing (Tarragona, 2021) can help gather qualitative data concerning older persons' emotions, resources, and barriers experienced towards personal development. Expressive writing is used to help individuals cope with present changes and think about better futures (Tarragona, 2021). Furthermore, it has beneficial effects on health and the immune function and is linked to fewer negative emotions and perceived well-being (Pennebaker et al., 1988; Boas, 2012; Jensen-Johansen et al., 2013; Craft et al., 2013). Expressive writing can help older individuals deal with the present problems of older age and to imagine a better future such as the possibility of development in older age. Life stories are relevant to people's identity at any life stage (Tarragona, 2021). McAdams (2001) defines identity as an internalized life story that starts to develop during adolescence and continues over the entire lifespan. Smyth et al. (2012) argue that narratives about various life challenges help people integrate changes (e.g. in case of ageing changes that occur at bodily, social, or cognitive level) in a coherent life

story. Autobiographical memory plays an important part in the development and maintenance of identity and can be stimulated through writing exercises (Tarragona, 2021). Wilson and Rose (2003) found a bidirectional relation between memory and identity. What people believe about themselves at present and how they see their future influence what they will remember about themselves later in life. The other way around, what they remember affects how they think about themselves at present or what goals they set for the future (Wilson & Rose, 2003). Stories about one's life can provide insight into a person's identity and personality (Tarragona, 2021). Thus, using qualitative methods (e.g. thematic analysis, content analysis, discourse analysis, phenomenological analysis) to analyse what older people write about their experiences with ageing and their efforts to cope and develop can provide relevant information for theory formulation and intervention design. Currently, authors argue for a shift in perspective from evaluating complex positive intervention packages to assessing the components that specifically target change among participants (Hayes et al., 2020; Ciarrochi et al., 2022). This would help improve intervention strategies and adapt the programmes to the particularities of the context or those of the target audience (Hayes, 2019), for example, older adults living at home as compared to those living in an institution for elderly care.

Conclusion

This chapter dealt with the complex issue of how to measure development in older age. Evaluation is crucial for planning research and designing interventions in the field of positive development in older age. Thus, the way one conceptualizes development in midlife or older age has implications for research (e.g. how one examines if and how people develop in older age) and practice alike (e.g. for individual counselling, for organizational interventions, for policy-making). Deciding how to operationalize development for older age groups represents a challenge compared to younger age groups where developmental theories usually set a standard or milestones of what to expect of a child who is just entering school as compared to teenagers who are preparing for the transition into adulthood.

One characteristic of positive ageing is exactly its heterogeneity, meaning that there is not one single solution to how a person should age well and continue to develop in several life domains (e.g. cognitive, social, emotional, physical, personality). Positive ageing theories have either tried to define criteria such as the successful ageing model (Rowe & Kahn, 1998) or concentrated on the processes responsible for ageing well, such as the selection, optimization, and compensation model (SOC, Baltes & Baltes, 1990). In order to define development, one needs both a set of criteria or outcomes (e.g. what should a person be able to do after a cognitive training intervention) and processes (e.g. what strategies are useful to help an older person develop on a cognitive level). The positive psychology framework helps to define development in the sense that it provides a series of outcomes such as positive emotions (e.g. happiness, well-being), individual strengths (e.g. courage,

gratitude, curiosity), or civic virtues (e.g. altruism) (Ho et al., 2014) that can serve as both components and outcomes for developmental interventions. Moreover, by definition, positive psychology places the focus on gains rather than losses and is thus centred on measuring growth and identifying developmental assets that would help a person experience well-being despite growing older.

Positive developmental psychology inspires a set of questions regarding development in midlife or older age such as what people understand under the idea of development in older years, what are their representations of ageing, which factors predict well-being and development in older age and which interventions are effective in promoting development in older age and what strategies account for the effectiveness of such interventions. Depending on the research questions, researchers will choose the appropriate research methods to answer these. For instance, longitudinal statistical designs can be used to measure trends in development by comparing the same individuals at different life stages. One can use quantitative designs to explore the differences in development between younger and older adults by comparing their performance on different tasks (e.g. cognitive tasks, emotional reactions to positive and negative stimuli, and social behaviour). Quantitative designs can also be used to examine relations between different variables (e.g. individual strengths and well-being) or predictors of development in older age groups. Qualitative designs are useful for giving older people a voice to talk about their views on ageing and development, the barriers, and facilitators of development or how they prepare for older age. Experimental designs such as randomized controlled trials are needed when one wants to test the effectiveness of a positive psychology intervention among older adults and to identify what strategies help to foster development in different realms (e.g. what strategies to use to enhance cognitive development among older adults, what strategies to use to encourage personality development, etc). Qualitative methods can help to conduct a process evaluation of such interventions and find out what older people like or dislike about a positive psychology intervention, what components they can apply in their daily life, and what barriers they encounter as well as what helps them to use the intervention for their personal development. In the next chapter, I will explore specifically how the framework of positive psychology can be applied to design interventions targeting development among older adults.

Reflection Questions

1. After reading the present chapter, how would you asses your own personal development? What research questions would you formulate? Give three examples.
2. What methods would you choose in order to answer the questions you formulated for point 1? Explain your choice.
3. How would you evaluate the development of your grandparents (or another older person you know)? What research questions would you formulate? Give three examples.

4. What research methods would you use to answer the questions formulated under point 3 and why? Explain your choice.
5. Formulate two research questions based on the criteria models of positive ageing.
6. Formulate two research questions based on process models of positive ageing.

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Chapter 4
Interventions at the Crossroad: From Preventing Decline to Fostering Growth

Introduction: Framing Interventions to Foster Development in Older Age

In the previous chapters (see Chaps. 2 and 3), I have examined how several theories have defined and operationalized development in midlife and older age. In this chapter, I will go on to explore what type of interventions can be designed to foster development specifically for middle and older age. In this sense, I will discuss some models that can offer a good frame for designing developmental interventions targeted at middle-aged and older adults. Also, I will provide an overview of the positive psychology intervention strategies that could be useful for stimulating development across midlife and old age. In the third part of the book, the chapters will further explore some case studies of concrete developmental challenges in middle and old age (e.g. love relationships, sexuality in older age, loneliness prevention, managing pain, etc.). These chapters (see Part III of this book) will include examples of how positive psychology interventions and strategies can be used to stimulate development among older individuals.

As already mentioned in previous chapters (see Chaps. 1, 2, and 3 of this book), people evolve across the lifespan, and development constitutes a series of gains and losses at every stage in life (Baltes & Baltes, 1990; Baltes, 1997). Thus, if change and development happen naturally, why do we need interventions to foster these among middle-aged and older individuals? In this sense, it is important to reflect on the role of developmental interventions and what they can help to achieve in midlife and older age. For example, such interventions can provide guidance on how to realize the desired developmental change (e.g. how to be more outgoing as a person, how to enhance one's social networks, how to maintain cognitive functioning in older age, how to control stress and balance the work and personal relations in midlife, etc.). The guidance is based on theoretical models and research findings that show what strategies work and which are not so helpful for developmental goal attainment. In this sense, interventions aiming to foster development on a personal

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or group level need a theoretical background that helps to formulate objectives and also assist in choosing appropriate intervention strategies. As previously described (see Chaps. 2 and 3), a mixture of criteria and processes is relevant when designing interventions. First, one needs to formulate some *criteria* to decide what one should be able to do (i.e. behavioural aims), think (i.e. cognitive goals) or how should one feel (i.e. emotional aims) after taking part in an intervention. Second, one needs to target some *processes* concerning how people may get to feel better after the intervention (e.g. change their goals, shape attitudes, increase self-efficacy). The processes imply the mechanisms that are responsible for the intervention's success.

When thinking in terms of what type of interventions we can design in order to foster development in middle and old age, we can differentiate between those who focus on the *individual* (e.g. building strengths, learning skills, boosting developmental assets) and those concentrating on *shaping the environment* in order to stimulate development (e.g. policies concerning pension and health insurance). A third type of intervention can focus on both aspects, *both individual traits and environment characteristics*, in order to stimulate development in middle and late adulthood. For example, the active ageing policy (WHO, 2002, 2009) entails both measures for individual strengths building and changing the environment to allow the building of strengths at an individual level. After deciding on a target audience for our intervention (e.g. taking criteria such as age, gender, other relevant characteristics like health or illness status into considerations), the next step is to find the right theoretical model that can guide us when designing the actual intervention programme. For this purpose, we can make use of existing theoretical models and frameworks from different domains of psychology since development as an aim includes a wide range of cognitive, emotional, behavioural, and social processes that happen simultaneously. Thus, in addition to developmental psychology knowledge, we can apply techniques from clinical psychology or use models from social or health psychology to help us in our work. Positive psychology provides an effective framework to design interventions that foster development across the lifespan. Whatever theoretical framework we choose for our intervention to foster development among older individuals, we need to consider the link between ageing and development and the intervention frameworks formulated to include both these concepts. Next, I will discuss some of these intervention frameworks that can be applied to foster development among middle-aged and older people.

The Active Ageing Policy Framework

In what concerns the relation between ageing and development, the *active ageing policy* was proposed by the World Health Organization (WHO, 2009) to guide the design of interventions at individual and policy levels. According to Walker (2006), in this context, "ageing" refers to the entire lifespan, while "active" implies ongoing involvement in activities (e.g. social, economic, and physical exercise). The Active Ageing Policy Framework describes active ageing as being *a process of optimizing*

opportunities for health, participation and security in order to enhance quality of life as people age (WHO, 2002; Walker, 2009). The concept of active ageing is considered unique in itself since it represents a policy concept as opposed to successful ageing or productive ageing that are considered to be more theoretical, research-based concepts (Lassen & Moreira, 2014).

The active ageing policy framework entails three pillars, namely, health, participation, and security. Thus, policies should enhance opportunities that foster health, participation (e.g. employment, civic engagement, education of older individuals), and security (e.g. safe environments for growing old, ensuring dignified care experiences). The policy framework is built on a balance of rights and duties of older citizens (Walker, 2006). For example, in what concerns health, older individuals are expected to make a personal effort to engage in health behaviour. Nevertheless, policy-makers should work to ensure that healthy choices are the easiest to make in a certain social context (e.g. there are safe parks where to walk around, there are activities that older individuals can do in their neighbourhoods, healthy food is reasonably priced, etc.). Furthermore, in order to construct a better ageing society, one needs to change negative views on ageing (e.g. associating ageing only with decline and loss) and negative stereotypes about older people (e.g. that older individuals are a burden to society) and, consequently, facilitate the contributions that older people can bring to society (Crăciun, 2019). The latter helps older people to adopt active roles in society. Also, by challenging negative ageing stereotypes, one sets new examples for what older individuals can do and provides alternative models of healthy ageing. The active ageing policy urges one to become more flexible in thinking about ageing and older individuals. Moreover, it stimulates the creativity to find innovative roles for older people in society. Thus, the active ageing framework promotes development at both an individual and societal level. Active ageing expectations are often defined by researchers and policy-makers alike (Stenner et al., 2011). This fact highlights the importance of both research and policy for influencing how individuals experience ageing. Research points out that the subjective experience of ageing is very important for implementing active ageing principles (Stenner et al., 2011). This has been emphasized in studies on stereotypes of ageing, self-perceptions of ageing, or views on ageing and their effect on the health and well-being of older individuals (Levy, 2003; Wurm et al., 2007; Crăciun, 2019; Crăciun et al., 2017; Craciun & Flick, 2014). The active ageing policy as a framework for developmental interventions targeted at middle-aged or older individuals can help in formulating aims and setting evaluation criteria. Nevertheless, one may need more practise-oriented frameworks to help implement the intervention's aims.

The Intervention Mapping Framework

One such framework that can be adapted to the design of developmental interventions is the *Intervention Mapping protocol* (IM, Bartholomew-Eldredge et al., 2016; Bartholomew et al., 2011). The IM protocol includes six steps: (1) conducting a

needs assessment or problem analysis, identifying what needs to be changed and for whom, (2) creating matrices of *change objectives* by crossing performance objectives (e.g. what behaviours need to be changed) with determinants (e.g. what cognitive factors need to change in order to influence behaviour), (3) select theory-based *intervention methods* that match the determinants and translate these into *strategies*, (4) integrate the strategies into an organized, structured *programme*, (5) plan the *adoption*, *implementation*, *and sustainability* of the project, and (6) generate an *evaluation plan* for the effect (e.g. was the intervention effective in changing the targeted behaviours, cognitions, and emotions) and process evaluation (e.g. did the participants like the intervention, what they liked or did not like about the intervention programme, etc.). The first four steps focus on developing an intervention to improve behaviours and environmental conditions, while the fifth step deals with the actual implementation of the intervention and the sixth step with its evaluation.

The *first step* implies a thorough description of the problem that will guide the formulation of intervention objectives that will be performed during the second step. In order to describe the issue, one can analyse the behaviours of individuals (e.g. what are the actions that demonstrate development in older age), the environment factors that contribute to the problem, namely, in our case ask, "what facilitates or hinders development in midlife or older age?". Behaviours may entail what individuals do concretely to foster their personal development (e.g. physical exercise, mental training, relaxation techniques, etc.). Environmental factors are cues from the social context that either foster or block personal growth of middle-aged and older people (e.g. existence of training programmes within the community, opportunities to socialize or practise sports, etc.). In addition, determinants are identified for both the behaviours and the environmental conditions. To note, here we can look at beliefs and emotions that are associated with personal growth actions. For example, positive stereotypes and positive ageing views are beliefs that foster development across the lifespan (Levy, 2003; Wurm et al., 2007; Crăciun et al. 2017; Crăciun, 2019). We can ask questions such as "what does the individual need to do in order to develop?" or "what needs to change in the environment so that personal growth is encouraged?". In order to find answers to these questions, we can conduct a literature review, involve the stakeholders (e.g. persons from the target population or experts on development in older age), or conduct qualitative and quantitative studies (e.g. surveys and interviews or focus groups with older individuals, with experts and key persons for formulating policy) (see also Chap. 3 in this book).

During the *second step*, we will formulate *performance objectives* (e.g. what does a person need to do in order to develop? What should change in the environment to encourage development?). To identify the *determinants*, questions such as "why would a certain person develop or adopt certain behaviours in order to develop?" and "why would someone change the environment to promote more personal growth?" can be asked. Here again, we can conduct a literature search, involve the representatives of the target population in our team, or conduct qualitative and quantitative studies to be able to answer these questions (see also Chap. 3 in this book). Results will aid with the formulation of concrete developmental programme

objectives (e.g. increasing self-efficacy, fostering optimism, enhancing emotional self-regulation abilities, creating opportunities in the environment that serve as cues to action for health behaviours to happen such as having fruit and vegetables on sale at the supermarket and accessibly placed so as to be easily noticed by older buyers, etc.).

The *third step* involves the actual programme design, in the sense that for each objective, we will search for strategies that were proven effective in fostering the desired change. Thus, for instance, if we want to improve a persons' self-efficacy for physical activity in older age (e.g. with the aim of enhancing physical development in older age), we will use strategies such as persuasion (e.g. present benefits of physical exercise in old age for health of older people) or modelling the desired action (e.g. show older individuals who practise sports and that constitute credible role models for the target group of our intervention). In order to increase social networks and boost social support in older age (e.g. to foster social development in older age), one can work on enhancing communication skills and befriending strategies among older adults. In this context, some concrete theoretical models or frameworks can prove useful.

When it comes to behaviour-change interventions, one framework that needs mentioning is the *behaviour change wheel* (Michie et al., 2011). Behaviour change interventions are defined as a coordinated set of activities that are designed to change specific behavioural patterns (Michie et al., 2011). Behaviour is measured in terms of prevalence and incidence in a particular population, and interventions are designed to change risk behaviours (e.g. smoking) and promote the maintenance or adoption of healthy behaviours (e.g. physical activity). These principles can easily be applied also for development interventions, where people should learn new skills in different domains of their lives (e.g. social, physical, emotional). When designing an intervention, according to the authors of the behaviour change wheel, one should first decide on an approach (e.g. use of education, use of incentives associated with the desired behaviour) and then go on and design the intervention components. In order to choose the right intervention type, one needs to have an overview of the possible intervention forms and when or how they may work. The behaviour change wheel offers such a framework, by comprising potential intervention types and also providing a system for matching these features with the behavioural aims, the target population, and the context where the intervention will be delivered (Michie et al., 2011, 2014). Since there is no perfect theory that covers all possible mechanisms of behaviour change for an intervention, often we need to choose components from different theories. This represents no problem, since our aim is to use all means that are at our disposal in order to foster behaviour change. However, before we design the intervention, we should carry out an evaluation of intervention needs to see what are the actions that need to be promoted or changed. This will additionally help us choose which theoretical models and strategies to select in order to change specific behaviours. Michie et al. (2011) have developed the *COM-B model* in order to capture the mechanisms responsible for behaviour change that can also constitute the target of interventions. In this model, C stands for capabilities, O stands for opportunities, M for motivation, and B for behaviour. Capabilities comprise individual

physical and psychological capacities (e.g. the necessary knowledge and skills) to engage in the desired behaviour. Psychological capabilities refer to the ability to engage in thought processes such as understanding the need to change the behaviour (e.g. positive attitudes towards healthy eating, information concerning what constitutes healthy eating, and how to cook healthy food). Physical capabilities comprise the necessary physical skills to adopt the new, desired behaviour (e.g. does the person have the physical abilities for taking up jogging or swimming). Motivation refers to all processes that stimulate a person to adopt a new behaviour (e.g. emotional responses, habits, decision-making skills). Motivation includes reflective processes (e.g. analytical evaluations, making plans) and automatic processes (e.g. emotions, impulses). Opportunities refer to all factors that are outside the individual and that make the adoption of the behaviour possible or easier (e.g. prompts from the environment). Opportunities can be physical, provided by the environment (e.g. fresh vegetables and fruit easily available at the supermarket and at low prices so that everybody can afford to buy them even retirees who live on a small budget) and they can be social, provided by the cultural context that shapes how we think about life in general (e.g. a social context that encouraged older people to be engaged in community life, having leisure activities alternatives for older people, such as walking groups or book clubs, etc.). All these three components interact and influence behaviour, while behaviour adoption also influences the capabilities or motivation or can create new opportunities. All three components can be useful when we evaluate the intervention needs for a certain individual or group. In order to foster development in middle or old age, a person would need to have the relevant capabilities, should feel motivated, and encounter the opportunities that facilitate development. For example, the COM-B model and behaviour change wheel were applied to increase auditory aid use in older adults (Barker et al., 2016). The targeted behaviours concerned providing information about the benefits of hearing aids, on the negative consequences of non-use, providing prompts and triggers and developing a plan to use the hearing aid and facilitate habit formation (Barker et al., 2016). For each targeted behaviour, a plan was made concerning who would deliver the intervention, what the intervention should be, and where and when it should be delivered. For instance, information should be delivered by the audiologist, but the plan for hearing aid use should be formulated by the audiologist together with the older individual (Barker et al., 2016). For the provision of information, written materials were supplied during each fitting appointment in the fitting room (Barker et al., 2016). A physical object was given to serve as a cue to use the hearing aid (Barker et al., 2016).

The *fourth step* implies putting the whole programme together by structuring all the objectives and strategies in a temporal framework. For example, during this step, we decide how many sections or sessions should an intervention have, how it will be delivered (e.g. use of written and visual material, who will deliver it), and what are the main themes and messages that need to be transmitted. The materials should be culturally relevant and adapted to the age or other relevant characteristics of the target audience. During this step, the final materials are usually pilot-tested with a representative group of the target population. In this phase, usually we test the

attractiveness, the comprehensibility, accessibility, motivation, credibility of the messages, as well as indicators of the intervention effectiveness (e.g. of behaviour change, cognition change, etc.).

Step number *five* includes formulating an implementation plan that involves thinking about adoption, implementation, and maintenance strategies as well as who does what at what stage of the programme implementation. *Step six* represents a continuation of step five in the sense that we also plan how to evaluate the intervention by deciding how to measure its effectiveness (e.g. have the change objectives been reached) and process evaluation (e.g. to what extent did the target population like the intervention and plans to disseminate it to others). For example, one way to evaluate interventions is to use the RE-AIM framework (Glasgow et al., 1999) which stands for reach, effectiveness, adoption, implementation, and maintenance. Reach refers to the extent to which individuals participate (e.g. participation rate, representativeness of individuals). Effectiveness implies the impact on selected outcomes (e.g. the effect of gratitude on health or well-being). Adoption measures the proportion and representativeness of settings and staff members who adopt a particular intervention (e.g. participation rate, representativeness of the settings). Implementation refers to the extent to which an intervention is delivered as planned, while maintenance refers to long-term changes at individual and setting levels (Glasgow et al., 1999).

Challenging and Changing the Frame: Positive Psychology Interventions to Foster Development in Midlife and Old Age

Previous studies point out that interventions that aim to increase health and well-being among older adults as well as slow down decline and prevent illness are necessary in order to increase the quality of life of the older population and reduce healthcare costs (Sutipan et al., 2016). Positive psychological characteristics from all developmental areas (e.g. positive emotions, positive social relations, optimism as a personality trait, health behaviour, having a purpose in life) are associated with better health outcomes (Park et al., 2004; Kim et al., 2011). Therefore, designing interventions based on positive psychology principles may be effective in boosting developmental assets in middle-aged or older individuals. In the following, I will explore what positive psychology is, what are the positive psychology principles, why they are relevant, and how these can be applied to design interventions to foster development in older age.

Positive psychology (Seligman & Csikszentmihalyi, 2000) as mentioned also in previous chapters (see also Chaps. 2 and 3 in this book) focuses on positive human qualities, on strengths, on positive subjective experiences, individual traits, civic virtues, and also institutions that can promote better quality of life and buffer against mental illnesses (e.g. positive environments in schools, positive work contexts). There are some main aims for positive psychology interventions that can be then adapted to fit the needs of the older population. One aim is *to promote positive*

subjective experiences (Seligman & Csikszentmihalyi, 2000) such as positive emotions (e.g. happiness in the present moment, optimism for the future or satisfaction with one's past). A second objective is *to discover and augment positive individual traits or character strengths* such as courage, curiosity, openness to experiences, and gratitude (Seligman et al., 2005, 2006).

Positive psychology interventions are designed to nurture positive emotions, thoughts, and actions (Parks & Biswas-Diener, 2013; Sin & Lyubomirsky, 2009; Seligman et al., 2004). One important aspect to keep in mind is that, from a positive psychology viewpoint, the *aims* of the intervention should focus on fostering growth or maintenance rather than just target the reduction of negative aspects (e.g. decrease depression levels) or help with decline prevention. Intervention objectives would aim to identify developmental areas where people can grow (e.g. develop social skills, emotional regulation competences, etc.) and shift their attention on developmental gains as opposed to losses (e.g. wisdom versus cognitive decline). The latter does not mean that one should ignore illnesses or potential deficits (e.g. one should get glasses to compensate for a loss in visual acuity), but one would concentrate on appreciating the benefits of older age and finding developmental areas where one can grow. For example, a positive psychology framed intervention should focus on helping people to handle the stress of adult life better, deal with crisis more efficiently, and foster resilience as opposed to just reducing the negative emotions (e.g. depression, anxiety) that they experience in stressful situations. Nakamura and Chan (2021) list some criteria for positive psychology interventions as they were formulated by Parks and Biswas-Diener (2013):

1. The primary goal of the intervention is to achieve positive outcomes among the target group (e.g. increase individual strengths, teach skills, increase empowerment or autonomy, etc.).
2. There should be empirical evidence that the intervention will successfully affect the targeted positive variables.
3. There should be empirical evidence that if we manipulate the targeted variables, we will achieve positive outcomes for the target population (e.g. in this case, the middle-aged and older individuals who participate in the intervention).

Ciarrochi et al. (2022) demonstrate how positive intervention aims can be formulated for different dimensions. For example, in case of affect, instead of aiming just to reduce negative affect (e.g. depression, anxiety), one can aim to increase positive emotions, stimulate curiosity, and promote emotional intelligence, resilience, and love (Ciarrochi et al., 2022). In case of cognition, instead of just challenging negative cognitions, one can focus on solution-based interventions, on recalling positive memories, and imagining positive futures (Ciarrochi et al., 2022). For the social dimension, instead of aiming to reduce loneliness, one can aim to increase social connectedness, prosocial behaviour, civic engagement, and couple resilience (Ciarrochi et al., 2022).

One assumption of positive psychology interventions is that individual strengths, positive subjective experiences, and resources can act as buffers against stress and illness and promote quality of life (Seligman & Csikszentmihalyi, 2000). *Positive*

subjective experiences refer to positive emotions such as being satisfied with previous life experiences, experiencing happiness in the present and being optimistic about the future (Seligman et al., 2006; Seligman & Csikszentmihalyi, 2000). As developmental traits, one can, for example, increase emotional regulation skills, enhance optimism, and practise positive reframing as a cognitive skill. Indirectly, increasing such developmental assets and positive experiences also helps to decrease negative emotions like anxiety and depression (Ho et al., 2014). *Positive individual traits* comprise strengths such as curiosity, gratitude, and courage (Seligman et al., 2005, 2006). Identification and use of individual strengths can help older adults to boost their developmental assets in several life domains (e.g. enhance their social networks for social support, engage in health behaviours, and increase physical health and strength). For example, gratitude is considered to be a component of wisdom (i.e. cognitive development) (Choi & Landeros, 2011). Active engagement in behaviours as well as self-acceptance were shown to increase personal growth and fulfilment (Reichstadt et al., 2010). A third component of positive psychology interventions, namely, *positive civic virtues and institutions*, comprise altruism and meaning in life (Seligman et al., 2006; Seligman & Csikszentmihalyi, 2000). These virtues are relevant because they motivate older adults to aim for purposes that are beyond their own satisfaction (e.g. giving back to the community, generativity for next generations, etc.) and serve other people or the community. Having a sense of purpose and contributing to society are components of successful ageing (Reichstadt et al., 2007). Furthermore, engagement in productive activities can give an older person a sense of meaning in life and contribute to their identity and promote a positive attitude towards life in general (McDonnall, 2011; Stav et al., 2012). Interventions can help older individuals to make a habit out of behaving altruistically and learn how to find meaning in life (Ho et al., 2014) even in older years.

Positive psychology interventions to foster development can be inspired by positive ageing interventions and the corresponding frameworks (see also Chaps. 2 and 3 in this book). Positive ageing implies being healthy, cognitively fit, experiencing positive emotions, being socially engaged and active, and can be evaluated with both objective and subjective measures (Bar-Tur, 2021). As we have seen also in Chaps. 1 and 2, several theoretical models have addressed the topic of successful or positive ageing (Baltes & Baltes, 1990; Rowe & Kahn, 1998; Ryff & Singer, 2008). The integrated model by Ryff includes lifespan developmental theories, clinical theories referring to personal improvement, as well as mental health components (Ryff & Singer, 2008; Ryff, 2014). The model formulated by Ryff includes six dimensions, namely, self-acceptance, positive relations, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 2014). Research findings pointed out that components such as purpose in life, social relationships, perceived control, and prosocial behaviour can stimulate health and well-being, increase cognitive functioning, and decrease disability among older adults (Ryff, 2016, 2018). Directly related to the notion of development across the lifespan and specifically in older age, research also pointed out that having a purpose in life, engagement, self-realization, and growth shape how well and how long a person lives (Ryff, 2014, 2016, 2018).

In case of middle-aged and older persons, positive psychology interventions imply education (e.g. learning how to regulate emotions, how to train cognitive abilities, what physical exercises to do at their age, etc.), early intervention (e.g. before they are diagnosed with depression or anxiety), and positive functioning (e.g. staying active and autonomous, maintaining cognitive abilities, etc.) in older age (Bar-Tur, 2021). Positive psychology interventions were mostly tested in a general population or with younger adults (Carson et al., 2010; Seligman et al., 2005), and thus, there is still need for more studies in what concerns their effectiveness for an older adult population (Ho et al., 2014). Nevertheless, there is a growing evidence base pointing out the effectiveness of positive psychology interventions among older adults. Also, an important point to make is that research illustrates that older adults can change and optimize their ageing experiences (Ryff, 2014, 2018); they can adopt and maintain health behaviours and increase their well-being (Malkinson & Bar-Tur, 2019). There is a growing body of evidence that shows that interventions targeting older adults can increase physical functioning such as sleep quality, cognitive functioning, and emotions (Friedman et al., 2017; Bartholomaeus et al., 2019; Cantarella et al., 2017; Cesetti et al., 2017; Meléndez et al., 2014; Preschl et al., 2012). Therefore, researchers argue that it makes sense to focus on well-being and health rather than only concentrate on decline prevention when designing interventions for older adults (Bar-Tur, 2021; Bar-Tur & Malkinson, 2014).

Positive psychology interventions were found to increase well-being among middle-aged and older people by enhancing gratitude (Killen & Macaskill, 2014) or forgiveness (Reed & Enright, 2006). For example, gratitude was found to be a protective factor against depression as well as against the negative impact of stress (Krause, 2006, 2009). Gratitude exercises were found to help reduce depression and promote happiness (Nelson, 2009). Curiosity and openness to new experiences were also found to be associated with subjective complaints or depression and anxiety (Slavin et al., 2010). Additionally, curiosity can promote a positive attitude towards life in general and is important in middle and old age when people may feel that there is nothing new to experience. Courage is important because it helps people deal with difficult situations. It often involves positive coping strategies and emotional regulation skills. Optimism and hope interventions were found effective in promoting positive emotions (Seligman et al., 2006). Savouring interventions are applied to help older adults enjoy daily experiences and stimulate positive emotions (Seligman et al., 2006). In addition to targeting strengths, some strategies like life review (Preschl et al., 2012), positive reminiscence therapy (Moral et al., 2015), and self-management (Frieswijk et al., 2006) can be considered effective positive psychology interventions to enhance well-being among older people.

Such components as the individual strengths described above (e.g. altruism, courage, gratitude, curiosity, savouring, forgiveness, meaning of life) have been incorporated in positive psychology intervention to promote well-being among older adults (Ho et al., 2014; Ramirez et al., 2014). For example, one study (Ho et al., 2014) tested an intervention for older adults, which included several sessions, each targeting different aspects of the ones mentioned above: (1) understanding happiness, (2) fostering gratitude, (3) inducing optimism, (4) enhancing savouring,

(5) promoting curiosity, (6) increasing courage, (7) boosting altruism, and (8) developing a meaning in life. The components of the intervention included positive subjective experiences (e.g. optimism, savouring), the encouragement of positive strengths (e.g. curiosity, courage), and positive civic traits (e.g. altruism). The intervention proved to be effective as compared to a control group in increasing life satisfaction, reducing depression levels, and increasing gratitude and happiness among older participants (Ho et al., 2014). Such results are important because they help combat negative ageing stereotypes that older adults cannot learn new skills and that old age is automatically associated with decline and loss (Ho et al., 2014). The effectiveness of the positive psychology intervention was explained through the components included in each session, namely, self-awareness, education, and self-reinforcement (Ho et al., 2014). *Self-awareness* refers to discussing one's own experience during the sessions to identify one's own strengths and skills. During the sessions, older people recalled and narrated positive aspects of their lives. By doing this, they also focused on the strengths that they already possessed and reflected on how to reinforce these in the future. The *education* component refers to delivering new knowledge, linking it to the person's previous knowledge and promoting the understanding of the benefits of the exercise. For instance, participants need to identify their strengths (e.g. curiosity, courage) based on a list they receive and then give examples of how they use this strength in daily life. The educational component is relevant because participants need to understand why an exercise is relevant and how it helps them improve (Sin et al., 2011). The *self-reinforcement* component refers to giving participants homework, namely, to practise the learned skills at home or in other contexts than the intervention setting. Exercises were shown to be particularly helpful if they involved practise, were enjoyable, and could be easily integrated in the daily routine of the participants (Seligman et al., 2005). For example, take-home message type of exercises would allow middle-aged and older individuals to understand their cognitions, systematically challenge negative thinking patterns, as well as develop positive attitudes about themselves and their experiences in general. All in all, such positive psychology exercises refocus the attention, memory, and expectations of middle-aged and older individuals from negative aspects in their lives (e.g. health decline) to positive ones (e.g. enjoying time with grandchildren).

Important aims for individual or group intervention from a positive psychology perspective are to (1) identify *individual strengths* that people already have or want to build (e.g. skills, beliefs, values, and strength) and (2) *apply strategies* to maintain, increase, or learn these skills or boost the strengths that help them in their personal development. Such valuable individual strengths comprise gratitude, finding meaning in life in general, autonomy, and forming positive social relations. Several types of individual interventions were designed to target the learning of such developmentally relevant skills. Below, I mention a few of these, and more examples are to be found in the next chapters of this book (see Part III of this book). At an individual level, intervention strategies such as education (e.g. providing information, facilitating understanding), persuasion (e.g. using communication to induce positive or negative feelings and stimulate action), training (e.g. teaching

skills), and modelling (e.g. providing concrete "how to" examples) can function well for behaviour adoption and maintenance. Individual strengths can be identified with the help of the Values in Action Inventory of Strengths (VIA-IS) (Peterson et al., 2005; Ruch et al., 2010; Peterson & Seligman, 2004). One popular exercise is to encourage older people to use the identified strengths in a novel way. Participants complete the VIA-IS questionnaire and receive feedback on their top 5 strengths and are then instructed to use these in a new way on a daily basis.

Several types of positive psychology interventions can be applied at an individual level and implemented either as a single component (Moral et al., 2015) or as a multicomponent programme (Ramirez et al., 2014; Ho et al., 2014). These positive psychology strategies are aimed at dealing with life transitions across the lifespan in a more effective way (Seligman, 2008, 2011; Lyubomirsky, 2008). According to Layous (2021), for instance, happiness interventions work because they target the fulfilment of important needs such as the need to understand themselves and others, the need to belong and feel connected to others, and the need to feel good about oneself. Gratitude and kindness exercises help in this sense to increase well-being because it helps to connect with others, to feel better about oneself, and feel better in general (Curry et al., 2018; Layous & Lyubomirsky, 2014; Layous et al., 2013). An important point to remember is that happiness interventions do not simply focus participants on achieving happiness, because this may cause additional stress (e.g. they feel a pressure to be happy in general such as performing a duty and feeling guilty if they are not happy). Thus, happiness interventions place the focus on other people's happiness and thus include exercises such as gratitude letters, three good things, and three acts of kindness (Layous, 2021).

Gratitude interventions involve helping people notice and appreciate the positive things in their lives and the world in general (Seligman et al., 2005). Gratitude was shown to be associated with well-being and functional coping strategies (Wood et al., 2010). Emmons and McCullough (2003) describe a gratitude intervention that involves writing down things for which one is grateful each day. This helps people to acknowledge things that they may have taken for granted (e.g. the joy of spending time with grandchildren, being in relatively good health, having their best friends around, having a nice dinner with one's life partner, etc.). For instance, Killen and Macaskill (2014) successfully applied the three good things in life intervention to increase well-being and reduce stress. Gratitude is also promoted through the gratitude visit exercise, namely, writing a letter to thank a person for a particular thing (Seligman et al., 2005). The letter may be sent or not or read aloud to the person in question. Also, it is important that participants write down how they felt while writing the letter. These types of gratitude exercises help people to focus on positive things and identify them in their daily lives. *Kindness interventions* imply that participants perform three or five acts of kindness during the week, preferably all cumulated in 1 day (Layous et al., 2013; Nelson et al., 2016; Lyubomirsky et al., 2005). Participants have to describe the acts of kindness they performed and write down how they felt after executing these. This helps to acknowledge the performed acts of kindness and helps boost well-being (Kerr et al., 2015).

Another popular, positive psychology-oriented intervention is the *well-being therapy* (Fava, 2016). This is based on the six domains of well-being described by Ryff, namely, environmental mastery, personal growth, purpose in life, autonomy, self-acceptance, and positive relations with others. Well-being therapy is a short-term form of intervention that focuses on self-observation, the use of a structured diary, and the interaction between the therapist and client. Other popular, easy-to-apply interventions are reminiscence interventions, life review interventions, bibliotherapy, humour boosting exercises, and expressive writing.

Reminiscence interventions entail the recall of memories from a person's life as compared to life review interventions that focus on evaluating one's life around structured themes. For instance, *life review interventions* focus on retrieving and reorganizing the memories of the older person and emphasizing specific positive memories (Preschl et al., 2012; Chiang et al., 2008). Studies found that two types of reminiscence are particularly important in what concerns positive ageing, namely, integrative reminiscence (e.g. to achieve a sense of self-worth and making amends with one's past) and instrumental reminiscence (e.g. constructing perceptions of continuity and competence in one's life). *Bibliotherapy* was used to help older individuals increase self-management skills, a sense of mastery and well-being (Frieswijk et al., 2006). *Humour* represents an important strength for older adults' well-being (Konradt et al., 2013) and can be trained through exercises such as three funny things (Proyer et al., 2014). The exercise implies that each evening before going to sleep, the person writes about three funny things that happened during the day and why these are funny (Proyer et al., 2014).

Expressive writing interventions were shown to improve immunological functioning as well as physical and psychological health in general (Pennebaker et al., 1988; Boas, 2012; Tarragona, 2021). Writing about trauma or negative experiences (e.g. illness, loss of a friend or life partner, etc.) can help individuals because it facilitates the expression of emotions as opposed to inhibiting these (Tarragona, 2021). Moreover, it exposes the person to the trauma and, thus, in behaviourist terms helps to confront and overcome the negative effects of the experience (Tarragona, 2021). Also, writing about negative events can help to integrate these into a coherent life story as prose can help to organize complicated emotional experiences (Pennebaker & Seagal, 1999; Smyth et al., 2012; Tarragona, 2021). In terms of development, expressive writing can also increase the functioning of autobiographical memory (Maestas & Rude, 2011) and may contribute to emotional regulation competence building. From a positive psychology perspective, one should not only write about painful and traumatic experiences but also about positive events in one's life (Tarragona, 2021). Writing about positive experiences was shown to increase positive mood and health (Burton & King, 2004). Expressive writing exercises ask people to write about several topics over the next few days. Participants can choose to write about all subjects in 1 day or about a different topic each day. The topics include something that one is thinking about too much (e.g. worrying, ruminating, etc.), something they are dreaming about, something they believe is affecting their lives in a negative way, and something they have been avoiding for some time (e.g. weeks, years) (Tarragona, 2021). It is important to be

as honest as possible with oneself when doing the writing exercise. One can choose to throw away the written material or to keep it and edit it every day or read it after a certain period to see how one has changed in the meantime.

Stories are a relevant component in positive psychology interventions (Seligman et al., 2005; Tomasulo & Pawelski, 2012). Parks and Schueller (2014) examine a number of 40 positive interventions that employ writing. For instance, keeping a gratitude diary, writing a gratitude letter, writing down three achievements of the current day, and writing personal gratitude stories (e.g. the best possible future self) can all serve to build gratitude. In order to increase the strength of forgiveness, one can write a forgiveness letter, a forgiveness certificate, or write a forgiveness letter to oneself (Parks & Schueller, 2014). One can write about positive emotions and benefits that can be identified in adverse circumstances to increase positive emotions. Savouring and optimism can be enhanced by writing about positive experiences, about the creative process (Parks & Schueller, 2014). One can write about negative events and how one usually reacts to these (e.g. one avoids the person, one feels angry or frustrated, etc.) and identify how to positively reframe the situation or react to it (Parks & Schueller, 2014). Writing one's obituary (e.g. for how one would like to be remembered) may also prove an effective intervention in terms of preparation for death (see also chapter on death in Part III of this book).

Positive psychology interventions can also serve to enhance physical strength and health in older age. *Physical activity interventions* strengthen physical functioning in general but also a feeling of self-efficacy and well-being (Nakamura & Chan, 2021). Thus, sometimes, getting people to be more physically active also indirectly improves their mood and their social relations (e.g. if they start being part of a running group or a walking group). Ramirez et al. (2014) combined exercises for autobiographical memory, forgiveness, and gratitude to increase subjective well-being and quality of life among older adults.

Positive psychology constructs were applied in several interventions (see Ciarrochi et al., 2022 for a review). These constructs can be integrated in interventions targeting development in midlife and older age. Additionally, these exercises can be adapted to the specific needs of middle-aged or older individuals. For instance, an exercise to promote *optimism and hope* (Seligman et al., 2006) implied that participants think about situations when they lost something and learned from the loss, when a door closed and another one opened. Identifying one's *strengths* and using them in a different way daily (Schutte & Malouff, 2019) constitutes an exercise which is relevant for recognizing individual resources and developmental assets in middle-aged and older individuals and motivating them to apply these on a regular basis. Exercises that help promote *meaning in life* encourage the participants to think about what is important to them, clarify their values, and find meaning in adversity (Manco & Hamby, 2021). This type of exercise can be useful for older individuals to help them find meaning in old age and cope with the negative aspects of ageing (e.g. pain, loss of loved ones, etc.) while fostering growth in several life domains. One value for older age can be continuous personal development. In case of middle-aged individuals who experience a midlife crisis, meaning in life exercises can help clarify what are the values and goals that they find motivating and

promote positive feelings about one's achievements (e.g. realize that one is good at handling stressful situations in life since they had already coped with several stressors.

In the affective developmental realm, exercises can be applied to encourage *positive emotions* and stimulate, broaden, and build attitude, namely, enhance exploration, social development, and skills development (Howell, 2017). Other abilities that middle-aged and older people can exercise are *goal setting*, *contrast thinking* (e.g. what are the benefits and drawbacks) and "*if/then*" *contingency thinking* (Clark et al., 2021). These can help them develop cognitive skills such a decision-making that can be applied to several important decisions in their lives such as relationship problems, pension plans, or medical issues.

Encouraging a *growth mindset* (Schleider & Weisz, 2018) such as the idea that one can still develop in midlife and older age is relevant for development in older age in general and encourages positive views on ageing. Also, in the cognitive developmental realm, one can enhance *creativity*, by encouraging flexibility, originality, and elaboration in thought patterns (Alves-Oliveira et al., 2021). Enhancing creativity fosters cognitive development among middle-aged and older adults. *Self-efficacy* represents another important strength that one can improve through exercises that help people develop a sense of mastery and of beliefs that they are effective in what they are doing (Niveau et al., 2021). Self-efficacy represents more of a general individual strength that can be useful for development in several areas such as the cognitive domain (e.g. believing in one's cognitive aptitudes even when one is older), social realm (e.g. believing one can use social skills to gain social support), emotional sphere (e.g. believing one can manage negative emotions), and physical realm (e.g. believing one can engage in physical activity in older age). Teaching middle-aged and older adults how to use *positive self-talk* (i.e. use of helpful language to encourage themselves, Blanchfield et al., 2014) can help them stay motivated in their tasks (e.g. cognitive tasks, health behaviour). *Patience* and *persistence* or *conscientiousness* can be trained as personality traits in middle and older age through exercises that teach people how to persist in their actions and sustain their motivation (Roberts et al., 2017).

Positive emotions can be stimulated among older adults by training their *humour*, for instance, through an exercise that asks them to recount three funny things that happened during the day (Wellenzohn et al., 2018). Similarly, enhancing *gratitude*, *kindness*, and *empathy* can help middle-aged and older adults experience well-being and improve social relations with other people. Thus, these are important strengths that stimulate development in the emotional and social domains of life. Gratitude can be trained through simple exercises where people express their gratitude towards someone, either directly or in writing (Seligman et al., 2005; Boggiss et al., 2020). Kindness can be accomplished in a similar way by performing three acts of kindness for other people within 1 day (Curry et al., 2018; Seligman et al., 2005). Empathy can be exercised by improving communication skills and trying to see things from the perspective of another person (Levett-Jones et al., 2019). *Savouring* represents a strength that helps people to focus on the positive experiences in the emotional, bodily, or social realm (Smith & Hanni, 2019). In this sense, it denotes

an important strength to train in order to foster development on the emotional, social, and physical level in older age. *Prosociality* denotes a strength that one can learn in the social domain to build cooperation (Mesurado et al., 2019) and gain social support.

In the physical realm, one can enhance skills for bodily relaxation by practising *breathing* exercises (Zaccaro et al., 2018), *biofeedback* (Lehrer et al., 2020), or *mindfulness* (Fjorback et al., 2011). Positive health programmes aim to help middle-aged and older people to become aware of their resources and their physical, cognitive, and social strengths and cultivate these (Bar-Tur, 2021). Such programmes aim to encourage middle-aged and older adults to engage in a healthy lifestyle and learn new stress management strategies. Such interventions also serve to promote positive ageing (Bar-Tur, 2021). In this context, skill training interventions with educational components were shown to have a significant impact on mental health outcomes among older adults (Forsman et al., 2011).

The ABC model (i.e. activating events, beliefs, consequences) was proposed to be used as a frame for interventions targeting optimal ageing, because it provides solutions for how to deal with the frustrations of growing older (Ellis & Velten, 1998). The model proposed by Ryff for positive ageing (Ryff, 2014; Ryff & Singer, 1998, 2008) can provide six elements that would form the basis for formulating intervention objectives. For example, older people can learn self-acceptance, improve relations with other people, increase their autonomy, and enhance their decision-making skills (Bar-Tur, 2021). Lifestyle interventions and enhancing social engagement can help to reduce the impact of loneliness on mental health in older adults (Depp et al., 2014; Cohen-Mansfield & Perach, 2015). The Mental Fitness Program for Positive Aging is designed to resemble a journey with 12 stations. Each station addresses a different topic. The programme can be applied for a group or as an individual couching programme (Bar-Tur, 2021). Older individuals are provided with a map, compass, sail, and oar to guide them to plan their lives for the short-term and long-term future (Ellis & Velten, 1998). Older people are encouraged to develop positive views on ageing through reviewing their strengths, personal resources, and past accomplishments (Bar-Tur, 2021). Different positive psychology exercises are included in the programme, for example, identifying strengths and using them in a different way, understanding how to invest in significant relations, visualizing one's best self, keeping a gratitude diary, finding activities that create flow, practising mindfulness, and engaging in acts of kindness (Bar-Tur, 2019; Seligman et al., 2005; Lyubomirsky, 2008). Participants receive homework for each session, some concerning the topic of the session and some focusing on maintaining a healthy lifestyle. Specific positive ageing exercises included in the programme are, for example, some that target age identity, self-acceptance, and self-esteem. Participants are instructed to reflect on questions such as "who am I?" and "who am I at this stage in life?". Each participant writes an introductory card responding to these questions (e.g. with bullet points ideas). Discussion questions to reinforce self-esteem are applied such as "what does it mean to be 60 years old?" and "how do you feel now that you are retired? How does it feel to be a grandmother/grandfather?". By answering such questions, participants

reflect on their roles, on their meaning in life, on how they present themselves to the world, if they emphasize qualities or defects, and if they dwell on losses or rather concentrate on the positive things in the present. The facilitator helps the older adults to emphasize their positive aspects and focus more on what they can do at present then ruminate about the past (Bar-Tur, 2021). Other exercises target the past and teaching the older person to identify their accomplishments and qualities rather than dwell on failures and negative experiences. For example, each participant receives a picture of a sailing boat and is asked to say where the boat comes from and where they want to sail in the future. Participants are asked to recount stories from their past, focus on achieved milestones, and evaluate their strengths and resources. When remembering traumatic experiences, participants are asked to talk about how they overcame these and what skills and strengths helped them to do so. Because social relations are relevant to positive ageing, three sessions from the programme are dedicated to mapping and assessing relations with significant others (Bar-Tur, 2021). Older individuals are also encouraged to think about their personal goals and how to pursue these, how to increase their autonomy, and how to identify realistic goals and apply the selection, optimization, and compensation strategies (Baltes & Baltes, 1990). Focusing on goal attainment and purpose in life represents a relevant component of the programme. Participants also learn how to engage and maintain health-promoting behaviours to cope with the problems associated with growing old (Bar-Tur, 2021). Within the programme, they are also encouraged to form social networks together with other participants to provide emotional and social support to each other and share experiences (Bar-Tur, 2021). The Mental Fitness Program was applied in various settings in Israel (e.g. community centres, retirement programmes) and has been proven to be effective (Bar-Tur, 2021). Thus, this programme can be adapted to other settings and cultural contexts and of course adapted to the needs of a middle-aged group of participants. Nevertheless, one should perform a needs assessment in order to tailor the exercises to the characteristics of the target population since these can influence the effectiveness of the intervention (Depp et al., 2014; Bajraktari et al., 2020; Bar-Tur, 2021).

In terms of development in midlife and older age, for instance, socio-emotional learning programmes were designed to increase skills such as self-awareness, self-efficacy, self-confidence, responsible decision-making, relationship skills, social awareness, and self-management (Taylor et al., 2017; Lawson et al., 2019). Self-awareness refers to identifying emotions or individual strengths (Ciarrochi et al., 2022). Responsible decision-making represents an important cognitive skill and implies identifying problems, analysing situations, self-reflection, and ethical responsibility (Ciarrochi et al., 2022). Relationship skills are relevant for social development and entail communication competences and social engagement, establishing and maintaining healthy relationships. Social awareness also helps to augment relationship skills because it implies practising empathy, taking different perspectives, appreciating diversity, and showing respect to others (Ciarrochi et al., 2022). Self-management is another important competence to practise in older age because it implies emotional and behavioural regulation (Ciarrochi et al., 2022).

One intervention based on positive psychology principles (Seligman et al., 2005) is the PERMA intervention (Gander et al., 2016). This is focused on pleasure, engagement, positive relations, meaning, and accomplishment (Gander et al., 2016). Focusing on pleasure meant remembering three pleasant things that one has experienced during the day and that were related to amusement, joy, or fun (Ciarrochi et al., 2022). Engagement means that a person remembers three moments when they were totally focused on something during the day (Ciarrochi et al., 2022). For enhancing positive relations, the participating person needs to remember three positive social interactions that happened during the day (Ciarrochi et al., 2022). For enhancing meaning, one needs to remember three moments that were particularly meaningful during the past day (Ciarrochi et al., 2022). To achieve a feeling of accomplishment, the persons need to remember three situations when they felt successful during the previous day (Ciarrochi et al., 2022). The PERMA intervention can be used to guide developmental interventions targeted at middle-aged and older individuals.

Conclusion

All in all, positive psychology interventions can be useful in fostering development in midlife and older age in all life domains (i.e. social, emotional, cognitive, physical, personality) because they focus on building individual strengths and boosting developmental resources. Intervention aims from a positive psychology perspective would concentrate on increasing positive emotions, enhancing competences and skills, and indirectly reducing negative emotions and preventing decline among middle-aged and older adults. Researchers argue for a personalized approach in individual positive psychology interventions (e.g. coaching, counselling) (Ciarrochi et al., 2022). This means that one would start with a case conceptualization and then tailor the intervention to the needs of the client (Hayes et al., 2020; Ciarrochi et al., 2022). In case of stimulating personal growth in older age, some old adults may need to focus on their cognitive skills, while others would need to enhance their social abilities or emotional regulation competencies. Interventions at the community or policy level are also very important for individual development in older age. In addition, positive psychology principles can be applied to shape the environment so that it favours personal growth and active ageing (WHO, 2009). In the next section of the book (see Part II), I will explore what development in midlife and older age can mean for several specific life domains, namely, the cognitive, emotional, social, personality, and physical realm. In the third section (see Part III of this book), I will examine several specific developmental challenges that occur in midlife or older age (e.g. topics related to love, grandparenthood, sexuality, loneliness, death, etc.) and how positive psychology interventions can help stimulate self-growth at different levels (i.e. physical, cognitive, social, emotional, and personality level). Altogether, when designing interventions to foster development in midlife and older age, the most important thing is to try to change and to take the risk of pursuing

personal growth goals. Furthermore, one should not get discouraged if the change process takes longer than expected or if one intervention does not work. This can mean that one should try out another strategy and attempt again to attain the desired change goals. As beautifully captured in a poem by Rupi Kaur, *if you tried and didn't end up where you wanted to go that's still progress* (Kaur, 2020).

Reflection Questions

1. Why is the Intervention Mapping Framework useful? When can it be used?
2. What are the steps of the Intervention Mapping Framework?
3. How would you define a positive psychology intervention in your own words?
4. Formulate three objectives for a positive psychology intervention that aims to foster development in older age for your grandparents.
5. Describe three strategies that you would apply for each of the objectives that you mentioned at point 4.

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Part II
Understanding and Exploring the Developmental Potential

Chapter 5

Physical Development in Midlife and Older Age: Promoting Health as an Individual Asset

"Give me laugh lines and wrinkles
i want proof of the jokes we shared
engrave the lines into my face like
the roots of a tree that grow deeper
with each passing year
i want sunspots and souvenirs
for the beaches we laid on
i want to look like i was
never afraid to let the world
take me by the hand
and show me what it's made of
i want to leave this place knowing
i did something with my body
other than trying to
make it look perfect"
from the "awake" chapter in "Home body" by Rupi Kaur (2020)

Introduction

Biological or physical ageing is probably the most visible in terms of ageing signs and a source of negative ageing stereotypes (e.g. the grey-haired, wrinkled older woman; the old man moving with the help of a walking stick). Furthermore, constant external cues (e.g. people's reactions to our looks, advertisements depicting anti-ageing products or medicine for age-related problems such as pain reducing gels) remind us of biological ageing and emphasize ideas of loss, decline, and illness related to bodily ageing. For example, a study that analysed 124 advertisements that appeared in an American magazine between 1998 and 2008 found that older women were depicted as victims of older age, as an "at risk" population that needed to monitor signs of ageing and intervene to reduce or remove them (Smirnova, 2012). The advertisements proposed different cosmetic products that promised to "cure" old age signs and promised to restore youth (Smirnova, 2012).

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The author also criticizes the emphasis placed on staying young, namely, the urge to engage in any possible action in order to prevent ageing or erase any visible signs of ageing while projecting a youthful appearance (Smirnova, 2012). Similarly, in case of men, Viagra advertisements promise to reunite desire with ability and support a youthful idea of a virile man (Loe, 2004). Cosmetic surgery is proposed to both women and men as a solution to fix bodily changes that are related to midlife and older age and pledge to restore one's youthful appearance. Thus, it comes as no surprise that usually, when we think about age-related physical changes, mostly images of decline and deficits come to mind (e.g. illness, wrinkles, grey hair, glasses, hearing aids, etc.). This may happen because negative ageing stereotypes are reinforcing these kinds of associations of ageing and illness or declining physical attractiveness (Crăciun, 2019). Thus, since chronological or biological ageing are generally described in terms of decline, addressing physical ageing from a positive psychology perspective represents an interesting challenge. For instance, physical ageing is often regarded as the progressive loss of functions of several organs, loss of muscle mass and of fertility, and increasing mortality that happens with advancing age (Adams, 2004). Chronological ageing refers to a persons' age as measured in years that one has lived, while biological ageing concerns the losses that occur in terms of body functionality (Kirkwood & Austad, 2000; Bond et al., 1993). With increasing chronological age, the demands of the environment on the body multiply, while the ability to meet these demands decreases (Adams & White, 2004). From a biological and evolutionary point of view, ageing itself represents a strange phenomenon since according to the evolutionary perspective, usually organisms are designed to live only a limited amount of time in an unprotected environment (Kirkwood, 2000; Kirkwood & Rose, 1991). Maintenance of physiological systems requires having enough resources and happens first of all at cellular level (Adams, 2004). Thus, when the maintenance system does not operate properly anymore, cellular damage accumulates, resulting in biological ageing. The rate of cellular damage (e.g. oxidative stress) is determined by the balance between the occurring harm and the action of the defence and repair mechanisms (e.g. antioxidant vitamins and enzymes) (Adams, 2004). From the perspective of biological theories, physical ageing is shaped by genetic (e.g. certain genes that control enzymes involved in cell damage accumulation) and environmental factors (e.g. ultraviolet radiation, cigarette smoke) (Adams, 2004). In what concerns the protective factors that can help repair cell damage, healthy eating habits are very important (e.g. a diet rich in vitamins C and E found in fresh vegetables and fruit). Thus, adopting a healthy diet can act as a developmental resource for slowing down biological ageing.

The mechanisms involved in biological ageing were linked to several illnesses (e.g. cancer, diabetes, atherosclerosis, osteoporosis). Therefore, it comes as no surprise that ageing is often associated with decline and disease. Nevertheless, there is fortunately a lot of heterogeneity in what biological ageing processes are concerned, and not all people develop illnesses as they grow older (Dionigi, 2015). In this context, the process of human ageing has been described as complex, personalized, and multifaceted (i.e. it happens at several levels such a biological, cognitive, social, etc.) (Dziechciaż & Filip, 2014). Social, cognitive, emotional, or personality factors

can play a role in how physical ageing happens. For instance, studies point out that stereotypes of ageing and self-perceptions of ageing have an impact on health in older age and longevity (Dionigi, 2015; Levy et al., 2000; Levy, 2003, 2009). Furthermore, research showed that cognitive functions could improve in older age, that older peoples' well-being can increase as they grow older, and that new neuronal connections can emerge even in late life (Lupien & Wan, 2005). Consequently, one needs to look beyond physical or chronological ageing at physical development in older age, explore the factors that shape it, and reflect on what interventions to design in order to foster it.

In the present chapter, I will explore biological ageing and what physical development can mean in older age as well as how people experience and cope with biological ageing. In this context, I will reflect on how one could measure physical development in late life and summarize qualitative data on people's perspectives on age-related bodily changes and health issues. Next, I will examine how physical development is related to other areas of growth in older age (e.g. cognitive, emotional, social, personality). Last, but not least, I will consider how a positive psychology approach can be applied to intervene and shape physical development in older age by increasing individual strengths and boosting developmental assets.

Defining Physical Development in Midlife and Older Age

Defining physical development is as challenging as trying to explain other domains of growth in midlife and older age. The physical domain of development entails changes that happen in the brain as well as the body as people age and that affect their health and well-being. The decline paradigm has dominated the area of physical health for a long time, and even theories such as the successful ageing model (Rowe & Kahn, 1997) were criticized for setting unattainable standards concerning health in older age (Martinson & Berridge, 2014). Similar to cognitive development (see chapter on cognitive development in the present book), one could define physical development in older age as a series of gains and losses that happen at bodily level (e.g. brain, different organs, muscles, bones, etc.). In the following, I will explore these changes to illustrate the gains and losses that occur at physical level as individuals grow older.

The first signs of ageing that appear and can make a person look older are greying or white hair and wrinkles. Ageing determines changes in a persons' hair in terms of colour, density, and growth (Trueb et al., 2018). In case of women, menopause can have an effect on hair diameter, namely, the hair becomes less thick due to the hormonal changes (Trueb et al., 2018). In case of men, hair diameters were shown to start to decrease already in their mid-20s (Trueb et al., 2018) resulting in progressive hair loss and baldness. Before they reach 60, most men experience some form of baldness in relation to changes in levels of the male hormone testosterone (e.g. losing hair at the temples and at the top of the head). Similarly, among women, this age-related baldness may manifest itself with hair loss and the scalp becoming

visible. Hair follicles represent structures in the skin that are responsible for hair production and growth. With ageing, these follicles produce less melanin which determines the greying of a person's hair. Usually, scalp hair is the first to turn white, followed by bodily and facial hair. In a similar fashion to changes in hair condition, the quality of nails changes with age. For instance, with advanced age, nails often become brittle or may become hard, thick, and change colour.

Wrinkles and sagging skin are another common sign of ageing. Age-related changes of the skin texture are determined by genetic and environmental factors (e.g. exposure to the sun, exposure to extreme cold) as well as by a person's lifestyle (e.g. sun exposure without using protective sun creams). The outer skin layer becomes thinner with age and sometimes pigments (the so-called age spots) can appear in places where the skin was frequently exposed to the sun. Modifications that occur at the level of connective tissue can cause the skin to lose elasticity and strength. The blood vessels under the skin become more fragile which often leads to bruising or bleeding. Because the subcutaneous fat decreases, this can lead to problems with maintaining body temperature and can constitute a risk for injury. In general, older skin is more prone to injuries and bruising. Also, ageing skin repairs itself at a slower rate which means that any injuries take longer to cure. For example, wounds may heal up to four times slower as in younger adults. Nevertheless, preventive measures can be taken to protect skin from premature ageing (e.g. staying out of the sun or using sun protection, keeping skin moisturized, eating healthy, and keeping oneself hydrated).

Our bodies on the whole also age so there are different modifications that appear at the level of bones and muscles. Bone fractures, osteoporosis, and sarcopenia represent unfortunately frequent problems among older people. Ageing is associated with loss of bone density and strength as well as reduction in muscle strength and mass (i.e. sarcopenia). This can constitute a risk factor for fractures and falls (Van den Beld et al., 2018). An inactive lifestyle can accelerate the process of losing muscle mass and strength. Additionally, a decrease in water within tendons can cause the stiffening of the joints and thus restrict movement. When the cartilage brakes down, it determines inflammations in the joints and arthritis and consequently the experience of pain in older age (see also chapter on pain, part III of the present book). Several hormonal changes take place and affect the changes that occur in bone and muscle mass and strength. Hormonal modifications can also cause loss of appetite and food intake causing some older adults to be undernourished (Van den Beld et al., 2018).

Concerning hormonal changes, ageing affects the male and female reproductive system in different ways. Older men do not undergo the equivalent of a menopause (Van den Beld et al., 2018). However, ageing does affect the male reproductive system (e.g. changes in sperm quality, reduction of the volume of the testicles, etc.). Males tend to gain weight until they reach 55 years of age and then lose weight in connection to the changes in hormonal functioning (e.g. testosterone). Women tend to gain weight until the age of 65 and then begin to lose weight also in relation to hormonal changes. However, diet and exercise patterns can make a difference in the way that person's body shape changes with age. For women, menopause (i.e. the

ovaries stop releasing eggs and the periods stop) occurs on average between the age of 45 and 55. This represents a consequence of the body producing less hormones, namely, estrogen and progesterone. In case of men, changes in the reproductive system include reductions in testicle volume, erectile dysfunctions, and declines in sperm quality. The reduction in the production of testosterone may cause difficulties in getting an erection. Nevertheless, male fertility is less affected by ageing as is the case for women. However, in case of men, the enlargement of the prostate can cause functional as well as health problems.

Some changes that happen in the physical realm may be more subtle such as modifications at the level of the senses (e.g. hearing, seeing, taste). As discussed also in the cognitive development chapter (see chapter on cognitive development in the present book), several age-related changes take place at the cognitive level as well as at the level of vision and auditory acuity. With ageing, there is a rising need for people to wear glasses or hearing aids (Roberts & Allen, 2016). This may explain why, when depicting older people, the negative stereotypes usually include an older person wearing glasses or complaining about not hearing what other people are saying. Several questions come to mind such as can older people still hear conversations, or do we need to talk louder and clearer when we address them? Can older individuals still hear the pitch in music (e.g. can older musicians perform as before or does their performance decline with age)? How far can older individuals see or how well can they recognize faces? Responses to such questions are related to perceptual changes in older age.

Vision acuity is among the first to decline with older age. For instance, a reduction in the flexibility of the lens determines *presbyopia*. Consequently, older people have difficulties in focusing on objects that are close to them. This means that, for instance, already in their early 40s, some people will have trouble to see at close distance, such as when reading a book or working on the computer (American Optometric Association [AOA], 2022). Also, when reading small letters when the light is dim such as consulting the menu in a restaurant, the text may appear blurry (AOA, 2022). Both age-related eye illnesses (e.g. cataracts, glaucoma, macular degeneration) and healthy ageing are associated with the thickening and yellowing of the lens (Roberts & Allen, 2016). Older people also encounter difficulties in colour perception (Page & Crognale, 2005), visual acuity (Spear, 1993), perception of movement (Hutchinson et al., 2012), perceiving fine details, and pattern vision (Pardhan, 2004; Roberts & Allen, 2016). Nevertheless, it is important to keep in mind, as in case of auditory perception, that there are large differences between older adults where their visual capacity is concerned and not all people will encounter the same issues at the same age. Nonetheless, all older adults may experience problems with vision at some point or another while growing older. Some changes such as needing more light in order to see properly, distinguishing colour shades, and reduced tear production are considered to be part of normal ageing (AOA, 2022).

Auditory capacity is also affected by ageing. For example, older people will encounter difficulties in hearing faint sounds in a quiet environment. Peripheral hearing sensitivity was found to be impaired among approximately one third of people aged 61–70 years old and two thirds of people over 70 years old (Wilson

et al., 1999). The sensitivity to temporal fine structure was also found to be impaired among older adults, even people who have a normal audiometric threshold (Grose & Mamo, 2010; Füllgrabe et al., 2015). Moreover, sensitivity to changes in the temporal envelope is also affected by growing older (Füllgrabe et al., 2015). Consequently, older people who suffer from auditory loss often have trouble understanding conversations, doctors' advice, hearing a doorbell, or a car approaching. This can affect their social activities and independence in their daily lives or may even prove life-threatening (e.g. if they do not hear a car approaching while crossing the street). The first signs of hearing loss include having trouble to understand a conversation if there are more people talking at the same time, turning the TV volume so loud that others are complaining, having trouble hearing other people over the phone, frequently needing to ask others to repeat what they said, and having trouble hearing what someone says because of background noise (National Institute of Aging [NIA], 2018). Hearing loss takes many forms and degrees (e.g. one can have trouble hearing the voices of children or women or one can have trouble hearing any voices). *Sensorineural* hearing loss is the consequence of damage to the inner ear or auditory nerve (NIA, 2018). Conductive hearing loss happens when sound waves cannot reach the inner ear (NIA, 2018). This may happen, for example, because of accumulations of earwax, or a punctured eardrum (NIA, 2018). Age-related hearing loss is called presbycusis (NIA, 2018) and appears because of modifications that occur at the level of the inner ear or auditory nerve. *Presbycusis* can make it difficult for older individuals to put up with loud sounds or hear what other people are speaking. Causes of hearing loss are very diverse. They can range from loud noise (e.g. listening to loud music frequently) to an ear infection, an illness (e.g. high blood pressure, diabetes, brain injury, tumour), a side effect of medication, or a hereditary problem (NIA, 2018). Compensatory strategies can be applied to deal with hearing loss in older age (e.g. using a hearing aid, telling people about your problem so that they can pay attention to face you when they speak to you and try to talk loudly and clearly).

In terms of gains and losses that happen at the level of *the ageing brain* (see also chapter on cognitive development in the present book), studies have shown that ageing is not all about dying neurons and shrinking neuronal capacity. In contrast, *neuroplasticity*, defined as the capacity of the brain to change and reshape itself as an adaptation to novel experiences and settings, still takes place in older age (Maharjan et al., 2020). Furthermore, *neurogenesis*, namely, the process by which stem cells from our neurons in the hippocampus differentiate and reproduce into new neurons following the impact of novel experiences and of supporting cells also continues to happen in older age (Maharjan et al., 2020). Thus, the ageing brain does not lose as many neurons as was once the common belief but continues to produce new ones (Lupien & Wan, 2005). Brain plasticity does not end at 55 or 65 or 75 years old. The difference is that the changes that occur in the ageing brain happen in a different brain region compared to younger adults, namely, these occur in the white matter (Miller, 2022). For instance, research findings showed that when older adults learned a new task, changes in white matter were visible, while younger participants experienced neuronal changes in their cortex (Yotsumoto et al., 2014).

Furthermore, there is evidence that the brain of older people changes following cognitive training interventions (Park & Bischof, 2013; Pauwels et al., 2018) or meditation training (Chetelat et al., 2018). Such research results are showing that there can be gains in what physical ageing is concerned. Moreover, as discussed in the chapter on cognitive development, crystalized intelligence tends to improve with age and compensate for losses that happen at the level of the fluid intelligence (see chapter on cognitive development in the present chapter). From a positive psychology perspective, it is relevant to note that there are findings which point out that the brains of pessimists and optimists are different (Hecht, 2013). People with a tendency to see the world and the future in a negative way (i.e. pessimists) are associated with neurophysiological processes from the right hemisphere, while a tendency to see the positive side of life and expect good things to happen (i.e. optimists) are linked to the left-brain hemisphere (Hecht, 2013). In this regard, positive ageing interventions may help people to reshape their brains and adopt more positive thinking patterns also in older years.

Taking all the above-described physical changes into consideration (e.g. what happens to the body, the senses, the brain, etc. as we age), one may ask what are the gains that occur in the physical realm as we age? As depicted in the definition of physical development at the beginning of this chapter, growth in the biological domain implies both losses and gains that happen with chronological age and affect health and bodily appearance. While losses are more visible, gains may be more subtle and depend on as well as impact development in other life domains. In what concerns other life realms, the benefits that are registered with age are more visible such as, for example, an increase in well-being (i.e. emotional level), increase in wisdom (i.e. cognitive level), increase in conscientiousness or optimism (i.e. personality level), or increase in social support received from social networks (i.e. social development). Gains in the physical domain may include neuroplasticity, neurogenesis, and an increase in health or body strength. These improvements depend on the willingness of people to learn new things (e.g. personality trait of openness to new experiences), social support and relations (e.g. do they have a social circle that supports development in late life), positive emotions (e.g. being in a happy mood will motivate a person to learn new things), or cognitive skills (e.g. does the person have the habit of learning) and beliefs (e.g. beliefs about ageing). According to the selection, optimization, and compensation theory (Baltes & Baltes, 1990), people can actively *select* goals to improve physical aspects (e.g. health), *optimize* the means to achieve these goals (e.g. engage in health behaviours), and *compensate* (e.g. activate their social support network to help them achieve their health goals). Development on a physical level can also include changes in the mind frame (e.g. paying more attention to one's health, accepting the ageing body, and achieving self-esteem despite an ageing body) that are stimulated by bodily ageing. Thus, bodily ageing can act as a motivating factor for development in the physical realm as well as other life domains. Bodily ageing can also stimulate people to be more appreciative of who they are. For example, older people may be grateful for being healthy and care less about appearance as compared to younger adults. Even if older adults are prone to develop several illnesses (e.g. diabetes, high blood

pressure, osteoporosis), this prospect can motivate individuals to engage in preventive behaviour (e.g. physical activity, healthy diet, medical check-ups, etc.).

Positive psychology principles can play an important role in fostering physical development in older age. Developing individual strengths (e.g. gratefulness, creativity, curiosity) can assist in the process of physical development. Also, boosting developmental assets in other life domains (e.g. increasing social support, improving emotional regulation, boosting positive emotions, enhancing cognitive skills, encouraging openness to new experiences, etc.) can stimulate physical development in older age. The last paragraph of the present chapter will be dedicated to prevention and intervention ideas from a positive psychology viewpoint. Nevertheless, before addressing positive psychology principles that can be applied as change strategies in the realm of physical development in older age, it is important to consider how to measure the needs for intervention as well as its effectiveness. In addition, defining physical development in older age raises issues concerning ways to operationalize or measure these biological changes and growth. In the following, I will explore subjective experiences concerning physical development in older age, namely, how people relate to bodily changes and how they cope with these and develop in midlife or older age.

Experiences with Physical Development in Midlife and Older Age

Physical development may be challenging to measure from a psychological perspective. Direct measures of bodily changes and growth constitute mostly the subject of medical (e.g. changes in bodily functions and organ function) or neuropsychological assessments (e.g. changes that are visible at the brain level). However, in daily life, people will monitor their bodies for signs of decline or illness and associate these with the ageing experience. From a psychological viewpoint, it is interesting to explore how people adapt to the ageing process, how they cope with physical changes and illness in their older age, as well as what they think about health and its maintenance in late life.

Body image is defined as the cognitive and subjective representation of physical appearance as well as physical sensations that are experienced at bodily level (Cash & Fleming, 2002). It includes ideas about one's own appearance and how the body functions (Reboussin et al., 2000). As people grow older, negative views on ageing and negative ageing stereotypes can influence how they perceive their bodies, resulting in negative body images and consequently leading to the experience of negative emotions (e.g. depression, anxiety).

Since illness is unfortunately part of growing older, it is interesting to see how older people themselves think about health and disease and the process of growing older. The latter may refer to how older individuals cope with ageing symptoms as well as how they represent their own old age. Findings can inform interventions that foster physical development in older age. For instance, one qualitative study looked

at how older individuals (i.e. 65- to 85-year-olds) coped with multimorbidity (Löffler et al., 2012). Results were encouraging as they showed that patients tried to stay positive despite experiencing multimorbidity (Löffler et al., 2012). At a social level, participants tried to stay independent, while at a practical level, they made an effort to keep control over their medical conditions (Löffler et al., 2012). Concerning their emotions, they oscillated between anxiety and strength and overall attempted to stay positive (Löffler et al., 2012). Authors argue that participants are less passive then sometimes thought in the literature and that these findings can inform how health professionals can engage older patients in taking an active role in their treatment (Löffler et al., 2012). Other qualitative studies focused on older individuals who were considered to be at risk, such as older adults who lived alone while being sick or disabled (Birkeland & Natvig, 2009). Findings showed that even if participants experienced several constraints due to their physical condition, they adapted to the situation and engaged in activities that required less strength (Birkeland & Natvig, 2009). The most frequently applied coping strategy was acceptance. However, this coping strategy implied mostly passive, resigned acceptance of the situation (Birkeland & Natvig, 2009). The authors suggest that medical personnel can help such individuals to find more problem-oriented coping strategies and help them establish routines in order to create daily rhythms with which they would feel comfortable (Birkeland & Natvig, 2009). Small daily routines such as cooking, knitting, or just getting out of bed became very important to the interviewed older individuals as they provided meaning and structure (Birkeland & Natvig, 2009). According to the study participants, having an agenda for the day created a feeling or predictability. Illness and disability often determine depression and part of the cognitive coping consists of creating novel routines, namely, identifying, planning, and implementing these in their lives (Birkeland & Natvig, 2009). Behavioural coping implies caring out practical, interpersonal activities according to a certain schedule (Birkeland & Natvig, 2009). Medical personnel are encouraged to identify passive attitudes in the elderly and discuss more problem-oriented alternatives such as thinking about one's needs and how to offer practical help according to these (Birkeland & Natvig, 2009). Another at risk group are older people who suffer from dementia. A qualitative study looked at how older individuals were coping with dementia by interviewing people who found themselves at the first stage of this disease (Preston et al., 2007). Results showed that people tried to make sense of dementia (e.g. understand the diagnosis and why it happened), manage their new patient identity (e.g. continuity or discontinuity between past and present self), and attempted to find coping strategies (Preston et al., 2007). The latter included everyday individual strategies, coping in relation to others and personal attitudes (Preston et al., 2007). Problematic issues emerged concerning how some people perceived themselves as being "substandard" compared to other people or to their previous self or complained about being attributed a negative identity such as being disabled or acting like a child (Preston et al., 2007). Individual coping strategies included using visual prompts, spatial cues, making lists, or keeping diaries to remember things (Preston et al., 2007). Coping in relation to others involved other people (e.g. talking and sharing with the family, sharing with other people with or without

dementia) (Preston et al., 2007). Social comparison helped in different ways; for instance, some found comfort in being with people who had dementia but were better off than themselves, while others found it helpful to compare themselves with people who had a worse case of dementia (Preston et al., 2007). Attitude mattered a lot in terms of coping with dementia. For example, being positive (e.g. having a sense of humour to give one perspective and relief for negative situations, being hopeful, self-praising, focusing on positive aspects, making the most of difficult situations, using positive reframing) was reported as helpful (Preston et al., 2007). Some participants recounted positive effects of having dementia such as meeting new people, finding novel meaning, becoming more sensitive towards others, and worrying less about unimportant things (Preston et al., 2007). Others mentioned focusing on what they are still able to do, acknowledging their boundaries, and consciously taking care of themselves as helpful attitudes. Putting problems into perspective and knowing when to let issues go, having patience, having faith, finding a right balance between acceptance, and fighting their illness were also mentioned as useful attitudes for coping effectively with dementia. Often attitudes differed between participants. For example, some preferred to avoid thinking about their symptoms and tried to distract themselves, while others found sharing information about dementia with others to be beneficial for dealing with symptoms. In this sense, context was acknowledged to be relevant. For instance, participants said they may feel comfortable to talk about their symptoms in the family context, but they would hide these illness signs in the work setting (Preston et al., 2007). Overall, there was a conflict between what older individuals could incorporate and what they could not from their identity as dementia patients, what they could cope with, and where they needed assistance (Preston et al., 2007). Such studies are important because they shed light on the patients' needs and coping strategies and informed interventions. From a positive psychology perspective, these findings are relevant as they provide information about what individual strengths (e.g. increase self-efficacy, humour, positive attitude, etc.) and developmental assets (e.g. encourage social support groups) one can build to improve the condition and well-being of people suffering from dementia.

Other qualitative studies looked at how older individuals *perceive health*. This is also important since representations of health can help individuals to formulate goals for engaging in health behaviours and maintaining a healthy lifestyle and manage their chronic conditions. In addition, health perceptions can act as a motivator for successful ageing (Tkatch et al., 2017). Self-perceptions of health and coping are components of successful ageing. While objective health comprises medical parameters, subjective health refers to what individuals think about their own health. Subjective health represents an important predictor of mortality irrespective of the objective health condition (Idler & Benyamini, 1997). When talking about health, participants included details about emotional and social well-being (Tkatch et al., 2017). Resilience was mentioned as an indicator for successful ageing, and coping was considered key to well-being (Tkatch et al., 2017). Support received from family and friends as well as preserving independence were mentioned as important factors for maintaining health in older age (Tkatch et al., 2017). Such findings point

out the importance of social support network interventions such as low-cost online interventions that foster social support (Brown et al., 2003; Maher et al., 2014). Results also highlight the relevance of empowering older adults to make their own health choices (Tkatch et al., 2017). For example, participants actively used internet resources to find information about health and change their health behaviours (Tkatch et al., 2017; Irvine et al., 2013). Another qualitative study in Italy looked at how older people perceive health promotion, how they engaged in it, and what emotional and pragmatic barriers they encountered in the process (Menichetti & Graffigna, 2016). Findings revealed several typologies that were described in the study as positions (i.e. locked position, awakening, and climbing) (Menichetti & Graffigna, 2016). Each position was connected to specific emotions, representations, and meanings of health behaviours that could constitute barriers or facilitators of health promotion for older adults (Menichetti & Graffigna, 2016). The position "Locked" referred to frozen attitudes towards health that resulted in unhealthy lifestyles and habits. This position was characterized by lack of work, social network, lack of purpose, emotional resignation, and risk behaviour (Menichetti & Graffigna, 2016). Participants from this position delegated their health to others. This helped reduce negative emotions but decreased the chances for health promotion behaviour. A fatalistic attitude to life was connected with their engagement in risk behaviour. A second position referred to "awakening". People who described themselves as being in this category were alternating between health awareness and lack of motivation to improve their health in old age (Menichetti & Graffigna, 2016). They also alternated between fatalistic attitudes and more active attitude towards health. Although they were aware of the benefits of health, they often remained inactive and did not translate their knowledge into health promotion practise. The third position referred to "climbing" and consisted of people who were aware of the importance of self-care for staying healthy in older age (Menichetti & Graffigna, 2016). People in this category valued self-efficacy, a sense of coherence, a high motivation to feel aware and reflexive as important for healthy ageing. They valued being at peace with one's life, with ageing, and with death, in order to promote well-being and encourage engagement in health behaviour (Menichetti & Graffigna, 2016). Participants included in this category also considered a sense of control as being crucial in addition to enjoying good social relations and playing an active role in community life. Occasionally engaging in risk behaviour was considered to provide a balance in life so that one does not become too obsessed with health and to experience old age to the fullest (Menichetti & Graffigna, 2016). Such findings are relevant because they offer information for developing interventions that address the specific needs of older people where health promotion is concerned (e.g. how to help them overcome barriers and engage in health behaviour).

General practitioners can play an important role in discussing health and illness as well as ageing-related issues with older adults (Craciun, 2016, 2022). One qualitative study from Switzerland explored how both older patients and general practitioners (GPs) perceived and defined autonomy and decline and what they thought about when discussing age-related issues during medical consultations (Viret et al., 2019). Results pointed out that autonomy was described in terms of physical health

and mobility (Viret et al., 2019). This constitutes a further argument for the relevance of physical development in older age. Functional decline was regarded as either an acute event (e.g. a hip fracture) or slow deterioration. Findings showed that participants saw decline as part of normal ageing and therefore did not consider a consultation with a GP necessary for issues such as memory loss, deteriorating strength, or declining mobility (Viret et al., 2019). The *AGE tool* (active geriatric evaluation, Senn & Monod, 2015) was created to assess geriatric syndromes in family medicine and help prevent functional decline and increase quality of life. Geriatric syndrome screening (i.e. the AGE tool) was well perceived by patients and GPs alike. Thus, this would constitute a possibility to address age-related issues and inform older adults about potential solutions and interventions (Viret et al., 2019). The use of a standardized tool facilitated the discussion about age-related issues that GPs did not normally address in medical consultations and also approach coping strategies (Viret et al., 2019). Results pointed out that the AGE tool has potential for early detection and intervention because it assists with evaluating the patient's functional status and discusses tailored solutions for improving daily activities (e.g. mobility, psychological coping, external support) (Viret et al., 2019). Another relevant point for the practise is that often patients associate physical changes with normal ageing and do not address these in consultations, a fact found also in other studies (Craciun, 2016, 2022). Thus, GPs may initiate conversations about normal ageing and patients' wishes for their old age as well as strategies to achieve their desired older age. In the following, I will explore intervention possibilities to promote physical development in midlife and older age from a positive psychology perspective.

Why Intervene? Links with Development in Other Life Domains

Social development in older age is affected by changes happening in the physical realm since social relations mostly depend on one's mobility, health, and integrity of the senses. Older individuals who suffer from hearing loss may find it difficult to have conversations with friends and families because they cannot really hear what they are saying. This can also lead to unfortunate misunderstandings. Thus, hearing loss may be a risk factor for social isolation and experiencing loneliness. Also, restrictions in movement (e.g. caused by hardened joints or loss of muscle mass and strength) can hinder mobility so that older people will spend more time at home. Pain represents another factor that can reduce social activity among older adults and may lead to social isolation (see also chapter on pain, part III of the present book). The other way around, social networks can provide the necessary social support to stimulate health behaviours (e.g. a healthy diet, physical exercise) in older age. For example, frequent interaction with grandchildren (see chapter on grandparenthood, part III of the present book) can encourage older people to be more active and improve their health. Social support represents an important resource for health in older age (Tkatch et al., 2017; Uchino, 2006; Freney & Collins, 2014).

Perceptual health is directly associated with *cognitive development* in older age (Roberts & Allen, 2016). Declines in perceptions and cognition were shown to have a reciprocal effect (Roberts & Allen, 2016). Decreased perceptual input (e.g. because of impaired vision or auditory acuity) can make the performance on cognitive tasks more difficult (e.g. paying attention to all details, slow down information processing speed). Nevertheless, using compensatory cognitive strategies can help to increase performance on mental tasks (Roberts & Allen, 2016). Using perceptual aids (e.g. glasses) can also constitute a compensatory strategy and help prevent cognitive decline (Roberts & Allen, 2016). Changes at physical level can also cause negative body images in older adults (Sánchez-Cabrero et al., 2019a, b) and require interventions to address body image issues among middle-aged and older persons.

Emotional development and physical changes are related in the sense that positive and negative emotions influence people's state of health, and the other way around, being healthy or ill triggers emotional responses among older individuals. Older people who experience hearing or vision loss often get depressed or anxious. Similarly, being diagnosed with a chronic condition (e.g. diabetes, high blood pressure) or experiencing frequent pain often can cause depression or anxiety among older adults (see also chapters on depression and anxiety, part III of the present book). In addition, health was shown to be influenced by psychological factors such as depression, anxiety, or stress (Tkatch et al., 2017). Changes in one's body can affect mood and determine body dissatisfaction among older people (Sánchez-Cabrero et al., 2019a, b). Even if older people are more likely to accept their bodies as compared to teenagers and are not prone to develop eating disorders, they still experience body dissatisfaction issues. Authors have described a maturity crisis that includes feeling sad or disappointed because of the ageing effects on one's body (Gubrium & Holstein, 2006; Zdenko & Geiger-Zeman, 2015). The awareness of one's own mortality can trigger a shift in motivation and how one perceives the time left or what goals one prioritizes. According to the socioemotional selectivity theory (Carstensen et al., 2003), people start to prioritize goals with emotional meaning over aims that target information seeking and expanding one's horizon (Samanez-Larkin & Carstensen, 2011). Thus, physical reminders of ageing and mortality can act as a catalyst for emotional and social development.

Personality growth is also related to physical development in the sense that personality traits can act as barriers or facilitators of health in midlife and older age. For example, extraversion, openness, and conscientiousness may foster the engagement in health behaviour. Experiencing pain or disability can make a person become more neurotic with age (e.g. worry frequently about one's health, monitor the environment for dangers such as risk for falls, etc.). In addition, chronic illness can impact personality change in the sense that people become more neurotic (Costa et al., 2019). One study showed that multiple sclerosis patients experienced both a decrease in extraversion and in conscientiousness (Roy et al., 2018). The other way around, physical changes occurring in the brain because of injuries or illness may determine personality changes. On a positive note, health behaviour (e.g. physical exercise, adopting a healthy diet) can shape personality. For instance, extroversion and conscientiousness were shown to remain at stable levels among older

individuals who were physically active (Stephan et al., 2020). This was explained by the fact that engaging in physical exercise helped to keep the energy level that was needed to express these traits (Costa et al., 2019).

How to Intervene to Promote Physical Development in Midlife and Older Age

After reviewing the connections between physical development and other spheres of development as we age, the importance of prevention programmes that can help foster health and well-being becomes apparent. While physical ageing is inevitable, it does not mean that it has to be associated with declining health and well-being. Positive beliefs and positive reframing of negative situations (e.g. age-related changes in the body and changes in health status) can serve as prevention tools and help promote successful ageing (Pandey & Garg, 2018).

In what concerns health promotion and disease prevention, *positive psychology principles* (PPI) can be applied to help build individual strengths as protective factors for health (Sin & Lyubomirsky, 2009; Magyar-Moe et al., 2015). In this sense, positive psychology principles can be employed to foster positive thoughts, actions, and emotions (Magyar-Moe et al., 2015). Interventions based on PPIs include a series of activities that are designed to trigger positive thoughts and feelings (Sin & Lyubomirsky, 2009). Strengths such as optimism, empathy, and having meaning in life were associated with positive health outcomes (Kim et al., 2013) and decreased risk for dementia (Boyle et al., 2010) or mortality (Hill & Turiano, 2014). For example, a positive psychology intervention conducted in Spain showed that older participants reported decreased anxiety and depression, improvement in memory, and life satisfaction (Ramirez et al., 2014). Another intervention conducted with Spanish older adults targeted emotional regulation, the development of strengths, and positive emotions. Results showed an increase in happiness and reduction in negative emotions and blood pressure levels (Jimenez et al., 2016). In Brazil, a multicomponent positive psychology intervention aimed at retirees, provided participants with educational tools for individuals to identify and improve their strengths, cope with stressors, and build resilience (Durgante & Dell'Aglio, 2019). The programme included a pre-assessment session, six weekly sessions, and a post-assessment session (Durgante & Dell'Aglio, 2019). The first session was dedicated to values of self-care and prudence (e.g. introducing the values, teaching techniques such as relaxation, formulating an action plan for health). The second session focused on optimism (e.g. problem-solving strategies, affirmations concerning the best possible self, and action plan to implement these), the third session on empathy (e.g. self-regulation training, relaxation, action plan to experience a problem from another persons' perspective, i.e. putting oneself in someone's shoes), the fourth session on gratitude (e.g. creating a CV of personal accomplishments, relaxation, action plan gratitude diary, etc.), fifth session on forgiveness (e.g. the surprise

balloon, learning from one's mistakes, engaging in relaxation, writing a forgiveness letter, making an action plan, expressive writing, etc.), and the sixth session dedicated to discussing meaning of life and work (e.g. identify what is meaningful in life, revision of the topics addressed during the programme, final assessment, etc.). Findings pointed out an increase in life satisfaction and resilience as well as a decrease in depression, anxiety, and stress levels among the older people who participated in the intervention (Durgante & Dell'Aglio, 2019).

As mentioned in the previous section, body image issues could constitute a problem in midlife and older age. *Body image* refers to how a person feels, sees, imagines, and acts within his or her body (Cash, 2017). It includes a perceptive dimension concerning how a person judges the size and proportion of one's own body and a *cognitive-emotional* dimension (i.e. *body satisfaction*) (Sanchez-Cabrero et al., 2019b). The latter implies a subjective evaluation of one's body that can make a person feel bad about himself or herself or when positive, to feel comfortable with one's own body (Sanchez-Cabrero et al., 2019a). People who are in their 50s were shown to experience body dissatisfaction issues because of age-related changes happening to their bodies (Cameron et al., 2019). Worries include getting wrinkles, hair loss, and weakening of body strength (Gubrium & Holstein, 2006; Vega et al., 2015) but less concerned about body fat as compared to teenagers (Vega et al., 2015). Body image and body satisfaction are very important for self-esteem at several stages in life; however, little is known about these issues among older adults (Sanchez-Cabrero et al., 2019a) or middle age for that matter. Often the midlife crisis can be caused by age-related changes happening at physical level and resulting in anxieties or depression (Gubrium & Holstein, 2006; Keyes & Westerhof, 2012). These anxieties can add to those concerning social limitations (e.g. retirement, loss of significant social partners).

Body image interventions can address issues such as body satisfaction and body image and assist older individuals to develop positive attitudes and self-acceptance (Hudson et al., 2016; Mellor et al., 2010). General active ageing interventions were criticized for having a broad scope and ignoring specific issues such as body image or body satisfaction (Sanchez-Cabrero et al., 2019b). Thus, interventions such as the IMAGINA programme were targeted at older adults and aimed to improve their body image and self-esteem (Sanchez-Cabrero, 2012). The programme lasted 1 month and included eight group-sessions of 2 h each (two times per week). Results pointed out that the body image of older adults participating in the intervention improved as compared to a control group (Sanchez-Cabrero et al., 2019b). From a positive psychology point of view, one could create interventions that target the development of different strengths (e.g. self-efficacy, gratitude, kindness) and boost developmental assets in several domains (e.g. health behaviour, strength, openness to new experiences, positive emotions, social support, etc.).

Positive psychology interventions can help in case of older adults who suffer from chronic conditions since several individual strengths play an important role in the recovery process, adherence to treatment, and well-being. For instance, optimism represents a component of well-being and was found to be associated with better cardiovascular health (Boehm & Kubzansky, 2012; Steptoe et al., 2009). A

meta-analysis linked optimism to better cardiovascular outcomes and lower mortality rates (Rassmusen et al., 2009). Optimism represents an individual strength and developmental asset, and thus it can be easily integrated in positive psychology interventions. Positive emotions also have a beneficial influence for cardiovascular health because they encourage engagement in health behaviour (Steptoe et al., 2009). In a similar way, optimism was shown to enhance the probability of engaging in health behaviour such as a healthy diet or physical activity (Steptoe et al., 2006; Browning et al., 2009) and avoiding risk behaviours such as smoking (Kelloniemi et al., 2005). Patients who were optimistic after undergoing cardiac transplant surgery were more likely to adhere to the medication plan 6 months after the procedure (Leedham et al., 1995). One example of a programme based on positive psychology principles was specifically designed to help people who suffer from cardiovascular disease (Huffman et al., 2011). The intervention included modules focused on optimism, gratitude, and kindness (Huffman et al., 2011). It was designed for a period of 8 weeks (first 2 weeks targeted gratitude, week 3 and 4 focused on building optimism, weeks 5 and 6 addressed kindness, and week 7 and 8 focused on choice). The programme included weekly exercises with regular contact between the trainer and the participants. The exercises were designed to be completed in a single day because research has shown that the clustering of intervention activities has a positive effect compared to completing exercises on a daily basis (Lyubomirsky et al., 2005; Emmons & McCullough, 2003). If exercises are done daily, an adaptation effect may set in, and the exercises will cease to help increase the positive affect (Lyubomirsky et al., 2005). Within the programme, gratitude exercises included the "three good things exercise" (Lyubomirsky et al., 2005; Huffman et al., 2011) where participants are asked to recall three good things that happened during the week despite their health issues. Participants must write down in detail what these events were, how they felt at the time, and how they felt afterwards. Another exercise was "the gratitude letter" where people are asked to write a letter where they thank somebody in their lives to whom they feel grateful. Participants have to describe why the person's behaviour made them feel grateful, how it affected their lives then and in the present moment, and how often they recalled the acts of that particular person. Similar to the other exercise, participants were also asked to record how they felt before and after writing the gratitude letter (Huffman et al., 2011). Participants can choose whether they actually send the letter or not. Studies showed that this exercise impacts well-being even 6 months after completing it (Lyubomirsky et al., 2011). One exercise to improve optimism is "the best possible self" where participants are invited to imagine their best possible future, such as their ideal life in 5 years' time. The exercise can be adapted to target specific topics such as social relationships or health (Huffman et al., 2011). Similar to the other exercises, participants are instructed to write in detail how they imagine themselves in the future and also describe in writing how they felt during the exercise. In order to promote kindness, one can use the "three acts of kindness" exercise where participants are requested to perform three acts of kindness during 1 day. Performing and recording acts of kindness was associated with increased well-being (Otake et al., 2006). In

the last 2 weeks of the programme, participants could complete the exercises of their choice according to their personality and interests (Huffman et al., 2011). This was done because research has pointed out that if activities match the person's interests, the success of the intervention improves (Lyubomirsky et al., 2005). Moreover, matching exercises to the person's wishes can help address exactly the areas where a person needs to improve (Lyubomirsky et al., 2005). Overall, study results showed that cardiac patients accepted the intervention content and found it useful (Huffman et al., 2011). Results from the pilot study also showed improvements in optimism following the intervention (Huffman et al., 2011).

Conclusion

Physical ageing does not automatically mean decline and illness. Physical development in older age refers to a series of gains and losses that have an impact on a person's health and well-being. While several losses in the physical domain come naturally with ageing, one can slow down this process. Furthermore, one can focus on fostering gains (e.g. take care of one's health, engage in physical exercise to keep the body strong, find the relaxation techniques that fit, adopt a healthy diet, etc.). Physical development requires motivation and effort just as for other life domains (e.g. cognitive training, personality change, social competence enhancement, increase in emotional regulation abilities, etc.). How one perceives physical development in older age can affect one's body image, body satisfaction, mental health, and well-being. Also, how middle-aged or older people cope with illness and disability affects their mental health and satisfaction with life. Even if illness and decline are part of growing older, how a person copes with these can stimulate physical development and overall boost well-being in midlife and older age. Perceptions of health and attitudes towards health promotion are also relevant as one grows older and can be included in interventions to promote healthy ageing. Moreover, physical development is connected and impacts all other forms of development and thus constitutes an important target for developmental intervention.

Positive psychology interventions can address individual strengths (e.g. self-efficacy, optimism, gratitude, kindness) to help improve health and well-being in midlife and older age as well as promote physical development. In addition, boosting developmental assets within other life domains (e.g. social support, social networks, emotional regulation, views on ageing, attitudes towards health, openness to new experiences) can help improve physical strength and health or stimulate health behaviour among middle-aged and older individuals. Instead of just targeting decline prevention in several life domains (e.g. cognitive, social), positive psychology interventions have the advantage that they can focus on a range of positive changes such as engagement in a healthy lifestyle, promoting a positive body image, increasing body satisfaction, and improving physical strength and mobility.

Reflection Questions

1. Think about your grandparents, what signs of physical ageing can you identify? How about in case of your parents? Give at least three examples for each.
2. Define physical development in your own words. How would you explain physical ageing and development to your grandparents?
3. Ask your grandparents about their experiences with physical ageing. How are they experiencing bodily ageing? Do they describe it in positive or negative terms?
4. Explain the relation between physical development and other areas of development (e.g. cognitive, emotional, social, personality), and give concrete examples for each.
5. Think about your own physical development, what will you do to foster growth and prevent losses?
6. Formulate three goals, and suggest three strategies for a health promotion intervention based on a positive psychology perspective. Think about your grandparents and their friends as the target population.

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Chapter 6
Cognitive Development in Midlife and Older Age: From Neuroplasticity to Self-Efficacy and Positive Views on Ageing

Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.
—Albert Einstein

Introduction

Similar to physical development, cognitive improvement represents one area that is mainly associated with children and adolescents. For example, in the school context, cognitive achievements are encouraged and externally regulated. In the school setting, cognitive development is measured with tests and exams. There are clear criteria of what cognitive achievement means (e.g. well-defined cognitive developmental stages and milestones) and success is motivated extrinsically (e.g. one should get a good grade to enter university) or intrinsically (e.g. learning geography is fun). At a young age, one is motivated to improve in what concerns cognitive tasks by one's own progress (e.g. learning to read gives access to information), by future outcomes (e.g. if one studies well in school one can have a good job in the future), or by the idea of learning itself (e.g. studying can be fun in itself for some children such as learning how to solve math problems or how to write poetry). However, in midlife and older age, people tend to ignore cognitive development because they think it is not possible anymore, or they believe they do not have the skills to develop, or they think that cognitive development is only for younger people. As we have seen in previous chapters (see also Chaps. 2, 3, and 4 and chapter on physical development), stereotypes and views on ageing play an important role for development in midlife and older age. Additionally, when middle-aged or older individuals undertake some cognitive training tasks, usually they do this because they fear losing their cognitive abilities, or in order to prevent further decline and not because they think of future gains. Although fear can be a good incentive for cognitive progress, it might not be the best one in midlife or older age as it might reinforce negative ageing stereotypes and decrease self-efficacy for performing cognitive tasks

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among middle-aged and older individuals. Nevertheless, sometimes middle-aged or older persons seem to "know it all" and are reluctant to learn new things. But what triggers such reactions? Is it that older people are not curious about the novelty in their daily lives (e.g. new technological advancements) or do they feel a certain pressure to show they are knowledgeable? Curiosity is considered a "normal" trait for children and young adults, and somehow older individuals are expected to be the ones who have all the answers. However, studies show that curiosity may be beneficial also in older years and older individuals can still learn new things. Studies pointed out that people who are curious and embrace life's novelty and uncertainty as well as the challenges that are inevitable in our lives have better outcomes in terms of well-being and perceiving life as rewarding (Silvia & Kashdan, 2021). People of all ages thrive on novelty and challenge. Curiosity has psychological benefits in terms of seeking out and embracing change and thus plays an important role in development. When we are curious about our potential, about trying out new things, and about meeting new people, we place ourselves in situations where we learn, and we flourish on cognitive, social, emotional, and even physical and personality levels (see also the chapters on personality, emotions, social development, physical growth).

In the following, I will explore cognitive ageing and cognitive development from a positive psychology perspective. First, I will examine what cognitive ageing is and what are the potential meanings of cognitive development in midlife and older age. In order to do this, I will refer to both a theoretical perspective and studies reporting on the perspective of older adults themselves. Also, I will summarize a few instruments that can help to measure cognitive improvement in older age. Next, I will explore why cognitive development is relevant among older individuals (i.e. examine the connection with emotional growth, improvements in one's social skills and networks, physical and personality change). Last, but not least, I will propose a few alternatives concerning how one can foster cognitive development among older individuals and how to prevent dementia using a positive psychology and developmental assets approach.

Age-Related Changes in Cognition in Midlife and Older Age

Before reflecting on what cognitive development means in midlife and older age, it is interesting to look at the changes that take place in cognition as people age (i.e. cognitive ageing). Cognition is important at any stage in life and examining its evolution in older years can shed light on ways to define and measure cognitive development as well as foster it among older people. In this sense, it is also relevant to differentiate between normal changes that happen with our cognitive abilities as we age and those that are pathological and may constitute a sign of dementia. In terms of changes in cognitive functioning with ageing, there is a large variability among older adults (Rut et al., 2018). This makes the field of cognitive development interesting but also confusing since it may be difficult to establish clear criteria of what

good or "normal" cognitive ageing represents and what are the milestones of cognitive development.

During midlife, people must manage different complex tasks as they balance between work and personal life challenges. For the accomplishment of all these tasks, cognition plays an important role as middle-aged individuals need to learn new things and adapt to changing, challenging circumstances (e.g. having teenage kids, changing jobs, going through a divorce, having ill parents, etc.). For older individuals, cognition is relevant for independent living. Having good cognitive skills helps the elderly maintain their autonomy in daily life. For example, cognition is significant for taking their medication properly; playing with their grandchildren; engaging in leisure time activities such as gardening, shopping, and cooking; and driving safely or for work. Thus, cognitive capacities need to be fostered and developed continuously during midlife and old age in order to maintain effective cognitive functioning. Even if ageing is usually associated with declining cognitive abilities, from a positive psychology perspective, cognitive development is regarded as a balance between gains and losses in the cognitive realm as we age (Baltes et al., 2006). In the following, I will explore the most common cognitive changes that occur during the ageing process and that are considered part of normal cognitive ageing.

Modifications that occur within the brain's white matter determine a loss in processing speed as people age (Gunning-Dixon & Raz, 2000). Some authors argue that the slowing down of *processing speed* has an impact on other cognitive functions (Salthouse, 2010). Thus, impairment when performing certain cognitive tasks (e.g. reading subtitles when watching a film on TV, reading the newspaper, driving the car, having a telephone conversation in a noisy restaurant, etc.) can be explained by the slower processing speed or by the impaired sensory skills rather than by diminished cognitive capacities (Salthouse, 2010). Cognitive capabilities that are affected by aging include memory, attention, language, and visuospatial skills.

Memory has been the focus of many studies concerning what happens with cognitive abilities as we age. Results of these studies point out that a memory deficit is not a general feature in older age. Older adults may have difficulties performing certain memory and learning tasks, while their performance for other tasks is comparable to that of younger adults (Luo & Craik, 2008; Nilsson, 2003). For example, older adults may have difficulties learning a new computer game on the smart phone but have no difficulties to read a text if they wear their glasses. Concerning the declarative memory, studies showed that episodic memory (i.e. memory for everyday events such as time or locations that are also related to emotional and contextual content) is more affected than the semantic memory (i.e. memory of general, context-free knowledge) (Nilsson, 2003; Nilsson et al., 2004). For instance, older adults may have problems remembering where they left their glasses or if they took their medicine at the right time interval during the day (i.e. *episodic memory*), but they would have no trouble remembering where Italy is located in Europe or why they need to take their medicine (i.e. *semantic memory*). Problems with semantic memory are usually related to pathological age-induced changes.

Prospective memory implies the ability to recall that one needs to perform a certain activity at a specific time in the future (e.g. remembering one needs to meet a friend in the café at a certain time, remembering an appointment at the doctor, etc.). Prospective memory is complex since it involves self-regulatory skills like time management and time control. Also, prospective memory is especially relevant to health-connected tasks that one is required to do as an older person (e.g. taking medicine on a regular basis or going to medical appointments) but also for sustaining an active social life (e.g. remembering to meet a friend, remembering birthdays of people in the family). Prospective memory has received a lot of attention from researchers because of its role in the autonomy of the elderly. Nevertheless, findings are mixed with some attesting the decline of prospective memory, while others point out that it is preserved (Reese & Cherry, 2002).

Procedural memory (e.g. how to ride a bike, how to play the guitar, how to prepare a meal) tends to be maintained with age. When testing the performance on *procedural memory* (i.e. type of long-term memory referring to how to perform certain actions such as driving a car, riding a bike, cooking a meal without looking at the recipe) tasks, one should also consider the slower processing speed that occurs with normal ageing. Studies also pointed out that older individuals experience encoding and retrieving difficulties. Nevertheless, if older people are taught encoding strategies like visual representations (e.g. representing the numbers in a certain colour or place when memorizing a phone number, such as one as red, two as green, and so on) or semantic associations (e.g. in order to remember a password one links it with a certain event like one's birthday or the birthday of a child), their performance on memory tests matches that of young adults (Luo et al., 2007; Troyer et al., 2006). Such encoding strategies can also improve the performance on memory tasks among middle-aged adults who often need to juggle several tasks simultaneously (e.g. work, kids, administration, elderly parents, etc.).

Similar to procedural memory, *autobiographical memory* (e.g. remembering relevant information about oneself and one's life) is usually kept intact well into old age. To sum up, some forms of memory decline with age and some are preserved (Argimon & Stein, 2005). *Working memory* is affected by ageing (e.g. information processing, difficulties in dividing attention between tasks). Working memory is relevant for goal-directed actions where information must be retained and used to ensure successful task execution (Chai et al., 2018). Older adults have difficulties on assignments that require speedy retrieval of information or recall. Nevertheless, recognition and implicit memory performance are maintained into older age (Taussik & Wagner, 2006). In general, episodic memory is more affected by ageing than semantic and procedural memory (Yassuda, 2006).

Attention and executive functions comprise different types of cognitive processes such as those involved in establishing and sustaining a state of alertness, those that orient one towards selecting the relevant information from the sensory input, and those related to attentional control and monitorization of attentional resources. The attentional systems involved in staying alert and being oriented tend to be maintained with ageing (Mahoney et al., 2010). Concerning selective attention, one needs first to differentiate between tasks where people ought to separate a stimulus

or information from distractions, and tasks where one needs to inhibit non-relevant information. Attentional deficits that appear with ageing are more related to the inhibition aspects of attention (Ballesteros et al., 2009). Often, we can notice that older people cannot concentrate on a task (e.g. talk on the phone, have a conversation, read a book) if there is noise in the background. This happens because they find it difficult to block the irrelevant information. They concentrate their resources into blocking the unwanted information, and this interferes with their attention to the task (e.g. concentrating on what they want to buy in a shop when other customers are noisy). Studies suggest that deficits in inhibitory control are responsible not only for problems with attention tasks but also with working memory and recall tasks. The retrieval of relevant memories is affected by the difficulties in inhibiting irrelevant memories (Lustig et al., 2001). *Executive functions* such as decision-making, planning, or problem-solving tend to decrease with age (Lezak et al., 2012). This may happen because these skills depend on the good functioning of memory and attention. All in all, one can conclude that attention is also affected by ageing as illustrated by findings that point out less efficient search systems or problems in inhibiting disrupting information (Brucki & Rocha, 2004). The inability to inhibit irrelevant stimuli was explained among other factors by the fact that older people are easily distracted and tend to store irrelevant information for longer time periods (Brucki & Rocha, 2004).

Language is described as the best-preserved skill in older age. Some authors even suggest that vocabulary and semantic skills can increase with age (Wingfield, 2000; Kemper & Sumner, 2001; Verhaegen, 2003). This depends of course also on the time and effort that a person invests in preserving or even increasing their vocabulary or language skills. Like any other skill, if not used, language capacity may also deteriorate with age. Speech, vocabulary, verbal reasoning, and speech comprehension tend to remain stable over the years unless there is some brain damage that may cause issues in this domain. Speech comprehension that depends on attention capacity (e.g. inhibiting irrelevant noise) and sensory capability (e.g. how well we hear) can be affected with age. Verbal fluency and retrieval can also worsen with age (see also chapter on physical development). For instance, one study showed that older people tended to be more repetitive, less wordy, and less specific in word choice in spontaneous speech as compared to young adults (Critchley, 1984).

Visuospatial processing such as visual recognition of objects, shapes, or gestures remains stable as we age (Rut et al., 2018). The visual spatial orientation is however likely to decline with age. For instance, if asked to copy a simple figure, older people can still manage to do so. Though, if they are asked to copy a complex figure, this task can prove difficult for them (Ogden, 1990). On free drawing tasks, it was noticed that drawings made by older individuals are more simplified and less articulate depending on their age (Ogden, 1990). Nevertheless, this may not interfere with the daily lives of many older individuals since tasks such as drawing a complex figure may not be part of the daily activities of older adults.

All in all, one can conclude that *normal cognitive ageing* implies a slowing of the information processing speed, difficulty in generating capacities for encoding speed and spontaneous recall, general preservation of language skills, some attention

deficits, and issues with visuospatial processing (Rut et al., 2018; Roberts & Allen, 2016). Studies show that there is a decline in cognitive performance for tasks that involve the following: control and switching of attention, manipulation of information, that require high processing speed and visuospatial processing (Hofer et al., 2003). Poor cognitive performance in older age is explained by a general slowing in processing speed and by dedifferentiation (Wilson et al., 2012; Roberts & Allen, 2016). However, from a positive psychology perspective, one can interpret these issues as age-related changes where older individuals can compensate and optimize their cognitive abilities within the cognitive development process. Change represents a significant aspect of the cognitive ageing process (Parente, 2006). Normal cognitive ageing includes losses and gains because as some cognitive skills decline with age, some remain stable, and some improve (Parente & Wagner, 2006). In the following, I will explore what cognitive development means, how it is experienced by older individuals, and how it can be measured.

Meanings and Experiences: Facing Cognitive Challenges and Fostering Strengths

As we have seen in previous chapters (see Chaps. 1, 2, 3, and 4), development is linked to growth and improvement in functioning (Lerner, 2002) in one personal development domain or another. Cognitive development in midlife and older age is far from easy to define. How can we say that someone in their 40s or 70s is developing in the cognitive domain, and how can we differentiate between cognitive development in midlife versus old age? As stated above, there are no clear standards of what cognitive development stages or milestones should one reach during adulthood. If we ask middle-aged individuals or older adults what they think about cognitive development, they might define it in terms of "what they are still able to do". But this would imply that one should define cognitive development as the prevention of cognitive decline. However, from a positive psychology perspective, it is important to focus on strengths and gains (Seligman et al., 2005; Peterson & Seligman, 2004) when trying to capture the meaning of cognitive development. Thus, next, I will summarize some definitions from different perspectives that consider cognitive development as a balance of losses and gains.

Studies from neuropsychology tend to define cognitive development in terms of neuroplasticity, neurogenesis, and boosting the cognitive reserve (see also chapter on physical development in this book). *Neuroplasticity* refers to the capacity of the brain to "reinvent" itself, namely, to change and shape itself in a different form, as an adaptation to new experiences. Our brains can transform following the need to adapt to the environment. Neurogenesis refers to the process in which stem cells from our neurons within the hippocampus region of the brain differentiate and reproduce into new neurons with novel experiences and other supporting cells (Maharjan et al., 2020). Recent studies show that not only neuroplasticity but also

neurogenesis occur in the ageing brain. Thus, from a neuropsychological perspective, cognitive development is still possible as we age.

The *cognitive reserve* theory assumes that some people can cope better with brain damage then others during the normal process of ageing because of their brain reserve (e.g. neuronal networks, cognitive processes). The cognitive reserve helps our brain to be more plastic and adapt to new situations in the environment. The *brain reserve* refers specifically to brain size and neuron counts (Katzman, 1993). The brain reserve represents a passive model of the cognitive reserve, as it postulates that there is a threshold which, if surpassed, functional deficits will appear. It also assumes that this situation occurs for each ageing person, without taking the heterogeneity of cognitive functioning in old age into account. Another, more activity-oriented theory concerning the cognitive reserve postulates that our brain uses pre-existing cognitive processes or enlists compensatory processes to cope with brain damage (Stern, 2002). For example, two people can have the same brain reserve capability but different cognitive reserve capacity. From the two individuals, the one with better cognitive reserve will tolerate brain damage better and maintain his or her functional capacities to a greater extent. The cognitive reserve focuses on the processes that allow individuals to survive brain damage and maintain functioning (Stern, 2009). Cognitive training as well as stimulating environments and exercise have been shown to improve neurogenesis (Brown et al., 2003; van Praag et al., 2005) and increase neuroplasticity (Stern, 2009). This lends support to the idea that cognitive development can be stimulated during midlife and older age and prevent cognitive decline and pathology. In addition, authors like Stern, 2009 suggest that cognitive reserve is not static; it results from different kinds of influences across the lifespan such as education, leisure time activities, and exposure to inspiring environments. Thus, this suggests that cognitive development is possible through training and that it can be measured by evaluating the evolution of a person's cognitive reserve across his or her lifetime.

When aiming to explore cognitive development, it is important to first describe some concepts that are directly related with it, such as intelligence and wisdom. Concerning intelligence, researchers have made a clear distinction between *fluid and crystallized intelligence* (Cattell, 1971, 1987). Fluid intelligence refers to reasoning, comprehension, problem-solving, speed of processing information, or speed of recalling information. It involves the ability to think flexibly and understand abstract relations. By comparison, crystallized intelligence involves recalling past knowledge and earlier experience. It reflects *efficient processing and storage of accumulated information throughout a lifetime* (Salthouse, 2004). For example, school tests or job interviews usually assess crystallized intelligence since they ask candidates to recall stored information and apply their knowledge to solve specific tasks. If we take the example of math problems, crystalized intelligence implies knowing different formulas, algorithms, or the meaning of prime numbers. Fluid intelligence refers to the ability to create strategies to solve complex math problems. The two types of intelligence are said to rely on distinct brain systems even though in order to perform cognitive tasks successfully, we usually need both fluid and crystallized intelligence.

In terms of lifespan development, it was shown that fluid intelligence develops until we are in our 30s and then begins to decline, while crystallized intelligence continues to develop while we are in our 60s, and then it reaches a plateau and is maintained more or less at the same level (Salthouse, 2010). Mental abilities belonging to crystalized intelligence depend on experience and practise and can develop over the lifespan. For instance, reading comprehension and vocabulary can be enhanced through cognitive training (Salthouse, 2004). Crystallized intelligence has been compared to wisdom, since the latter also involves the ability to understand a problem from multiple perspectives and recognize the limitations of one's own knowledge (Grossmann et al., 2010). In order to assess the evolution of fluid and crystallized intelligence across the lifespan, we need to know how to evaluate the two. Thus, an important question to ask is how are fluid and crystallized intelligence assessed? For fluid intelligence, usually working memory and abstract reasoning are tested, while in case of crystallized intelligence, vocabulary, the ability to make analogies and general knowledge is assessed. Cross-sectional and longitudinal studies conducted with older adults showed that fluid intelligence capabilities declined with age, such as performance on tasks involving reasoning, or processing speed (Salthouse, 2004, 2010), working memory (McArdle et al., 2002), or attention and problem-solving (Craik & Salthouse, 2000). The implication for cognitive development is that, with age, one relies more on crystalized intelligence. As people grow older, they use crystallized intelligence in a compensatory fashion for daily problem-solving and decision-making. In this sense, regarding intelligence, cognitive development may refer mainly to fostering crystallized intelligence and preventing the decline of fluid intelligence across middle and old age.

Wisdom represents another quantifiable positive outcome of cognitive development during adulthood. Wisdom is also cherished as a positive stereotype of ageing and older individuals. Yet not all older people are automatically wise. This means that the ones who eventually become wise have gone through a process of reflecting upon their life experience and that wisdom is the outcome of an ongoing developmental process. The heterogeneity observed in the elderly population also points to the fact that some continue to develop on an intellectual level. If we think about it, all of us can name some examples of people who are cognitively fit, learn new things, and apply them to solve problems in their everyday lives. There are even examples of people who start up new careers in their midlife. Having children and grandchildren can also help one to stay cognitively fit and stimulate intellectual growth, since the interaction with the young generation keeps one up to date with novelty (see also Chapter on grandparents, Part III of this book). Thus, even if people do not become more intelligent with age, they can surely learn new things and may become wiser.

Wisdom constitutes one of the most cherished outcomes of late adulthood and was defined as expert knowledge about human nature and life (Baltes & Smith, 2008). Wisdom is linked to personal growth and reaching a degree of maturity (Baltes & Kunzmann, 2004). People who are described as being wise are motivated to understand a problem from different perspectives; they consider the gains and losses associated with development across the lifespan. Wisdom, as a concept,

implies reflecting on experiences and learning from them and overall involves a desire to improve as a person (Staudinger et al., 2005). Thus, one can affirm that wisdom is linked with cognitive development in middle and old age. In this context, wisdom represents a strength that one can build with age. However, wisdom is not just a cognitive strength, as is can also be regarded as expertise in emotional regulation or even as a personality trait. Nevertheless, because it does involve several cognitive processes, it can be considered to represent an aim of cognitive development in middle and late life. From the perspective of the Berlin paradigm (Staudinger & Glück, 2011), wisdom has been defined as valued, expert knowledge on how to deal with existential problems in life and finding meaning in the process. Such existential problems like choosing the right career, finding the right life partner, and dealing with illness or the death of loved ones increase as people advance in life, and thus, wisdom becomes a necessary strength as we age. The authors of the Berlin paradigm (Staudinger & Glück, 2011) suggested that one should differentiate between general wisdom (e.g. expert knowledge about life in general) and personal wisdom (i.e. referring to one's own life). *Personal wisdom* implies self-knowledge (e.g. knowledge about oneself) and self-regulation (e.g. knowledge on how to deal with challenges). Three meta-criteria were also defined (Staudinger & Glück, 2011), namely, interrelating the self (e.g. insight into potential causes of one's own behaviour), self-relativism (i.e. taking distance from oneself), and tolerance of ambiguity (e.g. recognize and manage the uncertainties in one's own life). No matter what type of wisdom we aim for, one should keep in mind that wisdom is not automatically connected to older age. In order to become wise, one needs to invest time and effort, and thus, it comes as no surprise that there is no normative increase of wisdom with age. Thus, wisdom represents a strength that people can develop with age as it requires experience but also implies skills, such as self-reflection, that one may or may not have. Wisdom is much more connected to personal growth and the willingness to develop than with chronological ageing per se (e.g. it is no given fact that once one turns 60, one will become wise or that entering retirement will guarantee a wise old age).

All in all, an important characteristic of development in middle and older age is that the quest for improvement happens despite developmental constraints such as diminishing resources (e.g. physical functions such as eyesight or decline in hearing capacity) or restricted opportunities (e.g. family duties or work responsibilities interfere with personal development tasks). Nevertheless, middle-aged and older adults can improve in what their cognitive abilities are concerned even if sometimes development involves the improvement of compensatory strategies. For instance, our memory capacity might not improve, but we can learn mnemonic strategies to enhance the encoding and recall of information or make use of external devices to help us compensate (e.g. use of reminders, cues that help us remember, organizers, etc.).

Cognitive abilities can be measured with the help of different instruments. Table 6.1 presents an overview of some of the assessment instrument options. Several of the listed instruments are usually applied to measure deficit (e.g. what older adults cannot do anymore or where performance is worse than that of younger

Table 6.1 Examples of instruments to measure cognitive abilities

Cognitive ability	Measuring instrument
Memory	Memory Complaint Questionnaire (MAC-Q) measures the subjective perception of memory ability (Bertolucci et al., 1994)
Orientation in time and space, memory, attention, concentration, language, naming, comprehension, and constructional skills	Mini Mental Status Examination (MMSE) (Folstein et al., 1975)
Language	Category verbal fluency test (Argimon & Camargo, 2000)
Cognitive reserve	Cognitive Reserve Index questionnaire (Nucci et al., 2012)
Intelligence	Wechsler Adult Intelligence Scale WAIS-IV (Wechsler, 2008)
Cognitive strengths	
Self-efficacy	The General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995)
Curiosity	Curiosity and Exploration Inventory (CEI) (see Peterson & Seligman, 2004; Kashdan et al., 2018)
Creativity	The Creative Achievement Scale questionnaire (Carson et al., 2005)
Judgement	Dogmatism Scale, a self-report survey (Shearman & Levine, 2006), and argument evaluation test (expert analysis of arguments) – See: Critical thinking worksite: Argument evaluation (Lunggito et al., 2015)
Wisdom	ACL Practical Wisdom Scale, a self-report questionnaire (Wink & Helson, 1997) Self-Assessed Wisdom Scale (Webster, 2003; Webster, 2007) Three-Dimensional Wisdom Scale (Ardelt, 2003) Adult Self-Transcendence Inventory (Levenson et al., 2005) Berlin Wisdom Paradigm (Baltes & Smith, 1990; Baltes & Staudinger, 2000)

participants). For example, the *Mini Mental State Exam* is widely applied to detect dementia cases (Gaines, 2022). One can use the *General Practitioners Assessment of Cognition* or *the Memory Impairment Screen* and *Mini-Cog Brief Psychometric Test* which are recommended by the Alzheimer Association (Gaines, 2022). However, researchers working from a positive psychology perspective highlighted the importance of formulating positive outcomes and finding the right measures that would be suitable also for people with dementia (Stoner et al., 2017). In their review, Stoner and colleagues (2017) mention the *Herth Hope Index* (Herth, 1991), the *Systems of Beliefs Inventory* (Holland et al., 1998), and *Psychological Wellbeing Scale* (Ryff & Keyes, 1995; Ryff, 2014). When evaluating cognitive development in older age, one could include measures of strengths such as curiosity, creativity, or self-efficacy. These individual strengths can be included in the evaluation of needs for interventions to foster cognitive development in late life (e.g. what cognitive strengths do these people have and what they need to develop). Additionally, they can be applied for measuring the effectiveness of such interventions. For instance,

well-being can be used as an outcome in addition to measures for cognitive skills and their application in everyday life. The *Ryff Psychological Wellbeing Scale* (Ryff et al., 2010; Ryff & Keyes, 1995) measures self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. All of these subscales are relevant for boosting cognitive abilities in older age. The *Positive Psychology Outcome Measure* (PPOM, Stoner et al. 2017) was adapted also to be used with participants who suffer from dementia. Another questionnaire developed especially for individuals with dementia is the *Engagement and Independence in Dementia Questionnaire* (EID-Q, Stoner et al. 2017).

Why Intervene? Links Between Cognitive Improvement and Other Developmental Spheres?

Concerning the connection with *physical development*, as discussed above and in the chapter on physical development, there are close links between the brain reserve, the cognitive reserve, and cognitive development (Stern, 2009). Neuroplasticity and neurogenesis represent important physical assets for cognitive development. In contrast, the interaction between sensory deficits (e.g. impaired vision or hearing loss) and cognitive processes accounts for a decline in cognitive performance. Sensory deficits can increase the difficulty of performing well on memory or attention tasks. However, learning new cognitive strategies can compensate for the sensory deficits and perceptual aids (e.g. wearing glasses, hearing aids) can help improve cognitive performance. In this sense, there is an interplay between sensory and cognitive abilities in what the cognitive performance of older adults is concerned. The link between perception and cognition is high in young adults as well, but it becomes stronger with age (Baltes & Lindenberger, 1997). One the one hand, impaired perception leaves fewer cognitive resources available to perform cognitive tasks in older age (Roberts & Allen, 2016). On the other hand, cognition plays an important compensatory role to help people adapt to deficits in perception such as auditory or visual abilities (Roberts & Allen, 2016). A review on the link between perceptual deficits and cognition concludes that one needs to account for perceptual deficits when investigating cognitive decline in older age (Roberts & Allen, 2016).

The heterogeneity found in cognitive abilities in older age depends, among other factors, on a person's health and lifestyle (Ribeiro et al., 2010). Illness is unfortunately more prevalent in older age and can affect cognitive functioning (Spiro & Brady, 2011). For instance, vascular diseases as well as risk factors for vascular health issues such as risk behaviours (e.g. smoking, sedentarism) affect our cognitive capacities (Raz & Daugherty, 2018). People who evaluate their lives in positive ways are also more likely to engage in health behaviour and invest energy in maintaining their cognitive functioning (Lyubomirsky et al., 2005; Fredrickson, 2001). In contrast, people who hold negative views on ageing are less likely to engage in health behaviours and thus indirectly contribute to their own cognitive decline (Levy, 2003). Studies point out a connection between health behaviours and cognitive development (Small et al., 2012; Hertzog et al., 2008). For example, it was

shown that being physically active can help prevent memory loss by increasing the blood flow, prevention of blood clots forming in the brain, and causing memory loss or attention deficits. Nutrition also plays an important part in adult neurogenesis. It was reported that high fat and high sugar consumption as well as alcohol negatively affect adult neurogenesis (Poulose et al., 2017). Regular physical exercise was reported to contribute to neuroplasticity, neurogenesis, and learning skills (Maharjan et al., 2020). The other way around, when cognitive functions are preserved, people are more likely to engage in health behaviour such as regular exercise (Bherer, 2015). All in all, in order to have a healthy brain into old age, one needs to combine physical factors (e.g. plant-based diet, physical exercise, good sleep, stress management) with more cognitive ones (e.g. being socially engaged, exposing oneself to cognitive challenges) (Gaines, 2022).

The connection with *personality development* implies certain traits such as openness to new experiences and conscientiousness that are involved in cognitive growth. For example, openness and emotional stability were shown to predict memory performance among older adults. In addition, these personality traits are related to executive functions and episodic memory in older age (Stephan et al., 2020; Williams et al., 2010). Furthermore, higher levels of openness can constitute a resource for Alzheimer prevention (Duberstein et al., 2011). Research pointed out that lower emotional stability was related with cognitive decline in late life, while higher conscientiousness and emotional stability were associated with slower cognitive decline (Chapman et al., 2012; Luchetti et al., 2014). The link between personality and cognition can also work the other way around, in the sense that in patients with Alzheimer, there was an increase in neuroticism and a decrease in conscientiousness (Robins Wahlin & Byrne, 2011). Higher neuroticism (i.e. tendency to experience negative emotions and distress) was found to be associated with lower performance in episodic memory, while higher levels of openness (i.e. predilection for variety and intellectual curiosity) and conscientiousness (i.e. tendency to be organized) were related to better memory functioning (Chapman et al., 2017; Graham & Lachman, 2012; Klaming et al., 2017).

Specific cognitions such as views on ageing are linked to personality development (Kornadt et al., 2019). For instance, lower levels of neuroticism, higher conscientiousness, and higher openness were shown to predict more positive attitudes towards ageing (Kornadt et al., 2019). The other way around, how people think about ageing and older individuals may shape their personality (Kornadt et al., 2019). The way people react to certain age-related situations depends on their views on ageing and influences their personality (Rothermund & Brandtstädter, 2003; Kornadt, 2016; Kornadt et al., 2015). When older people encounter stressful situations the way they think about ageing plays an important role in their general coping and development. For example, if a person believes that older people are wiser and calmer, then they will tend to act in ways that confirm this positive stereotype. According to the TESSERA frame, with time, this attitude can lead to a decrease in neuroticism and increase in agreeableness (Wrzus & Roberts, 2017). Wisdom as a cognitive and personality trait also illustrates the link between personality and cognitive development. For instance, studies point out that general and personal wisdom is linked to openness (Mickler & Staudinger, 2008; Staudinger et al., 2005).

Wisdom is a component of cognitive development but also was described in the literature as being part of personality development (Ardelt, 2003). As people grow older, the problems they need to deal with become more complex. Personality traits such as openness and conscientiousness may help in coping with complex problems and developing wisdom.

Poor cognitive functioning can hinder social activity (Bourassa et al., 2015) and thus negatively affect development in older age. In contrast, people who report good cognitive functioning such as having a purpose in life also engage in more social activity (Galenkamp et al., 2016). One important cognitive function that is involved in *social development* is memory. For example, as mentioned above, prospective memory is important for remembering tasks that relate to daily life. Organizing meetings with people involves coordination and prospective memory abilities. Autobiographical memory is also important for keeping track of one's social relations and social support sources. The other way around, significant others (e.g. life partner, friends, family) can help one to exercise ones' memory and other cognitive skills such as language. For example, contact with grandchildren can provide opportunities for older individuals to learn new skills and develop on a cognitive level (see chapter on grandparents, Part III in this book). Cognitive performance in older age was found to depend on education (Ribeiro et al., 2010). Crystallized intelligence depends on education, on the environment, on culture, on our physical health, and on our social environment (e.g. surrounding oneself with people who are cognitively stimulating to enhance cognitive abilities). Maintaining cognitive functioning in older age also helps with finding social support and apply thus support to buffer stress (Cohen, 2004). The mental stimulation one receives by engaging in social activities can help prevent cognitive decline, while loneliness and decreased social engagement can lead to cognitive deterioration (Lövdén et al., 2005). People with bigger and more complex social networks were shown to have a larger amygdala (Bickart et al., 2011). Furthermore, as reported also in the chapter about love (see chapter on love, Part III in this book), romantic partners play an important role in shaping development (Monin et al., 2015), including cognitive abilities in older age. However, cognitive decline of one partner will impact the daily life of the couple and affect cognition and well-being of both partners (Drewelies & Gerstorf, 2020). Collaborative cognition and communication within the couple can facilitate the use of joint knowledge and help preserve cognitive functioning in both partners (Margrett & Marsiske, 2002). In general, while individual cognitive tasks (e.g. solving a puzzle, doing crosswords, reading a book, etc.) are important, social activity stimulates the brain in several ways. For instance, one needs to process visual-spatial information, exercises attention, and language abilities or decision-making concerning behaviour in a social group (Gaines, 2022). When going to a dinner party, one gets to interact with different people, discuss various topics, exercise dividing one's attention, practise memory skills by recalling people's names, and so on.

In terms of *emotional development*, studies point out that cognitive development and well-being are interlinked (Drewelies & Gerstorf, 2020). This means that better performance at cognitive tasks is associated with higher levels of well-being (Drewelies & Gerstorf, 2020; Brose et al., 2014). Additionally, enhanced cognitive functioning predicts well-being in older individuals (Wettstein et al., 2015), while

well-being predicts better cognitive functioning in general (Gerstorf et al., 2007; Allerhand et al., 2014; Bielak et al., 2012). In this context, well-being is considered to be both a cause and outcome of cognitive development in older age (Drewelies & Gerstorf, 2020). Cognitive health was found to represent a component of well-being in older age (Bart et al., 2018). Cognition can be regarded as part of evaluative well-being along with the more affective elements of the concept (Deci & Ryan, 2006). Evaluative well-being refers to how people assess their life in general or evaluate specific aspects such as family or work. Emotional well-being refers to how frequently people experience positive emotions like happiness. Having a purpose in life can be considered part of the cognitive realm and is also a component of well-being (Baltes et al., 2006). Having a purpose in life was shown to be associated with lower risk of developing dementia (Boyle et al., 2012; Sutin et al., 2018). Cognitive functioning is considered to be a mechanism of adaptation to life's conditions (Baltes et al., 2006) because it provides instrumental resources and has behavioural and motivational effects (Drewelies & Gerstorf, 2020). All these cognitive resources can help individuals to face the challenges in their lives and sustain or nurture well-being (Allerhand et al., 2014). For example, maintaining their cognitive functions helps older people stay autonomous and consequently to experience well-being. In contrast, impaired cognition constitutes a barrier to being independent. For instance, memory impairments may hinder a person to fulfil regular everyday tasks such as shopping or cooking or engaging in social activities with other people (Lövdén et al., 2005). On a neurobiological level, higher levels of dopamine activate the amygdala and increase the likelihood of processing positive information. The amygdala sends signals to the hippocampus to remember the positive information (Sharot et al., 2012). These neurobiological processes contribute to higher well-being.

In contrast, negative emotions such as depression are associated with poor performance of cognitive tasks (Jorm, 2000). This can be explained through the presence of rumination that uses up cognitive resources that would otherwise be invested in solving cognitive tasks effectively (Drewelies & Gerstorf, 2020). Additionally, physiological changes such as neurotransmitter activity can explain how depression influences cognitive functioning (Drewelies & Gerstorf, 2020). Stress also influences cognitive functioning as well as well-being (Charles et al., 2013). For example, undergoing chronic stress can lead to hyperactivity of the hypothalamus pituitary adrenal axis and consequently to higher cortisol levels and atrophy of brain regions such as the hypothalamus that is involved in memory functioning (Llewellyn et al., 2008). One study showed that exposure to everyday stressors contributes to worse self-reported memory performance 6 months later (Stawski et al., 2013).

Nevertheless, on a positive note, there are cognitive strengths that one can train to achieve well-being. For example, *benefit finding* and exercising *meaning making* after traumatic events represent one area of intervention where cognitive and emotional developments are linked. Sometimes trying to find benefit or meaning may also contribute to personality development, as people are likely to experience some sort of change during the process of meaning making (e.g. become more agreeable, more extrovert, more open to novel experiences). Another relevant cognitive strength is represented by curiosity, defined as an approach-oriented motivational state, an impulse to seek out new things that activates a reward system and thus has a general positive emotional effect. The reward system motivates seeking novelty in

everyday life and recompensates exploring new things or situations. Intrinsic motivation implies that people pursue different activities because they are interested and not because they seek out certain incentives. This can prove very useful as one gets older and the setbacks multiply. Continuing to pursue hobbies or mental training activities because one likes them may happen to be very useful since rewards might not come as easily as in younger years. Curiosity has been associated with well-being (Jovanovic & Brdaric, 2012). This fact has been explained by the reward mechanism and intrinsic motivation system that it sets in action. While investing time and effort into seeking and mastering novel challenges, people also develop on a cognitive level. In this context, curiosity was also linked to higher stress tolerance and higher likelihood of stepping outside one's own comfort zone (Kashdan, 2007).

How to Foster Cognitive Development in Older Age

As we have seen in the other sections in this chapter, several losses can be noticed in the cognitive domain among older or middle-aged individuals. Nevertheless, the good news is that all cognitive abilities (e.g. memory capacity, attention, language, etc.) can be improved or maintained to the desired level if people set this as their objective and invest time and resources to realize this goal. People can train their memory and their attention span; exercise analytical thinking, problem-solving, and decision-making skills; acquire new learning strategies; and develop their creativity during midlife and older age. Apart from the concrete skills that one can exercise and master, there are several individual strengths that can prove to be useful for intellectual growth. These include, for instance, self-efficacy, positive views on ageing, as well as selection, optimization, and compensation strategies related to cognitive developmental goals. *Cognitive training* in older age implies both a series of skills to acquire and practise and strengths that facilitate learning. For instance, learning new things or training mental abilities require a person to believe that he or she has the capacity to do so. In this context, developing self-efficacy becomes significant. Moreover, as discussed in other chapters (see Chaps. 1, 2, 3, and 4 in this book, chapters in Part III of this book), positive views on ageing can represent an important resource to foster cognitive development. In the following, I will discuss some of the most important strengths that one could cultivate during cognitive training interventions based on positive psychology principles. Nevertheless, these examples are of course not exhaustive, as there are other strengths that a person can identify and work on to improve on a cognitive level. Furthermore, such interventions are usually tailored to individual needs in order to be more effective. The following examples are meant to provide a starting point on the fascinating challenge of cognitive improvement in middle and older age.

Self-efficacy (i.e. belief that one can perform a certain action to reach desired goals) plays an important role concerning which behaviours people choose to engage in and how much they persevere when they face obstacles (Bandura, 1997). Self-efficacy beliefs are relevant for psychological adjustment, a skill that is highly needed during middle and older age. Self-efficacy also implies the ability to coordinate skills in difficult and changing situations, ageing being an example of such a

situation. Low self-efficacy is associated with anxiety and avoidance behaviour. Having high self-efficacy is connected to growth by engaging in a series of tasks that lead to cognitive development. Considered a system of beliefs in itself, self-efficacy is something that is worth training in order to improve our cognitive abilities. Self-efficacy can be developed through modelling (e.g. portraying models of middle-aged and older adults who learn new things and master cognitive tasks), verbal persuasion (e.g. encouraging slogans concerning how one can master cognitive abilities in older age), personal experiments (e.g. people try out new cognitive tasks and see that they can master these), or imagined experiences (e.g. imagining oneself as performing a cognitive task successfully).

Views on ageing are defined as beliefs about ageing, old age, and older individuals (Wurm et al., 2007; Crăciun, 2019). These can be positive (e.g. seeing old age as a time of continuous development, older people as still capable to learn) or negative (e.g. associating ageing with decline and loss and considering older people to be frail and ill). How people regard ageing and older people is mostly influenced by stereotypes of ageing that exist in a certain social context (Levy, 2009; Crăciun, 2019). Compared to ageing stereotypes (Levy, 2009), views on ageing refer to one's own ageing process (Wurm et al., 2007). Levy (2009) proposes in her *stereotype embodiment theory* that stereotypes of ageing are internalized and in time become self-stereotypes or self-perceptions of ageing (Kornadt & Rothermund, 2012). Negative stereotypes of ageing can become self-fulfilling prophecies (Wurm et al., 2013). Thus, promoting positive views on ageing is relevant in order to foster cognitive development in older age. Views on ageing need to be first identified. Next, one can discuss the negative views of ageing (e.g. examples are found, negative beliefs about ageing are disputed) and explore positive alternatives that can replace them.

In line with the self-efficacy concept, one can train *hopeful thinking.* According to Snyder (2002), hopeful thinking implies the belief that one can create pathways to the goals that one sets. Additionally, it represents the belief that one can be motivated to use those pathways to achieve the desired aims. In this context, goals are the mental targets we set for ourselves to direct our actions. Objectives can be expressed as verbal statements (e.g. I want to be healthy in my old age) or as mental images (e.g. having an image of oneself surrounded by grandchildren in old age) and can be set for a shorter or longer time. Goals can be formulated as approach (e.g. I want to stay healthy) or avoidance-oriented (e.g. I want to avoid getting ill). Agency is the motivational component according to the hope theory and involves the belief that one can reach the goals one sets. Agency thinking is important when pursuing all sorts of goals, including cognitive development ones. Also, it is particularly relevant for getting over obstacles, which can unfortunately be numerous during midlife and older age. Hopeful thinking or agency thinking is something that a person can train in order to pursue and master cognitive development goals.

Encouraging *curiosity* represents another way to foster cognitive development in midlife and older age. Curiosity refers to seeking out novel ideas, meeting new people, and learning new things and is connected with intrinsic motivation. Additionally, it can have positive emotional and social outcomes. According to research on curiosity, this has both an immediate and long-term function and both serve the purpose of cognitive development. In the short term, curiosity encourages people to learn and to explore something in greater depth. In the long term, it helps to build knowledge and

competences (Von Stumm & Ackerman, 2013). Curiosity is useful when dealing with challenges and uncertainties and, thus, can be an important asset in the lives of middle-aged and older individuals who often must face complex challenges. Authors like Silvia (2006) suggest that people who are curious tend to select activities and people who make them grow on a personal level and thus increase durable psychological resources for themselves and create even more meaning in life. Can one train curiosity? In order to do so, people can aim to challenge themselves, seek out new experiences, meet new people, and get out of their comfort zone. By exposing themselves to new environments and challenges, individuals train a certain mindset characterized by openness and exploration that can in turn help them be more competent and experience well-being. Introspection and curiosity to know oneself may also lead to developing wisdom (i.e. as a cognitive development outcome or personality trait). In addition, curiosity helps to train learning skills. The latter are relevant for learning new things, maintaining memory capabilities, training the executive function, and in general enhancing the cognitive reserve.

Creativity represents a cognitive strength that implies flexible thinking. Studies point out that there is a link between our creativity and our cognitive reserve (Colombo et al., 2018). The latter refers to the fact that the brain actively attempts to cope with neural damages by using existing cognitive processing approaches or enlisting compensatory approaches (Colombo et al., 2018). The cognitive reserve hypothesis was proposed by Stern (2002, 2006, 2009) to explain differences in how people cope with brain damage. Individuals who are high on cognitive reserve can optimize and augment their performance by differential recruitment of brain networks (Stern, 2002). The cognitive reserve is useful in coping with age-related brain changes in normal aging as well as for preventing dementia (Stern, 2009). The reserve hypothesis comprises two models, namely, a passive one and an active one. The passive one refers to the brain reserve and describes a positive relation between brain size and the ability to cope with pathology without presenting signs of clinical impairment (Stern, 2009). The active pathway or cognitive reserve refers to the fact that individual experiences (e.g. education, the kind of work one does, cognitively stimulating leisure activities, etc.) provide protection against the effects of brain damage and pathology. Additionally, the cognitive reserve helps people cope by enrolling compensatory processes and slowing down memory decline in normal ageing (Stern, 2009). The cognitive reserve also includes social networks cohesion and personality variables (Bennett et al., 2006) thus illustrating the link between cognitive development and personality and social development. Creativity can be understood as three types of mental operations: widening (e.g. tendency to keep an open mind), connecting (e.g. capacity to establish links between different elements and connect them in unexpected ways), and reorganizing (e.g. being able to change perspective and invert relations between different elements). The cognitive reserve implies applying alternative strategies, and these are similar to the creativity elements listed above, namely, being able to keep an open mind, creating new and uncommon associations, and changing perspective. Colombo and colleagues (2018) argue for an existing link between creativity and cognitive reserve. Thus, we may strengthen our creativity in order to nurture our cognitive reserve.

Developmental assets can also be boosted in order to promote cognitive development in older age. As discussed also in the previous section, lifestyle interventions

were proposed to foster cognitive growth and maintenance of cognitive skills in older age (Maharjan et al., 2020). For example, including curcuma in one's diet can be helpful in preventing cognitive decline because of its antioxidant properties (Maharjan et al., 2020). A caloric restriction diet can also impact brain plasticity and reduce the risk for memory decline (Maharjan et al., 2020). Nevertheless, calorie restriction should not mean decreasing the quality of the food intake as one needs to pay attention to consume nutritious food instead of food that is high in calories and low in nutrients. Engaging in regular exercise is also important for boosting brain plasticity in older age and can thus be recommended as a lifestyle intervention component. For instance, one study showed that after 3 months of engaging in physical activity, participants experienced an increase in the size of their hippocampus area and blood flow and thus an improvement in memory skills (Chapman et al., 2013). Involvement in aerobic exercise helped to improve information processing speed, prevent atrophy of the hippocampus, and increase the neural volume of the hippocampus among older people (Chapman et al., 2013).

In terms of cognitive abilities, several exercises can be implemented as cognitive training to foster cognitive development. Under the motto "use it or lose it", one can train memory abilities, language, attention, or visuospatial skills. Intergenerational communication can help in this sense, as contact with grandchildren can help one stay mentally fit (see chapter on grandparenting, Part III of this book). To note, cognitive abilities can be improved in older adults with cognitive training interventions (Ball et al., 2002). The cognitive training intervention ACTIVE (i.e. advanced cognitive training for independent and vital elderly) aimed to improve cognitive skills and performance on three cognitively demanding daily tasks among older adults (Ball et al., 2002). The cognitively demanding daily tasks included food preparation, driving, medication use, and dealing with financial issues (Ball et al., 2002). The intervention was conducted in small groups over a period of 5–6 weeks. It included ten sessions, each lasting around 60 minutes. The first five sessions focused on strategy learning, while the others were mostly dedicated to exercises and practise of the strategies. The targeted cognitive abilities were memory, reasoning, and processing speed. Memory training concentrated on verbal episodic memory. It consisted of learning different mnemonic strategies (e.g. how to remember word lists, sequences of items, text material, and main ideas and details of stories). For instance, participants were told how to organize word lists into meaningful categories or form visual images and make mental associations to recall words or text (Ball et al., 2002). Exercises included lists of words or relevant daily tasks (e.g. recalling a shopping list of groceries, recalling details from a prescription label of medicine they need to take). Reasoning training concentrated on solving problems that have a certain pattern (e.g. identify a pattern in a series of letters or numbers that is presented to them) or understanding a pattern within a daily activity (e.g. medicine dosage) (Ball et al., 2002). Exercises involved abstract tasks (e.g. a series of letters) or daily activity tasks (e.g. travel schedule). Processing speed training involved visual search skills and the ability to identify and locate visual information quickly in a divided attention format (Ball et al., 2002). Participants were given increasingly more difficult tasks (e.g. adding visual or auditory distractions) to practise on a computer and train their processing speed.

Cognitive training exercises do not need to be costly or very abstract. Several cognitive training exercises can be practised as part of everyday life. For instance, learning a new language stimulates the formation of new interneural connections and helps to prevent cognitive pathology (Kroll et al., 2015). Listening to music or making music can also constitute a cognitive exercise because music stimulates several areas of the brain (Wan & Schlaug, 2010). In this sense, learning a new dance can also prove a useful exercise because it involves listening to music and also coordination of movements and music, attention, visuo-spatial processing, and language (e.g. since we usually need to describe a movement with words in order to learn it). Playing card games, board games, or strategy games can also enhance cognitive abilities in older age. In this sense, grandchildren can be helpful since they can be fun play partners for their grandparents and have some cognitive fun together. Solving puzzles alone or together with others can improve cognitive abilities because it involves skills such as pattern recognition and problem-solving abilities (Fissler et al., 2018). Travelling was also listed as an activity that stimulates cognitive function through exposure to novel experiences and consequently building of novel neuronal connections (Gaines, 2022). Forest walks, the so-called forest bathing, can be beneficial for cognitive functioning and regeneration (Wen et al., 2019). On a similar note, cultural engagement (e.g. visiting an exhibition, reading a new poet, etc.) can also help form new neuronal connections and boost cognitive capacities (Gaines, 2022). In older age, one only needs to pay attention to find the right cognitive challenges so that older people feel stimulated but not overwhelmed (Proffitt, 2016).

Positive psychology focuses on developing individual strengths and then making use of these in order to prevent deficits (Diener, 2009). For instance, interventions from a positive psychology perspective can focus on indirectly decreasing the risk for dementia by increasing individual strengths. Understanding which factors can play a protective role in preventing cognitive decline and dementia has a great importance for developing dementia prevention programmes (Bell et al., 2022). For instance, having a purpose in life was associated with reduced risk for dementia (Bell et al., 2022). Thus, dementia prevention programmes, targeted at middle-aged adults, should include the consolidation of a sense of meaning and purpose in life among their objectives. One challenge for dementia research and intervention from a positive psychology perspective was to decide upon the suitable intervention outcomes and the corresponding measuring instruments. Identifying outcomes and measures would help to evaluate the effectiveness of such prevention programmes aimed at reducing the likelihood of dementia onset.

The *positive psychology principles* imply that instead of attempting to identify deficits or decline (e.g. identify deficits in memory capacity or information processing), one would focus on identifying strengths at the individual level (i.e. what are the cognitive assets that are strong within a specific person). For example, is memory a strong point of a person or rather language? Is the person good with structuring information or does he or she have above average visual abilities? As discussed above, we can also look for strengths and values with application in the field of cognition (e.g. self-efficacy, curiosity) or developmental assets from other fields of development (e.g. emotional regulation, openness to new experiences, health behaviours, social skills, etc.).

Wisdom represents at the same time a specific strength and a positive outcome of cognitive development in older age. Wisdom is believed to be both theoretical (e.g. reflect on things we cannot change but that we try to understand such as death) and practical (e.g. reflecting on things that we can change if we make the right choices such as having better romantic relationships). As also discussed in the first sections of this chapter, there are several definitions of wisdom in the psychological literature, since this represents a topic that has interested many researchers. To note that even if wisdom is usually regarded as a positive ageing stereotype, not all old people are wise, because growing older unfortunately does not automatically bring wisdom. The balance theory of wisdom (Sternberg, 1998) postulates that we use intelligence, creativity, common sense, and knowledge to balance all life domains and achieve wisdom. People achieve balance by adapting to their environments and shaping these or finding new environments. Baltes and Staudinger defined wisdom as *expertise in the fundamental pragmatics of life* (Baltes & Staudinger, 2000, p. 124). In contrast, Ardelt defined wisdom as *integration of cognitive, reflective, and affective personality characteristics* (2004, p. 257). Thus, from the perspective of Ardelt, wisdom can be regarded as both the result of cognition and as personality development. A review of the wisdom literature identified some common areas (Meeks & Jeste, 2009). These also reflect the strengths that one could master in order to achieve wisdom. For example, these assets include prosocial attitudes and behaviour (e.g. promoting common good, empathy), social decision-making (e.g. understanding others), emotional balance (e.g. impulse control), reflection and self-understanding, value relativism and tolerance, acknowledgement, and dealing effectively with ambiguity (Meeks & Jeste, 2009). A positive psychology definition of wisdom describes it as *knowledge hard fought for, and then used for good* (Peterson & Seligman, 2004, p. 39). In this perspective, wisdom is regarded as a trait or virtue that includes five strengths, namely, curiosity, creativity, love for learning, judgement capacity, and perspective (Peterson & Seligman, 2004). These strengths can be identified with the character strengths survey (Peterson & Seligman, 2004; Seligman, 2011). The development of wisdom can constitute a goal of intervention programmes using positive psychology principles. A first step would be to identify which of the five strengths a person already possesses and which one they need to enhance to achieve wisdom and improve on a cognitive but also personal level.

Some of these strengths are also challenging to define. For instance, *creativity* was described as *big C and little c* (Simonton, 2004; Miller, 2022). The former refers to creative works that transform people or society, while the latter refers to how we can be creative in our everyday life (Miller, 2022). From a positive psychology perspective, the little c was defined as *thinking of novel and productive ways to conceptualize and do things; includes artistic achievement but is not limited to it* (Peterson & Seligman, 2004, p. 29). In order to stimulate creativity among middle-aged and older individuals, first a person needs to identify in which situation he or she acts in creative ways. Next, in order to motivate the improvement of creativity, middle-aged and older individuals should be encouraged to reflect on how creativity can help solve life problems in a more effective way. Additionally, they need to identify barriers (e.g. what hinders their creativity in everyday life?) and facilitators (e.g. what resources does a person possess in order to be more creative?). Older and

middle-aged individuals can exercise divergent thinking concerning a problem and brainstorm as many ideas as possible that can act as solutions to the issue at stake.

As discussed above, *curiosity* means being interested in the surrounding world for the sake of knowledge itself, enjoying the discovery of new things and findings several topics fascinating (Peterson & Seligman, 2004). Several dimensions of curiosity were described by Kashdan et al. (2018) and included in an inventory. These are deprivation sensitivity (i.e. a deep need to fill gaps in knowledge), joyous exploration (e.g. considering the world to be fascinating), social curiosity (e.g. wanting to know what others are thinking), stress tolerance (e.g. admitting and using anxiety that is linked with novel experiences), and thrill seeking (e.g. engaging in risk actions to provide varied and intense experiences). Curiosity can thus be encouraged by working on these dimensions. To increase curiosity, middle-aged and older individuals can first identify when they are curious or what things raise their interest. Then, just as in case of creativity, middle-aged or older adults can classify the resources (e.g. what motivates one to be curious) and barriers (e.g. what stops one from being curious, when one feels uncomfortable to be curious). A practical exercise is to find an activity that we do not particularly enjoy and identify three novel features about it. We can exercise curiosity in our everyday life by practising active curiosity, namely, actively seeking novelty instead of waiting that other people stimulate us with new ideas and activities. Like this, curiosity can become a habit.

Judgement refers to being open-minded and thinking critically (Miller, 2022), thinking things through instead of jumping to quick conclusions based on insufficient information (Peterson & Seligman, 2004). Exercising judgement means identifying the biases in our own thinking patterns and trying to assess a situation in a fair manner (Miller, 2022). Also, exercising argumentation and critical thinking can help to build this character strength. In order to motivate middle-aged and older people concerning the use of judgement, they can be asked to consider situations where they use critical thinking or judgement automatically and reflect on what are the positive consequences of this (Miller, 2022). People can also think about situations where they tend to overuse the strength of judgement and reflect whether they should also think in a more emotional way (Miller, 2022). Older and middle-aged individuals can exercise critical thinking by arguing against one's own beliefs and finding counterarguments to one's own ideas, beliefs, or actions (Miller, 2022).

Love of learning refers to constantly wanting to learn and master novel skills and accumulate new knowledge (Peterson & Seligman, 2004). People who have these strengths tend to deal well with frustration because for them learning itself represents a positive experience (Miller, 2022). There are several traits that help to stimulate love for learning, such as positive feelings about a topic, knowledge about a certain topic, asking questions, ability to identify, and use resources well to solve a task (Peterson & Seligman, 2004). These traits can be translated into exercises (e.g. how to formulate smart questions, how to identify the tools you need for learning something new, etc.). To encourage love of learning, middle-aged and older people can be asked to think about a domain where they usually are curious to find out more and then identify a new domain where they can apply this particular strength (Miller, 2022). Older and middle-aged adults can also differentiate between situations where curiosity represents a driving force and what situations or topics do not arouse their curiosity. To train love of learning, middle-aged and older people can choose a domain that interests them (e.g.

gardening, cooking, photography, etc.) and pursue their curiosity for this domain to find out more and enhance their skills. Older age also implies situations or domains where learning something new may be boring, but older adults can be stimulated to reflect on how learning those new things may prove beneficial for them (e.g. using technology if the person finds technology irritating, boring, or threatening).

The strength of *perspective* refers to acknowledging one's own role and the roles of others in the world. Perspective is shaped by life tasks, adjustment, coming to terms with one's choices in life, life changes, or stressful life experiences (Hartman, 2000; Peterson & Seligman, 2004). Perspective is crucial for developing wisdom (Miller, 2022). Older and middle-aged people can be asked in what situations they feel most or least comfortable to share their perspective (Miller, 2022). They can also reflect on how perspective as a character strength has helped them in their workplace or in their private life. People can be asked to name a life problem (e.g. gender roles during retirement, handling being a resource for one's children and for one's ageing parents, etc.) that interests them and then imagine they travel around the world and have to speak about it with people from different cultures. In order to do this, they need to gather information about the differences in life contexts, values, and perspectives (Miller, 2022). Strengths can be underused or overused (e.g. being a conformist or eccentrically creative). When practising any of the above-mentioned strengths, people should be advised to keep a balance since an overuse of these strengths can also be detrimental (e.g. being nosy instead of curious or judgemental and cynical instead of a good critical thinker) (Miller, 2022).

Conclusion

As people age, several changes take place concerning their cognitive abilities. These transformations are more visible than changes that happen in the personality, social, and emotional realm because they are closely linked to changes in physical capabilities. Studies show that there is a large heterogeneity where cognitive functioning in older age is concerned (Rut et al., 2018). Cognitive ageing can be described as a series of modifications that occur concerning the processing speed of information, memory, attention, language, and visuospatial capacities. However, cognitive development is more challenging to define. Ageing implies a decline in information processing speed, working memory, and executive functions (e.g. attention, inhibitory control) (Murman, 2015). Nevertheless, cumulative knowledge and experiential skills are maintained into old age (Murman, 2015). Additionally, these can compensate for losses in processing speed, memory, or executive functions.

Cognitive development implies a series of gains and losses that happen in older age. An important point to make is that cognitive development does not just imply the prevention of cognitive decline or reducing the risk for dementia. Furthermore, it involves fostering a series of individual strengths such as curiosity, benefit finding, self-efficacy, and wisdom. Interventions to foster cognitive development in older age are relevant because cognitive growth is linked to all other domains of development in older age (i.e. physical, social, emotional, personality). From a positive psychology perspective, one can boost inner strengths and developmental assets in

order to promote cognitive development and prevent dementia among older individuals. Inner strengths that one can foster in older age to improve cognition include curiosity, self-efficacy, hopeful thinking, and positive views on ageing. Thus, from a positive psychology perspective, one first identifies the cognitive strengths a person possesses rather than the areas where the person has experienced deficits. After identifying the cognitive strengths of a person, one would make a plan (e.g. concrete exercises tailored to a person's interests and lifestyle) how to improve these and thus foster cognitive development. The cognitive exercises that one includes in cognitive training programmes should be novel and stimulating so as to help people grow but should not be too difficult so that they do not end up just being frustrating (Gaines, 2022). Novelty helps to ensure neuroplasticity (Park & Huang, 2010). Cognitive health represents an important component of development and positive ageing (Bart et al., 2018), and thus more attention should be given in research and practise to foster it at individual, organizational, community, and policy levels.

Reflection Questions

1. Define cognitive ageing and cognitive development in your own words.
2. What does cognitive development mean to you? What strengths would you develop to train your cognitive capacity for older age?
3. How would you motivate an older person (e.g. your grandparents) for cognitive growth?
4. What strengths could your grandparents develop in order to foster cognitive growth in older age?
5. Formulate three objectives and three strategies for a dementia prevention programme from a positive psychology perspective.
6. Formulate three aims and three strategies for a cognitive training programme for older adults based on positive psychology principles.

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Chapter 7
Social Development in Midlife and Older Age: How Social Roles and Relations Shape Personal Growth

They say nothing lasts forever; dreams change, trends come and go, but friendships never go out of style. —Carrie Bradshaw, Sex and the City Series.

Introduction

Individuals are social beings who change over their entire lifespan in parallel with and affected by the evolution of social contexts (e.g. economic recession or growth, pandemics, wars, etc.). Social development can entail a series of gains and losses over the life course, just as in the case of cognitive or personality development (see chapters on cognitive development and personality development in this book). Midlife and older age imply specific social roles that are associated with them. Changes in social status (e.g. marriage, retirement, widowhood) and social roles (e.g. becoming a wife or husband, becoming a parent, becoming a grandparent) have an impact on a persons' development in different areas. For example, retirement with its associated shift in social status can bring about certain adjustments in how people think, feel, or act. Social goals that we set for ourselves may differ during midlife (e.g. spending time with the life partner, spending time with one's growing children, networking at work) as compared to older age (e.g. spending time with the grandchildren, volunteering, taking time for hobbies). Social relations also change as we age. For instance, there are changes in the number and quality of friendships, evolutions in the relationship with the life partner, with one's growing children or with one's own ageing parents. What stays the same across the later life stages is that interpersonal relationships play a crucial role in a person's life and ultimately also play an important part for individual development across the lifespan. Thus, in this context, it is interesting to have a closer look at how social relations change during midlife and older age and what impact such changes have on development in other life domains (e.g. personality, cognition, emotion, physical areas).

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Similar to definitions of cognitive and personality development (see chapters on cognitive development and personality development in this book), social development entails a series of gains and losses across the life course. On an individual level, social roles and social relations represent an important component of changes that occur in midlife and older age. With ageing, some social roles may be lost or become less important (e.g. working roles, parents' roles, the role of spouses), while others gain in importance (e.g. the role of grandparent, friend, spouse, widower, retiree, etc.). On a social level, the societal context can be adapted to the needs of an ageing population (e.g. create age-friendly environments where older adults feel safe to socialize), or it can influence the development of middle-aged and older individuals through the social opportunities it offers (e.g. meeting places for intergenerational interactions, activity centres for older adults, create volunteer opportunities for older individuals). Social settings are also relevant for midlife development. For example, environments that are family friendly (e.g. having day care centres, kindergartens, and schools in the area, having a playground close to home) or having access to sports services or cultural events in the area where one lives can stimulate development in midlife and older age.

Contrary to what one may expect, social relations change with age, but older people report experiencing more positive emotions during their social interactions as compared to younger people (Charles & Piazza, 2007). Also, older individuals report receiving the needed amount of social support despite having smaller social networks (Ertel et al., 2009). Older people tend to experience fewer social stressors in daily life (e.g. arguments or fights with other people) (Almeida & Horn, 2004). Moreover, when conflicts do occur, older individuals tend to interpret their partner's reactions in a more positive way. For example, when having an argument with a spouse, older people will evaluate the reactions of the spouse more positively compared to an objective evaluator (Story et al., 2007). Explaining why this happens may provide insight into what development in older age means and how it can be stimulated.

In this chapter, I will discuss what happens in terms of social development in midlife and older age. First, I will attempt to define what social development implies during these advanced life stages, describe what are the factors that influence development, list theories that explain how social development happens, and lay out potential links between social development and cognitive, emotional, personality, and physical changes. The relations between social development and other life domains explain why interventions for social growth in older age are important. Nevertheless, other chapters in this book explore how to foster social development in older age, such as how to prevent loneliness (see chapter on loneliness prevention, Part III in this book) or to promote a fulfilling grandparenthood (see chapter on grandparents, Part III in this book). This chapter will explore some general principles concerning how to foster social growth in midlife and older age.

Explaining Social Development in Midlife and Old Age

How can one define social development in midlife and older age? If the number of social networks and social partners could represent a criterion in younger years, older age brings with itself a shrinking of social networks. This is however not necessarily a reflection of developmental decline (e.g. loss of social partners due to illness and death) but often constitutes a conscious choice to spend time with people who are emotionally important in our lives and who constitute relevant sources of social support. Some authors have asked themselves whether social relations improve with age (e.g. as people have more experience in how to handle conflicts, know what they desire from social relations, etc.). For instance, older adults tend to report higher levels of satisfaction with their social relations as compared to younger individuals (Luong et al., 2011). Such findings are explained based on the social role changes and improvement in social skills that older individuals possess (Luong et al., 2011).

Social relations can be defined as recurrent patterns of interaction with other individuals and have different functions, such as postulated by the *Socioemotional Selectivity Theory* (SST, Carstensen et al., 1999). For example, some relations serve for knowledge acquisition, while some are more important for receiving emotional support, and yet others are relevant for companionship (e.g. spending time together). Thus, one can attempt a classification of these functions as (1) *social support* that implies a form of assistance (e.g. emotional, instrumental, material, anticipated) provided when there is a problem to solve; (2) *companionship*, as a form of social interaction for enjoyment (e.g. pursuit of common interests, hobbies, share affection); (3) *weak social ties* that are characteristic for interactions that lack the frequency and intimacy of close friendships or family relations (e.g. encounters at the market, neighbours, casual relations at work); (4) *formal social relations* (e.g. with work colleagues, with professionals within the community such as doctors); and (5) *negative social interactions* (e.g. criticism, excessive or undesired help). The last form of social relations is worth mentioning at this point, because in older age, it may unfortunately occur quite often that older people are treated with condescendence or receive excessive advice because of ageism (e.g. older people are treated like children who cannot decide by themselves or do not understand much of the world and need constant guidance). Negative social relations in midlife that can have an impact on development include stressful work collaborations, unhappy marriages or friendships, and interactions with rebellious teenager kids. Negative social relations in older age can comprise unhappy marriages, tense relations with grown-up children or with grandchildren (see also chapter on grandparenthood in this book), or negative interactions with younger people in general (e.g. negative random encounters on the bus, at the supermarket, etc.). Nevertheless, maybe contrary to what one would expect, studies point out that on average, older people report better marriages, satisfying relations with their children, closer relations with

their friends, and, overall, more positive social interactions as compared to conflictual ones (Fingerman et al., 2004, 2008). How can these findings be explained by referring to changes that happen in the social realm while ageing? One potential explanation refers to individual processes (e.g. the way that older individuals select their social partners, their motivation to derive social support from relations, their social skills, etc.), while another explanation concerns social interactions (e.g. changes in the structure of social networks, how people generally react to older adults, etc.).

Social goals (e.g. receiving social support, making friends, getting to know new, interesting people, etc.) remain important throughout our entire lives. One important change that occurs with ageing concerns how one perceives time and its passage (i.e. the time horizon). While in younger years, time seems "endless" and people tend to believe in the idea of "forever and after", in older age the perspective shifts and individuals start to see that "time is limited" and there are "fewer years ahead as compared to the years one has lived". Developmental psychologists report that this change in time perception has an impact on how people set goals and interact socially (Carstensen et al., 2003; Luong et al., 2011).

The perception of time as limited has implications for emotions, cognition, and motivation (Carstensen et al., 1999). *The Socioemotional Selectivity Theory* (SST, Carstensen et al., 1999, 2003) explains the role of time perception for how people set their goals and how they choose their social partners to fulfil these aims. The authors of this theory suggest that social goals can be classified as those focused either on *acquisition of knowledge* (e.g. getting information about jobs, find out about the best school for your child, information concerning the best place to go on holiday, etc.) or *emotional regulation* (e.g. getting emotional comfort, experience positive emotions while being with others). Since older people perceive their time as being limited, they tend to be more present-oriented and less focused on the future as compared to the young. Contrary to the negative stereotype that older people are trapped in the past, they are actually more present-oriented compared to other age groups (Carstensen et al., 1999). Moreover, older people tend to consciously change the configuration of their social networks to include relations that are emotionally rewarding and provide social support (Lang, 2004; Carstensen et al., 2003; Charles & Piazza, 2007).

Knowledge acquisition is very important for young and middle-aged individuals, and thus, their goals will tend to concentrate on obtaining information (e.g. how to get the best job, how to buy a good apartment, how to get your child enrolled in the best school, etc.), sometimes at the cost of emotional satisfaction. Later in life, however, emotional goals become more important because one seeks to obtain emotional satisfaction in the present moment and not postpone it for an uncertain future. One way to ensure that we experience positive emotions is shaping our social groups. We know that when we meet our close friends, we can receive emotional support and comfort. Thus, it comes as no surprise that *social networks* decrease with age because older people tend to prefer those social partners from whom they know that they can receive the desired emotional support (e.g. partners, children, close friends) (Carstensen et al., 2003; Charles & Piazza, 2007). In contrast, younger

people are likely to prefer large social networks that can ensure getting information on various topics (e.g. study opportunities, the best parties, part time jobs, etc.). For young people, the novelty and variety of social networks are relevant. However, older individuals tend to value close relationships and interact with smaller groups of significant others (e.g. close family members, intimate friends). In this sense, middle age is described as a turning point when emotional goals become more important than knowledge acquisition goals (Carstensen et al., 1999).

Studies report that there are age differences in networks size and their composition (Carstensen et al., 1999, 2003). Research has pointed out that in older age, social groups are composed of family members and old friends, the so called "social convoys", the ones that accompany individuals through one's whole life (Carstensen et al., 1999). The interaction with these smaller social groups provides a sense of meaning and of connectedness. Close friends help us navigate social transitions and challenges and elicit positive emotions. Across middle and late adulthood, the social networks increasingly shrink to include only close, significant others. Authors argue that this is not the effect of just loosing people as we go along (e.g. some people move out of town and we lose contact, some people die, some people develop different interests and grow apart) but the result of a conscious choice to focus on emotionally relevant relations because time is perceived as being more limited (Carstensen et al., 1999). In view of Carstensen et al. (1999), this process of shrinking social networks does not reflect loss (e.g. losing social partners along the way) but represents an active adaptation to social circumstances and deliberate choices based on new goals and diminished time perspective (i.e. less time left to live). Moreover, it represents an argument regarding explanations why older people tend to have better social relations in older age (Luong et al., 2011).

A further individual reason for enjoying better social relations in old age is the fact that older people tend to appraise their social partners in a more positive manner (Story et al., 2007). Even if they have arguments with other people, older individuals are more likely to present a cognitive tendency to focus on the positive aspects of a situation (Charles & Carstensen, 2008; Charles et al., 2003). Older adults are also more likely to overlook negative interactions with their partners and forgive them because they usually concentrate on the positive aspects of social relations (Allemand, 2008). Compared to younger people, older adults report fewer negative emotions such as anger even after disagreements with their partners (Blanchard-Fields & Coats, 2008). The fact that older adults are inclined to appraise their social relations as more positive constitutes another explanation why social relations are likely to become better with age (Luong et al., 2011). Additionally, older adults are considered to have better social expertise and knowledge about how to avoid confrontations (Hess, 2005; Hess et al., 1999). For instance, older people are more skilled at recognizing individuals who have traits that may be harmful for relations (Hess et al., 1999). With age, people have more experience with difficult social partners and learn how to identify and avoid them (Hess, 2005; Blanchard-Fields, 2007) thus increasing the chances for positive social interactions. In addition to making better social judgements, older adults are often motivated to act in order to avoid conflicts. For example, older individuals tend to use *disengagement*

strategies, namely, ignoring the situation or avoiding problematic topics in order to regulate their emotions (Birditt & Fingerman, 2003). Although such conflict avoidance strategies are not useful in general, for older adults, they are reported to be more effective means of solving interpersonal issues (Charles et al., 2009; Blanchard-Fields, 2007). The use of disengagement strategies may also lead to better social relations in older age.

The improved quality of social relations with ageing depends on individual qualities (e.g. social expertise) but also on how others react towards older individuals. The *social input model* (SIM) stipulates that older people act in ways that enhance the positive qualities of their relations and that their social partners reciprocate these actions (Fingerman & Charles, 2010). According to the SIM model, social partners usually behave more kindly towards older adults, tend to forgive older adults more easily, and treat older adults in preferential ways even if sometimes these actions are based on benevolent ageist stereotypes. Stereotypes about ageing can also indirectly contribute to better social relations and responses from social partners. For example, in another experiment, participants were asked to choose a birthday card for a friend. In case of younger friends, people tended to choose funny cards, while in case of older adults, they chose more sentimental ones with personalized messages. Even if sometimes motivated by benevolent ageist attitudes, such kind social treatment leads to more satisfying social experiences for older adults (Luong et al., 2011).

Forgiveness represents an important component of harmonious relations because it is linked to trust (Wieselquist, 2009). Avoiding conflict with older adults does not lead to resentment or grudges towards these because people also tend to forgive their older social partners more easily (Luong et al., 2011). For instance, in one experiment, participants were asked to imagine that social partners of different ages said hurtful things to them. Findings showed that participants tended to forgive older individuals and look for compromises, while in case of younger people, they acted in more confrontational manners (Fingerman et al., 2008). In another experiment, participants were informed about a situation where a woman leaves a shop with a hat without paying for it (Erber et al., 2001). When they were told that the woman was young, study participants were likely to believe that the woman wanted to steal the hat. When research participants were told that the woman was old, they were likely to forgive her action and attribute it to negative ageing stereotypes such as forgetfulness. Thus, in some cases, negative ageing stereotypes may lead to better social relations with older adults. However, one should be aware that such situations as the ones described in the experiments above reflect benevolent ageism and negative views on ageing that can also have damaging consequences for older adults in the long run (see chapter on ageism, Part III of this book). Nevertheless, when considering short-term consequences, such social interactions are more positive and contribute to older adults evaluating their social relations with others as being friendlier.

So how can we say that individuals are socially evolving in midlife and older age? Measuring social development in late years constitutes a continuous challenge. Most measures focus on the number of social ties, the frequency of social encounters, or how much support one receives or perceives as being available to them. The depth of these relations is however not measured. It is also argued that social

contexts play an important role in how social relations are happening. Each generation is marked by historical events and has certain values that impact on how social interaction takes place (Meredith & Scheve, 2002). Social behaviour can be seen as the result of historical events and developmental processes. First, social settings and events such as wars, financial crisis or pandemics can shape how social relations are formed, for instance, either focused on competition or as networks of sharing. Second, social behaviour depends on an persons' life course and the specific events and people that mark his or her life. For example, relations with parents, romantic relations, relations with one's own children, and relations at the workplace all can play a role in how people develop social skills over the lifespan and how they form novel social relations or maintain their social networks.

Social skills are interpersonal abilities that can ensure successful relations with others. These affect the initiation and maintenance of social relations across the lifespan. An important social skill is the ability to be emphatic with others. This ability to put oneself in the place of another person and respond to them forms the basis of a good communication (Schlenker, 2003). Understanding the other person also facilitates how we communicate about ourselves when we talk to them, in order to make ourselves understood. Directly related to this is the ability of expressiveness, namely, to be able to communicate one's own thoughts, feelings, and needs to others (Schlenker, 2003). Expressiveness refers to conveying information in general, while self-disclosure concerns communicating information about oneself. These two may constitute different social skills, as the latter requires the ability of self-reflection in addition to that of expressiveness. Self-disclosure of feelings and needs is relevant for receiving social support. For the maintenance of social relations of support, gratitude also plays an important role, namely, giving thanks for the received support. Some see gratitude as a learned social skill that helps people maintain their social relations. From a positive psychology perspective, gratitude represents one of the character strengths (Peterson & Seligman, 2004) that can be enhanced in individuals (Parks & Biswas-Diener, 2014) in order to foster their social development in older years.

All in all, one can say that when explaining social development, most developmental theories are likely to focus on early childhood or adolescence (e.g. how the peer group becomes relevant in teenage years). One such theoretical model with implications for social development in older age is *the attachment theory* that stipulates people have an innate need to form significant social relations for security, safety, and comfort during their entire lifespan (McCarthy & Davies, 2003). The early attachment relationships with parents may affect the social relations later in life. However, studies examining the effect of early interactions with parents on social ties across the lifespan show mixed results. It is suggested that other turning points in life such as marriage or career changes may play a more important role in shaping social relations at advanced stages of life. The *socioemotional selectivity theory* (SST, Carstensen et al., 1999) represents an exception in terms of theoretical models, in the sense that it represents a theory that is focused mainly on what happens with social and emotional development in middle and older age as compared to having a focus on childhood or adolescence.

Experiences of Social Relations: Friendships in Midlife and Older Age

Social relations depend on many factors, such as socialization patterns over the life course, the social setting where we live and the corresponding social norms, personality, cognitive fitness, physical health, or social skills. The way individuals interact with other people can change over the lifespan. For example, the social circumstances may modify, as people take on several social roles in midlife (e.g. work colleague, parent, spouse) and may have less time for casual social interactions (e.g. spontaneously sitting on a terrace and making acquaintances, travelling the world, and meeting people from other cultures). Middle-aged individuals were also called the "sandwich" generation as they are often caught between the demands of their relations with their children and their own ageing parents. In such situation, resources for social interactions may be limited. In midlife, people often need to apply the selection, optimization, and compensation (SOC) principles (Baltes & Baltes, 1990) (see Chaps. 1, 2, 3, and 4 of this book), namely, to select the social relations that are most important to them (e.g. favour family or close friends as opposed to casual acquaintances; favour socializing with other people who have children as opposed to their childless friends, etc.), optimize their way of communication with different social partners, and compensate when resources are lacking (e.g. if they do not have time for family during the week, they find time at the weekend). During older age, people may continue to apply these SOC principles, in the sense that having fewer physical resources, they select the social activities they want to attend, optimize their way of communication (e.g. use a hearing aid so that they can hear what the grandchildren are saying) and compensate (e.g. use a video call when talking to family members who live in another city or country).

When it comes to social relations in older age, it is interesting also to explore what older people themselves think about them. For instance, how do they define friendship, what role do friendships and other relations play in their lives, what are the sources of social support, or how do they think that ageing affects their social relations? Does friendship and its meaning change over the life course? In the following, I will examine the benefits of friendship in older age, as well as how older adults experience their friendships.

Friendships are very important in later life because they represent sources of happiness and social connectedness (Ng et al., 2020; Blieszner et al., 2019). Also, the friendships people have in older age are usually part of their biographies as individuals because they have endured over the years (Ng et al., 2020). Friendships say something about a person, because, since people can select who they befriend, they will most probably choose individuals who are similar or whom they admire or like. Friends are people who are likely to provide companionship for leisure activities, help develop and maintain personal meaning and self-identity, and provide emotional support (Fingerman, 2009; Litwin & Shiovitz-Ezra, 2011). Having friends protects one from loneliness and provides emotional and instrumental support, companionship, and sharing of common interests (Huxhold et al., 2014;

Felmlee & Muraco, 2009; Nicolaisen & Thorsen, 2017; Chen & Feeley, 2014). The feeling of social contentedness that is imbedded in friendships also helps to provide meaning to older peoples' lives (ten Bruggencate et al., 2018).

In what friendships are concerned, many studies ignore the quality of the friendship and focus on quantifiable variables such as number of friends or proximity to different friends (Matthews, 1983; Ng et al., 2020). When defining friendships, people report qualities such as affection, trust, commitment, respect, and reciprocity (Blieszner & Adams, 1992; Dunbar, 2018). Although the relevance of friendships is known (Roberts-Griffin, 2011), studies on relations with friends especially in older age represent quite a novel phenomenon (Blieszner et al., 2019). For many decades, researchers were more interested in relations with family or romantic partners and focused less on friendships (Blieszner et al., 2019). Nevertheless, friends play an important part for individual well-being (Lee & Szinovacz, 2016; Dunbar, 2018). Thus, friendships are interesting to examine in terms of social networks structure, interactions (e.g. daily interactions), or how they evolve over the lifespan (Blieszner et al., 2019; Ng et al., 2020). One fascinating question is whether close friendships or peripheral social relations are more important for older peoples' well-being? According to the socioemotional selectivity theory and the social convoy theory, close emotional ties are important for well-being in older age (Charles & Carstensen, 2010; Antonucci et al., 2010, 2014). This can of course apply to midlife as well because social relationships also play a crucial role for middle-aged individuals. Studies point out that peripheral social relations are relevant for social integration, novelty, and variety of activities (Fingerman, 2009, 2020; Ng et al., 2020) as well as for having fun and companionship (Lakey et al., 2016; Rook, 2015). Contact with less close friends stimulates engagement in novel behaviours and thus can improve mood among older adults (Ng et al., 2020; Churchyard & Buchanan, 2017).

Making friends is usually associated with teenagers or young people. But do older individuals also befriend others easily? And what do middle-aged or older individuals value in a friendship? A qualitative study explored how people become friends and showed that individuals over 60 years old valued similarity, communication, loyalty, reciprocity, humour, and acceptance in a friendship (Roberts-Griffin, 2011). Shared interests and fun were not as important for older individuals compared to young ones in terms of forming new friendships (Roberts-Griffin, 2011). Another qualitative study asked older men and women to talk about their friendships (Matthews, 1983). Two central themes were identified, namely, friends as individuals and friends as relationships (Matthews, 1983). The first definition is mostly focused on the specific qualities of the person who is described as a friend (e.g. lifelong friend who has been present through one's life in defining moments). The second definition given by older adults concentrated on the quality of the relation itself (e.g. having many acquaintances but not really close friends). People who use the first definition of friendship are thought to be vulnerable in older age since if they lose the one specific friend, then he or she is hard to replace if not impossible, and this situation leads to loneliness (Matthews, 1983). This is the case when people miss a specific companion and not having company in general (Matthews, 1983). Individuals from the second category were considered less at risk for loneliness and

social isolation because they focused on relations not on individuals, and thus their friends were replaceable. Such individuals usually thought that you make many friends as you go along through life, so they were more likely to always find people to spend time with (Matthews, 1983). Such individuals are also more likely to create novel roles and find new friends. This means that when they retire, even if they do not see their work friends that often, they would find new hobbies or be part of a retiree committee where they would make new friends. A qualitative study conducted in Turkey with individuals older than 65 who were residents of a nursing home identified several definitions of friendships that could be fitted into five categories. These included behavioural processes (e.g. assistance, sharing, altruism), cognitive processes (e.g. trust, morality, compatibility), affective processes (e.g. intimacy), structural traits (e.g. openness, reciprocity, support in good and bad times), distinctive features (e.g. references to the past, health competence) (Yavuz Güler et al., 2020). All in all, one can conclude that friendships continue to be important at later life stages and individuals do form new friendships in older age. What evolves is the quality of relationships with friends that we have had for a lifetime, because they are part of our development process (e.g. our friends guide us, stimulate us, and can act as role models for our lives). Also, our needs and expectations where friendships are concerned may change over the years. Sometimes, when friends develop in different ways, also the quality of the friendship may suffer, and the people drift apart. Even if sad, this leaves one with time and energy to form new friendships. In the following, I will explore why social development is relevant also for other life domains of growth.

How Is Social Development Linked to Other Domains of Personal Growth?

Cognitive development is intertwined with social development. Social groups influence how and what people learn, can stimulate individuals to grow, or can constitute a barrier towards their personal development. Also, how cognitively fit a person is certainly has an impact on how much he or she seeks out social contacts or wants to establish novel social relations. Cognitive processes, especially theory of mind-related aspects (e.g. the ability to think from the other person's perspective), are closely related to how social relations evolve. Sustaining close, emotional ties requires that people are empathic, are able to inhibit their own preferences to give priority to those of friends at certain points in time, or are able to engage in perspective-taking to understand the needs of their friends (Dunbar, 2018). Certain cognitions such as positive views on ageing were proven to be important since research shows that they are associated with perceiving more support from friends and making more friends in older age (Menkin et al., 2017). Engagement in social relations also stimulates cognitive functioning in older age (Béland et al., 2005). The other way around, cognitive development is interlinked with emotional and

social growth. As discussed above, older people tend to present a cognitive bias that makes them focus more on the positive aspects of relations (Charles et al., 2003). This means that older individuals derive more positive emotions from their interactions and tend to appraise their social partners in a more positive way (Story et al., 2007). One experimental study showed that older individuals tend to ignore negative comments made by hypothetical social others (Charles & Carstensen, 2008), and this can lead to more positive social interactions in older age. Further research is needed in order to examine whether skills such as problem-solving or inhibitory control can benefit friendships in older age (Blieszner et al., 2019).

In terms of *emotional development*, the link with social relations is established within the Socioemotional Theory (Carstensen et al., 1999). As described also earlier in this chapter, social relations across the lifespan depend on the social goals that a person formulates, namely, knowledge gain in younger years and emotional regulation in older age. As temporal horizons diminish (i.e. perceived time left to live becomes less than the perceived time one has lived), people are more motivated by emotional regulation goals (Carstensen et al., 1999). Thus, they tend to choose social partners that can provide positive emotional interactions and social support. Older people can have fun and enjoy companionship from their friends (Blieszner & Ogletree, 2017) and derive support and confidence partners (Blieszner et al., 2019). Friendships are important sources of emotional support and affection (Dunbar, 2018; Blieszner et al., 2019) and thus can contribute to emotional development in older age. One study showed that social activities become more important as people age since they determine positive emotions and act as buffers against negative consequences of ageing (Huxhold et al., 2014). Engaging in social activities can increase a sense of fun and interest in life in older age (Huxhold et al., 2014). Also, for informal social activities, friends seem to be more important than family members in the sense that engaging in activities with friends determines more positive emotions among older adults (Huxhold et al., 2014). However, social interactions sometimes imply conflicts (Hess et al., 2012) and thus can be the source of negative emotions. Even if older adults tend to be better at avoiding social conflicts (Charles, 2010), when these do arise in social situations, they are likely to suffer more compared to younger adults. One study exploring social daily interactions among older adults found that encounters with friends were more pleasant and implied fewer discussions than with romantic partners or relatives (Ng et al., 2020). Discussions or disagreements with partners and family members involve household chores or decisions, while often friends are the ones with whom older individuals share leisure time activities (Ng et al., 2020). Also, since people are inclined to select their friends and share more similarities with these in terms of opinions or values, encounters with them are less stressful (Flatt et al., 2012). Thus, spending time with friends may have all in all a positive effect on well-being and life satisfaction in older age and compensate for the effects of other negative encounters. Moreover, a review of studies on social networks, social support, and depression pointed out that perceived emotional support from large and diverse social networks can protect individuals from developing depression (Santini et al., 2015). Another study on marital relations and friendships showed that couples who had more

interactions with friends were protected from depression compared to those who had few interactions with friends (Han et al., 2017). Friends were found to be very important also in the case of social and emotional loss, such as widowhood (de Vries et al., 2014; Bookwala et al., 2014). All in all, older people are considered to be better at emotional regulation because of the social experiences they had over the life course (Blanchard-Fields, 2007).

The need to be among people is present at any age even if individuals differ in terms of the number and type or social encounters they prefer because of their personalities. As we saw in the chapter on *personality development*, people will not become extroverts or introverts with age (see chapter on personality development in the present book). However, their existing features may accentuate with age as they become more confident about who they are as individuals. For instance, people may become more extrovert or more introvert based on a series of life experiences that confirm that they are either happier when spending time in groups or by themselves. The relationship with personality development is mutual. Older people may shape their personalities through social relations. Additionally, their own personality plays a role in what kind of people they are more likely to get along with and the number or type of social relations they seek out. For example, extroverts may aspire to have a large number of friends or social relations, and people who are open to new experiences may make friends more easily even in older age. In contrast, people who are neurotic may find it difficult to make novel friends or maintain their friendships over the years (Charles & Carstensen, 2010). It was also shown that having social relations influences personality as it makes people more optimistic (Antonucci, 2001). Thus, over the lifespan, the relationship between personality growth and social development go hand in hand.

Our social development also depends on physical changes in midlife and older age. *Physical development* influences social relations in the sense that the state of our health determines how much energy we have for social encounters. In turn, social relations can influence our health. Having social relations is thought to influence a person's health in a positive way (Cohen & Janicki-Deverts, 2009; Holt-Lunstad et al., 2010). For instance, social relations can have an impact on stress reduction and thus indirectly influence the state of health. Also, social groups can support different health behaviours (e.g. a healthy diet, regular exercise) and therefore indirectly affect health and well-being. Friendships are relevant because friends can encourage people to adopt a healthier lifestyle and also be the companions with whom one eats healthy meals or engages in physical exercise in older age (Blieszner et al., 2019). Research has documented an existing link between frequency of social contact and health across adult years (Sander et al., 2017). Physical development also influences social relations since illness and disability represent barriers towards social encounters and friendship maintenance (Sander et al., 2017). Having a network of friends was found to be protective for mortality in case of older adults (Litwin & Shiowitz-Ezra, 2006). Also, when people happen to lose their life partner, for example, in case of widowhood, friendships can protect one from physical and mental health problems (de Vries et al., 2014).

How to Foster Friendships in Midlife or Older Age

At first glance, something like an intervention to foster friendships in midlife or older age seems odd for several reasons. First, friendships are voluntary, and thus intervening to facilitate or stimulate them may be perceived as intrusive. Second, one may find it difficult to think that psychological models can help design such interventions because friendships seem to emerge, evolve, or dissolve at random (e.g. someone moves away, people have different social roles and interests, some people have kids and make new friends who also have kids and do not have time with friends without children). Nevertheless, friendships play an important role for the well-being and health of middle-aged and older individuals (Blieszner et al., 2019; Ng et al., 2020) and help to prevent loneliness in older age (Chen & Feeley, 2014; Nicolaisen & Thorsen, 2017). Thus, it makes sense to facilitate the formation or maintenance of friendships. One can intervene at individual level (e.g. enhance social skills, change negative views on ageing concerning the possibility to make friends in midlife or older age) or at social level (e.g. provide opportunities for people to meet and interact, offer activities for middle-aged and older individuals that are accessible and affordable, provide spaces for social interaction such as safe parks). These interventions need to be tailored to the specific needs of the target group. For example, middle-aged individuals may require time management skills to help them find time to meet their friends or make new acquaintances. Older people may need to have opportunities in the environment, such as activities to go to and meet people. Taking the relationship between social relations, especially friendships and development in all life domains into account, it is important to provide help to those who need it for forming or maintaining friendships in midlife and older age.

Several theories have guided the research on friendships and how to foster these in older age. For instance, the *social exchange theory* (Roberto, 1989) postulates that there is a dynamic among friendships in older age that involves both costs and benefits. Research on friendship conducted from this perspective focused on the type of exchanged resources and degree of reciprocity (Dunbar, 2018). For instance, one study showed that older adults perceived friendships as being more reciprocal than ties with relatives (Li et al., 2011). The *convoy model of social relations* (Antonucci & Akiyama, 1987) implies both interactive and structural aspects of social relations in older age. Research from this perspective centred on structural changes and on types and functions of friendships across the lifespan (Piercy & Cheek, 2004; Levitt et al., 1993; Wrzus et al., 2013). Studies of friendship over the lifespan based on the socioemotional selectivity theory (Carstensen et al., 1999) showed that older adults tend to favour emotionally significant relations (Sander et al., 2017; Li et al., 2011). An integrative frame was proposed to incorporate both psychological and sociological aspects of friendship (Adams & Blieszner, 1994; Ueno & Adams, 2006). The integrative friendship framework proposes a series of reciprocal influences among friends that affect their interaction patterns. Friendships are dynamic and contextualized in space, time, and culture (Blieszner et al., 2019;

Ueno & Adams, 2006). Friends bring their characteristics into a friendship-relation (e.g. knowledge, personality, communication style, etc.). The social and cultural context influences how friendship opportunities and constraints are understood and interpreted by the individuals who are part of a friendship-relation. For instance, social norms about friendship are internalized and influence with whom people become friends or how large or heterogenous their friendship networks are. An important point is that friendships are not static and they evolve over the lifespan (Blieszner et al., 2019; Adams & Bliszner, 1994). Also, friendships entail different phases such as formation, maintenance, and dissolution (Adams & Bliszner, 1994). For example, one friendship may dissolve because of different lifestyles (e.g. one person has children, and the other does not) but may be reinitiated later in life (e.g. when the children are grown-up, or the persons are retired and have more time). Also, sometimes friendships remain for a longer time period in the initiation phase where ties are not so close or the interactions are less frequent and only later evolve to become a close friendship.

Interventions to increase satisfaction with friendship-relations in middle and older age could be implemented at individual, dyadic, network, or environmental level (Blieszner et al., 2019). Nevertheless, one needs to consider the fact that friendships are voluntary and influenced by social and cultural norms (Blieszner et al., 2019). Friendships are subjective, and it is difficult to set objective norms about how many friends one should have or what to expect from a friend. Thus, interventions to facilitate friendships in older age need to be formulated so as not to make individuals uncomfortable or reinforce negative ageing stereotypes (e.g. older adults are lonely, older adults lack social skills, etc.). For example, such interventions should focus on the personal needs of middle-aged or older people (e.g. assess what middle-aged or older people want from a friendship) and the quality of the friendships (e.g. evaluate what middle-aged or older people consider a good friendship and help them achieve it). Some older people may want to improve their social skills and make new friends to enlarge their social networks (e.g. make new friends after retirement, identify opportunities for intergenerational communication to communicate better with grandchildren), while others may want to find ways to reconnect with their lifelong friends (e.g. how to provide emotional support for friends who suffer from chronic illnesses, have entered retirement or are widows, etc.). Middle-aged individuals may want to improve their organizational skills (e.g. how to manage to find time to meet friends between spending time with their children, their life partners, their work, etc.) or improve their communication competences (e.g. how to improve the quality of their friendships by communicating about needs and wishes).

Interventions focusing on the individual level usually addressed skills enhancement (e.g. communication, social abilities). For example, a 12-week intervention aimed to promote self-esteem, relational competence, friendship formation abilities, and social competence among older women (Stevens et al., 2006). Findings pointed out that participants were able to create new friendships and improve existing ones after taking part in the intervention (Stevens et al., 2006). This indirectly contributed to an increase in well-being and reduction of loneliness (Stevens et al.,

2006). Another friendship enrichment intervention showed that participants initiated social contact more after the intervention and engaged in behaviours to form new friendships and improve existing ones (Martina et al., 2012). Other interventions focused on network development and decreasing the discrepancy between wishes and reality in terms of friendship relations (Bouwman et al., 2017); boosting theory of mind skills and understanding the needs of others as well as increasing the social motivation to apply the new skills within friendships (Lecce et al., 2017); and making use of persuasive strategies to stimulate older adults to engage in social actions (Vargheese et al., 2016).

All in all, one could design friendship enrichment interventions for middle-aged and older adults and focus on (1) structural aspects, such as network enlargement (e.g. having more friends) or network diversification (e.g. having various friends in terms of age, gender, interests, etc.); (2) behavioural processes (e.g. taking initiative for social contacts, communication abilities); and (3) cognitive processes (e.g. identifying what one expects from a friendship). Interventions need to consider individual differences among middle-aged and older adults in terms of how many friends they desire, if they want a few closer friends or numerous casual social relations, the importance they place on friendships, what type of social support they expect to receive, and the amount of reciprocity they expect (Blieszner et al., 2019). Thus, friendship enrichment interventions need to be designed to be flexible and take the variety of needs and preferences of older adults into consideration (Blieszner et al., 2019). Nevertheless, sometimes, friendships can be unhealthy, and thus older adults would need to learn strategies that help to dissolve these harmful friendships (Blieszner et al., 2019). In this sense, one could design interventions by using the phases (i.e. initiation, maintenance, and dissolution) that characterize friendship relations (Adams & Blieszner, 1994). Some authors have developed exercises that can enhance social connectivity and foster social relations. For example, Breines (2014) proposed an exercise where people would make a mental map with the names of people who form their healthy social relations (i.e. individuals who support, enrich, enable, and energize a person). These can include friends, family members, colleagues, work contacts, and so on. A next step is to consider how one can increase contact with supportive relations and decrease contact with those who are unsupportive and critical. Negative social interactions unfortunately have a big impact on personal development, and it can take up to five positive interactions to balance a negative one. Gottman (2015) proposed an activity where individuals would focus on the positive social network and reflect on positive things one could say to them (e.g. “you are so good at…”. “Meeting you reminds me of the good time we had…”, “I like when you…”). It is also important to ask members of the social network to return compliments so that one can build up self-esteem. One can plan small actions to show that one does not take these people for granted (e.g. organize a small surprise, cook for them a meal, plan a relaxation activity, help them with some chores, etc.). One should also not forget to show interest in other peoples’ lives, especially those from one’s close social network (e.g. ask them what they have been doing, what makes them happy, what stresses them, etc.).

Conclusion

People continue to develop as social beings in their older age. Even if older individuals tend to have smaller social networks, this is not a consequence of declining social skills but a conscious choice to spend time with those individuals who provide social support and meaningful emotional relations. Thus, the size of social networks does not represent a developmental criterion in older age, but rather the quality of social relations can be used to measure social growth among older individuals.

Despite losses in social networks, social relations become more positive with age. Explanations include individual factors (e.g. better social skills, social experience, better abilities to select suitable social partners, a tendency to overlook negative aspects of relationships, the use of disengagement strategies to avoid conflicts) and social factors (e.g. friendlier treatment of older adults, smaller but more emotionally significant social networks).

Friendships in older age are very important because they represent a source of subjective well-being and support (Ng et al., 2020; Wrzus et al., 2012; Yavuz Güler et al., 2020) and loneliness prevention (Chen & Feeley, 2014; Nicolaisen & Thorsen, 2017). Friendships can last a lifetime and play an important role for the individual development and ageing. Social relations and specifically friendships can foster cognitive development (e.g. cognitive functioning), emotional development (e.g. emotional regulation, enhance positive affect, prevent loneliness and depression), physical development (e.g. health, engagement in health behaviour) and personality (e.g. optimism, openness to new experiences). Friendship enrichment interventions in older age should focus on structural aspects as well as behavioural and cognitive processes. Additionally, such interventions should consider the heterogeneity of middle-aged and older adults in terms of preferences and needs when it comes to initiating or maintaining friendships. Theoretically, older adults have more time for social encounters (e.g. are retired, the children are all grown-up and left home, etc.). However, health and financial difficulties can constitute barriers to forming friendships and maintaining relations with older friends. Thus, interventions for friendship enrichment in older age should address both individual characteristics (e.g. social competence, views on ageing) and social environment aspects (e.g. create opportunities for social encounters, increase access to social events for older adults, etc.). From a positive psychological perspective, it is relevant that friendship enrichment interventions focus on skills and strengths improvement (e.g. gratitude, savouring, forgiveness, etc.), on boosting of developmental assets (e.g. emotional regulation, openness to new experiences, communication skills, etc.), as well as on social opportunities enhancement rather than just concentrating on decreasing negative emotions or conflict reduction (Waters, 2020).

Reflection Questions

1. Do you have friends who are older than 60 years old? If yes, describe your friendship, how you met, what activities you do together? If not, list some reasons why you think you do not have older friends.
2. Think about your friendships, what does a close friend mean to you? Do you think your friends' network will evolve over your life? Explain your answer.
3. How many friends do your grandparents have? How would you describe their friendships?
4. Think about the socioemotional selectivity theory, does it accurately apply to your social relations as compared to the social relations that your grandparents have?
5. How would you define social development in your own words?
6. How is social growth connected to other forms of development (e.g. cognitive, emotional, physical, personality)?
7. Apply positive psychology principles to formulate three objectives and three strategies to promote social development among older individuals.

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Chapter 8

Emotional Development in Midlife and Older Age: Are We Happier with Age?

i stopped resisting
the unpleasant feelings
and accepted that happiness
has nothing to do with
feeling good all the time
Acceptance, "Home Body" by Rupi Kaur (2020)

Introduction

Emotions play an important role over the lifespan and are essential to our daily functioning (Ebner & Fischer, 2015). As we have already seen in previous chapters (see Chaps. 1, 2, 3 and 4 in this book), people continue to develop across their midlife and older age, and they do so on a cognitive, social, physical, and personality level. Emotional development is closely linked with all the aforementioned dimensions. Emotions are very important in our daily lives because they prepare our body for action (e.g. physical development), signal what is worth remembering (e.g. cognitive development), guide our social partners' selection (e.g. social development), influence our decisions (e.g. cognitive development), guide our actions, and are part of who we are as humans (e.g. personality development).

Old age or midlife should not automatically be associated with negative emotions such as depression and loneliness (see chapter on depression and chapter on loneliness, part III of this book). Happiness can characterize midlife and old age, and recent positive psychology paradigms allow ageing to be defined in terms of happiness as well as gains and developmental growth instead of just decline and illness (see Chaps. 1, 2, 3 and 4, in this book). Nowadays, there is an abundance of literature on coaching for a better life, and older individuals represent a growing target group for such books. Just as our personality may change across the lifespan (see chapter on personality development in this book), so does our predisposition to be happy or the way we define happiness. The pursuit of happiness is essential for

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our development because it makes us reflect on who we are, what we want, and how to achieve it as well as learn new ways to be happy at every stage in our lives.

Previous studies suggest that emotions and their expression change little with age (Levenson, 2000; Tsai et al., 2000; Ebner & Fischer, 2015). We continue to feel positive emotions like falling in love (see chapter on love relationships in older age, part III of this book) or happiness (see chapter on happiness promotion, part III of this book), as well as negative emotions such as anxiety (see chapter on anxiety prevention) or depression (see chapter on depression prevention and intervention, part III of this book), and the associated physiological sensations and facial expressions are not really altered with ageing (Levenson, 2000; Tsai et al., 2000). In case of negative emotions such as experiencing stress, these continue to affect our biological functioning and indirectly our health even in older years (Charles & Carstensen, 2010) when we "should know better".

Several *changes* concerning our emotions do happen in later life. Ageing is linked with better emotional problem-solving (Blanchard-Fields, 2007) and a rise in experiencing positive emotions (Carstensen et al., 2011) but also with a decline in the ability to recognize other peoples' emotions (Ruffman et al., 2008). Despite often experiencing health problems or even cognitive impairments, older people report high levels of well-being. Research findings show that older individuals report experiencing more positive emotions as compared to younger persons (Charles & Piazza, 2007) and more positive than negative emotional interactions (Birditt & Fingermann, 2003; Newsom et al., 2008). This has been coined in the literature as "the positivity effect" or "ageing paradox" (Reed & Carstensen, 2012; Charles & Carstensen, 2010). Among the explanations provided for this mysterious increase in positive emotions with ageing are prioritizing of meaningful activities and better self-regulation (Charles & Carstensen, 2010). Such findings concerning positive emotions in older age are important because they contributed to changing the decline model perspective on ageing in what concerns both research and practice. As these research results could not be explained through the lens of the decline and ageing paradigm, the development across the lifespan model gained importance. Moreover, the positive psychology framework (see also Chaps. 1, 2, 3 and 4) can offer a background against which to explain such positivity effects concerning emotions in later age. Nevertheless, questions like "what is emotional growth in midlife and older age?", "are older people happier?", and "do negative emotions predominate in older age?" still require further investigation.

In the current chapter, I will use a positive psychology perspective to explore the potential meanings of emotional development in midlife and old age, what characterizes emotional growth, and the links with different other dimensions of development (i.e. social, cognitive, physical, and personality). Another chapter (see chapter on happiness in older age, part III of this book) examines how we can foster emotional improvement in older age and describes intervention objectives that are specifically aimed at the pursuit of happiness and well-being in older age.

Defining Emotional Development in Later Life

Before defining emotional development, one needs to understand how emotions happen and how do people manage these (i.e. emotional regulation). We are confronted daily with a series of situations, and we evaluate these in conformity with our current goals. Emotions influence how we feel (e.g. happy, sad, anxious, nervous, angry, etc.), how we express feelings (e.g. laugh, cry, shout, pout), and how our body (e.g. sweating, increase in heart rate) or brain reacts (Urry & Gross, 2010). For example, if our current goal is to get to work on time and we miss our bus, we may feel anxious because we are going to be late. If we are talking to a person who attracts us and we miss our bus, we may feel happy because we get to converse some more and get to know the person better (i.e. the current goal).

Emotional well-being was defined as a balance between positive and negative affects (Charles & Carstensen, 2010). Emotional development in midlife and late adulthood comprises a series of losses and gains, like all the other aspects of our ageing selves (see chapter on cognitive development, chapter on personality development, and chapter on social development in this book) that, taken together, result in experiencing emotional well-being. For many people, it may not be surprising that happiness remains an important individual goal even in late life (see also chapter on happiness in older age in this book). Finding the right balance between positive and negative emotions or mastering emotional self-regulation might help people to experience happiness in midlife and older age. Both Western and Eastern philosophies as well as the human rights movement argue that the pursuit of happiness is one of the most important tasks that one can achieve in life. For example, Buddhist philosophy teaches us that one can train one's mind to achieve happiness and that several components are relevant when doing so, such as compassion for others, forgiveness, and gaining perspective. Some authors such as Lyubomirsky argue that 50% of our happiness is due to genetic factors and 10% to circumstances and the rest of 40% depends on ourselves (Lyubomirsky et al., 2005, 2011; Lyubomirsky, 2008, 2011). The pursuit of happiness does not end with people reaching a certain age (e.g. with turning 30 or being in one's 60s) but represents a lifelong task. Thus, one can argue that the pursuit of happiness across the lifespan represents one standard by which to measure how people develop emotionally across the lifespan.

Emotional development at a young age comes with clearly defined criteria or milestones, such as reaching certain emotional regulation levels or learning and applying emotional regulation in everyday life. But how can one define emotional growth in later life? Do we continue to develop, and if yes, how does this happen and how can we evaluate it? Successful emotional regulation in later years could represent a way to measure emotional development in later stages of life. But what happens to those who have not been successful at mastering emotional regulation during youth? Can they still learn emotion regulation strategies in their middle and late adulthood? The short answer is yes, but they need to be motivated to do so, as this task becomes their own responsibility, similar to other developmental responsibilities in midlife and older adulthood. Thus, one indication of continuous

development is that a person can still learn to regulate emotions in later life. Also, another standard for emotional development can be that a person is still capable of experiencing natural changes in their emotional reactions to situations. In other words, one can change how one reacts emotionally to situations. For example, if we are prone to worrying or to getting angry, we can modify this by learning to interpret situations in other ways so as to worry less or get less angry in similar stressful settings.

With age, negative events can unfortunately outnumber positive ones. For instance, while ageing, people are often confronted with illness, pain, death of loved ones, or entering retirement. Such events can trigger intense reactions of loss, grief, regret, or feeling less useful to others or society in general and questioning one's identity or social roles. Similarly, in midlife, people are exposed to various stressors ranging from work to private life and have to juggle several social roles simultaneously (e.g. being a loving parent, an attentive spouse, a caring son or daughter for ageing parents, an efficient work colleague, etc.). Managing these stressors and social roles can lead to experiencing anger, anxiety, or frustration on a daily basis. However, if people succeed in regulating these negative emotions, one can interpret it as a sign of emotional development. In the following sections, I will summarize several theories that explain how people deal with their negative emotions and how they manage to experience positive emotions despite undergoing several losses that could impact their overall well-being in older age.

As mentioned above, the experience of emotions and their expression do not change fundamentally with age (Charles & Carstensen, 2010). However, emotional intensity or the frequency of experiencing certain emotions may change across the lifespan. Studies point out that the intensity of emotions does not alter with chronological age and the facial expressions that characterize them remain stable with age (Tsai et al., 2000). However, our emotional reactions become more predictable. For instance, we know how we are going to react to a certain situation because we know ourselves better. Thus, we may appear less chaotic in our reactions, both to ourselves and to others (e.g. our close significant others such as life partners or children learn to predict and hopefully understand our emotional reactions in midlife). This is relevant for emotional development because our emotional reactions are connected to the stable core of our personality. Emotions can provide us with a sense of well-being for knowing "who we are". There is evidence that emotions with high intensity (e.g. feeling enthusiastic about something, being passionately in love, being unreasonably angry) may decrease with age as compared to low arousal emotions (e.g. being content, feeling satisfied, feeling disappointed) (Lawton et al., 1992). Age differences in emotional experiences were explained through the age-related decrease in both physiological arousals in case of high-intensity negative and positive emotions (Pinquart & Sörensen, 2001). Nevertheless, negative emotions continue to affect our physiological functioning and thus indirectly our health. That is to say that stress affects us also in midlife and old age, but our coping mechanisms are perhaps better exercised, or we may have developed more effective coping strategies as we progress through life and accumulate developmental resources.

Contrary to what some people may expect, older individuals were shown to experience high rates of emotional well-being. Similar to happiness, well-being refers to the subjective experience of positive and negative emotions, as well as the balance between these. Positive emotions are important because experiencing happiness from everyday activities predicts a longer life (Danner et al., 2001). This was explained by the fact that positive emotions can have a protective effect on health. For example, the experience of happiness can improve heart rate, strengthen the immune system, reduce disease and disability, increase longevity, and can even alleviate pain in the context of disease (Zautra et al., 2005; Cohen et al., 2003; Steptoe et al., 2005, 2014; Boehm & Kubzansky, 2012). Positive emotions are also motivating for our emotional growth in the sense that, by seeking to experience positive emotions, we learn strategies to cope with problems we encounter in midlife and old age. Nevertheless, negative emotions might play an important role as well, as they help signal that there is a problem that needs to be solved so that we feel better. The experience of negative emotions encourages us to find solutions to cope with our problems and learn more effective coping strategies. Negative emotions such as depression, anxiety or anger are necessary for our emotional development because without these, we would have trouble identifying what is wrong in our lives or what people or situations to avoid. As long as we know how to cope with negative feelings or we have learned effective emotion regulation strategies, the negative emotions we experience can stimulate emotional growth (see chapter on anxiety, chapter on depression, part III this book). In this sense, we can say that both positive and negative emotions play a role in our emotional development across the second half of our life. Knowing how to regulate both positive and negative emotions constitutes a standard for emotional development in midlife and older age.

As mentioned earlier in this chapter, emotional development does not start in old age but denotes a lifelong process. According to the existing literature, emotional development starts in early childhood with the formation of attachment styles. Attachment styles established towards one's parents during one's childhood are also those that one will later seek to experience with romantic partners (Shaver et al., 1988) (see also chapter on love in older age, part III of this book). For instance, it has been shown that older adults who reported they had secure attachments with their parents during their childhood also report experiencing higher levels of positive emotions and lower levels of negative emotions in their everyday life (Consedine & Magai, 2003). In contrast, people who suffered emotional neglect or adversity during their childhood report having smaller social networks later in life and feel emotionally isolated in older age (Wilson et al., 2006). Insecure attachments with caregivers during childhood or stressful situations (e.g. frequent moves, loss of important caregiver figures) were found to be related to health outcomes in later adulthood (Consedine & Magai, 2003). In this context, one further milestone for emotional development would be to be able to identify the preferred attachment style and how it shapes our emotional life and to attempt to change it, if needed, in order to experience well-being.

Emotional development can also be understood as the ability to experience various emotions at the same time. Emodiversity, namely, a concept that reflects the

variety of emotional experiences, has been shown to reflect a healthier emotional life (Quoidbach et al., 2014). Emodiversity entails both positive and negative emotions. Greater positive emodiversity predicts better health and lower depression levels (Quoidbach et al., 2014; Urban-Wojcik et al., 2020). In order to measure emotions in older age, several scales can be used. For instance, the *Positive and Negative Affect Schedule* (PANAS, Watson et al., 1988) measures both positive (ten items) and negative (ten items) emotions.

Understanding the Mystery of the Positivity Effect

Several questions concerning emotional development have fascinated researchers over the last decades, namely, whether older people are happier than in their youth or happier compared to young people. Being happier was operationalized as experiencing more positive emotions rather than negative ones. In the following section, I will explore some evidence-based answers to these questions.

The "positivity effect" (Charles & Carstensen, 2010; Mather & Carstensen, 2005) refers to the age-related shift in the ratio of positive to negative material processed using our memory and attention capacities (Reed & Carstensen, 2012; Mather & Carstensen, 2005). Research on memory task performance has shown that older adults remember, on average, more positive information (e.g. stimuli presented in the lab but also autobiographical events). Moreover, findings pointed out that older adults remember more positive than negative information as compared to younger people (Sakaki et al., 2019). In case of attention capacity, research has shown that older people compared to younger individuals manifest an attention bias towards positive information, namely, they tend to select positive stimuli as opposed to negative stimuli (Isaacowitz et al., 2009; Mather & Carstensen, 2003). Studies consistently showed that older people are inclined to favour the cognitive processing of positive events (Baumeister et al., 2001; Mather et al., 2005; Isaacowitz et al., 2009).

The positivity effect was demonstrated with a wide range of stimuli. For example, research showed that older people as compared to younger ones are likely to focus their attention on happy, smiling faces and away from angry or sad faces (Mather & Carstensen, 2003; Isaacowitz et al., 2009). The positivity effect was also demonstrated in studies on working memory (Mikels et al., 2005), short-term memory (Charles et al., 2003) or autobiographical memory (Kennedy et al., 2004). Different types of stimuli were used, such as emotionally balanced images (Charles et al., 2003), word lists (Piguet et al., 2008), faces displaying different emotions (Mather & Carstensen, 2003), or health-related messages (Shamaskin et al., 2010). For all these types of stimuli, older people tend to favour and process the positive information in comparison to younger adults. In contrast, research has shown that young adults have a negative bias when processing emotional stimuli (Rozin & Royzman, 2001). However, older individuals have a propensity to remember both positive and negative information in equal degrees, compared to younger

individuals (Kensinger, 2007), and even sometimes remember more positive information than negative one (Charles et al., 2003). In case of autobiographical memory, older adults are biased story tellers in the sense that they recall the past in a more positive manner (Kennedy et al., 2004). They even recall negative memories in more positive fashion as compared to young people (Comblain et al., 2005; Kensinger, 2007). In one study, participants were asked to view positive, negative, and neutral images and later were asked to recall what they had seen and to distinguish these images from newly presented items (Charles et al., 2003). Findings pointed out that older participants remembered a larger proportion of positive images than negative and neutral ones. Similar findings were reported in another study where older adults recalled fewer negative pictures than positive or neutral ones as compared to younger participants (Gruhn et al., 2005). In yet another study, participants were asked to write about past life events (Pennebaker & Stone, 2003). Findings revealed that older participants used more positive words and fewer negative words to describe earlier experiences (Pennebaker & Stone, 2003). Researchers also examined the positive and negative contents of published writings like books and poetry or plays and observed a similar effect among older authors (Pennebaker & Stone, 2003).

Similarly, the positivity effect was proven in case of decision-making. When making a decision, older people are likely to attend more to positive attributes than to negative ones, in comparison to how younger people decide on different matters. This effect emerged for situations when people had to choose between hospitals and doctors (Löckenhoff & Carstensen, 2007, 2008), cars (Mather et al., 2005) or consumer products (Kim et al., 2008). Compared to younger adults, older individuals remember the provided information in a positively biased manner. For instance, they disproportionately remember the positive qualities of their choice, or they invest their preference with positive traits, and they rejected the option with negative characteristics (Mather et al., 2005; Löckenhoff & Carstensen, 2007, 2008).

All in all, positive appraisals seem to increase with age. For instance, benevolent beliefs about the world (e.g. the belief in the goodness of people, the belief that the world is a nice place to live in) were higher among older adults in comparison to younger people (Poulin & Silver, 2008). This may explain why older people report fewer regrets in life (e.g. "I should have done…") in comparison to young adults (Riediger & Freund, 2008). This phenomenon can prove to be adaptive, since older people with a limited time perspective ahead of them and fewer choices have more opportunities to feel regret and less time to make changes in their lives.

Such findings as the ones described above were explained by referring to the *socioemotional selectivity theory* (SST, Carstensen (2006), see also the chapter on social development in this book) which postulates a shift in motivation towards emotionally meaningful goals as the time perspective diminishes with ageing (i.e. people perceive they have less time to live). The SST stipulates that people have a series of goals that operate throughout adulthood, including simple goals concerning attachment or feeling secure as well as more complex ones that deal with emotional gratification. According to the SST, the importance of these goals changes with the shrinking of the future time perspective (e.g. how much time one thinks one

has left to live). Older people tend to see their future as being limited, and thus, it comes as no surprise that their goal hierarchy also changes with age. Young people have a tendency to perceive their future as unlimited, as full of opportunities and therefore are likely to prefer goals related to knowledge-seeking and expanding horizons, making new discoveries, over goals that aim at emotional gratification. Often, when young people are upset about not getting what they want, they can console themselves with the idea that they will get it sometimes in the future (e.g. the dream job, the right partner, the children, the great vacation, etc.). However, older people tend to realize that their time on earth is limited and consequently are inclined to focus on present emotional satisfaction. Older adults usually prioritize emotional satisfaction over goals with a long-term effect such as knowledge-seeking. This is explained as an adaptive function since people try to adapt their goals to their current life stage. For example, focusing on individual goals earlier in life (e.g. finishing one's studies, getting financial independence) and emotional goals later in life (e.g. finding the right partner, starting a family) can increase the reproductive success (Carstensen & Löckenhoff, 2003). As these changes in motivation and goal orientation are regarded as adaptive, one can also presume that they are helpful in terms of emotional development. A focus on emotional goals and emotional gratification can help foster well-being in later life and thus can prove to benefit emotional development among middle-aged and older individuals.

What factors play a role in the positivity effect and how does this happen? According to the SST (Carstensen et al., 2003; Charles & Carstensen, 2010), the positivity effect represents an adaptation to the different stages of the life course. In young age, people need to absorb knowledge, and negative stimuli are likely to hold more survival-relevant information as compared to the positive ones. However, as time goes by, people learn from their own or other peoples' negative experiences. Moreover, as the time horizon shrinks, people do not need to prepare for the future and are more concerned about their present well-being. Since older people are more motivated to preserve their emotional balance in the here and now, their attention tends to shift to the positive aspects in life. According to the SST, our goals direct the focus of our attention and our memory (e.g. what we tend to remember). Thus, changes in our goals can guide our attention towards positive or negative stimuli and make us recollect positive or negative events.

Apart from the SST, other researchers tried to explain the positivity effect. For example, one alternative explanation concerns the idea that negative information is more cognitively demanding, and this motivates older adults to preferentially process positive information (Labouvie-Vief et al., 2010). The *ageing brain model* proposed by Cacioppo et al. (2011) stipulated that the positivity effect observed in memory studies is caused by age-related neural degeneration in the amygdala that leads to reduced emotional responses to negative stimuli. Nevertheless, such explanations are based on the *decline model of ageing* and are also not extensively tested. In contrast, a solid body of evidence exists for the SST theory that helps us understand how the positivity effect happens (Reed & Carstensen, 2012). As mentioned above, Carstensen et al. (2003) focused on motivation in order to explain why we can observe more gains in emotional regulation in later life. Ageing-related changes

in motivation imply that older individuals aim to derive emotional meaning from life, as opposed to their reduced wish to expand their knowledge. According to Reed and Carstensen (2012), the positivity effect illustrates that goals control our information processing. In this sense, the positivity effect represents an argument for emotional development in older age and does not reflect a form of cognitive decline (e.g. people feel happier because of a decline in the ability to process negative information). Furthermore, the positivity effect is regarded as an adaptative change in older age, leading to better daily functioning. This represents further evidence that the positivity effect contributes to emotional development in later stages of life.

Specific thoughts determine specific emotions, and thus *appraisals* are very important for determining what type of emotions we experience. One type of appraisal of events discussed above is the one concerning the evaluation of the time left to live or shrinking future perspective. As the time perspective changes with age, people are more motivated to maintain well-being, to focus on emotionally meaningful experiences. This perspective change impacts on thoughts and behaviours. Time use also changes in the sense that older adults tend to select activities that are personally and emotionally meaningful (Hendricks & Cutler, 2004). Thus, the probability to experience positive emotions increases. Other specific ways of interpreting a situation (e.g. sad, irritable, threatening, nice, etc.) can determine different emotional experiences. For example, sadness is associated with appraising a situation as being hopeless, with experiencing irrevocable loss or feeling helpless in a certain context (Levine et al., 2006). The perception that someone or something is standing in the way of our goal fulfilment is associated with anger, while appraising a situation as a threat to our well-being is linked to anxiety (Levine et al., 2006). Older adults were shown to have more positive appraisals of everyday situations as compared to younger adults (Lefkowitz & Fingerman, 2003; Story et al., 2007), and this may explain why they report more positive emotions in general. Furthermore, older adults were shown to make more positive appraisals of social situations or conflict situations (Story et al., 2007).

Another explanation of why older people report higher well-being despite experiencing losses in other life domains (e.g. health, cognitions, social domains) is that they are better in what concerns emotional regulation (Urry & Gross, 2010). Emotional regulation encompasses processes that people use in order to modulate their emotional states and determine when to experience certain emotions and how to experience or express them (Gross, 1998). The *emotional regulation process model* (Gross, 1998) describes an emotion-generative cycle with five stages that represent points at which emotions can be regulated. The five stages are the selection of situations, modification of situations, deployment of attention, change in cognition, and modulation of experiential, behavioural, and physiological responses (Gross, 1998). In this sense, emotion regulation means to choose situations based on the emotions they will potentially trigger (e.g. choose situations that will trigger positive emotions such as relaxing time for ourselves and spending time with close friends who provide emotional comfort). Situation modification refers to changing the situation to experience a different type of emotion (e.g. we clean our house in order to feel more comfortable when spending time at home, we renegotiate our

working schedule so as to have more leisure time and feel less stressed). Attentional deployment refers to the decision to pay attention to certain aspects of a situation and ignore others (e.g. attempt to focus on the positive aspects of a situation, rather than the threatening ones). Changing cognitions refers to reappraising a situation in order to change the emotion we experience (e.g. reinterpret a situation as a challenge rather than a failure to achieve success). Response modulation refers to actively changing how we react emotionally to a certain situation (e.g. we can learn relaxation techniques to apply when we are stressed). Older individuals choose their social networks according to their emotional importance (Carstensen et al., 2003), avoid arguments (Charles et al., 2009), tend to direct attention to more positive stimuli (Isaacowitz et al., 2008), and are good with applying positive reappraisal strategies (Shiota & Levenson, 2009). Additionally, older adults are said to actively select and optimize emotional regulation strategies that compensate for losses of internal and external resources and ensure well-being (Urry & Gross, 2010). This is in agreement with the SST (Carstensen, 1993) that stipulates that older adults invest more energy in emotional regulation. It is also similar to the SOC (selection, optimization, and compensation) model (Baltes & Baltes, 1990) (see Chaps. 1, 2, 3 and 4 from this book), and it is called the *SOC-ER* (entity relationship) *model*, namely, selection, optimization, and compensation with emotional regulation (Urry & Gross, 2010). The SOC-ER framework can be applied to understand how older people regulate emotions in internal and external domains. In what concerns choosing situations to regulate emotions, internally they have the necessary experience to know which situations to avoid and which to approach, while externally they will select social relations that elicit positive situations (Urry & Gross, 2010). For example, older people may know that watching news in the evening makes them anxious and thus will avoid this and watch a nice film that arouses positive emotions. Also, older people are good at judging what emotional reactions they have to certain people and are likely to choose to meet those who determine positive feelings (e.g. they will avoid the annoying relatives at a family gathering and talk to the relatives that they like).

How Emotional Development Is Linked to Other Domains of Development

In the following, I will explore how emotional development is related to other types of developmental growth (i.e. social, cognitive, personality, and physical domain) in middle and older age. *Social development* and strong social networks in particular offer the much-needed emotional support during midlife and older age (Charles & Carstensen, 2010). Our emotional well-being depends a lot on the quality of our social relations (Charles & Carstensen, 2010). Stressful social relations are often reported among the daily stressors that trigger negative emotions across the lifespan (Almeida, 2005). According to the socioemotional selectivity theory (Carstensen

et al., 2003), with age, people tend to choose those social partners who provide them with good communication and support. Thus, indirectly, this represents a strategy to ensure emotional well-being in midlife and older age. In order to experience positive emotions in older age, we need strong social support networks (social development) and a strong sense of control (cognitive development) over our strategies and the environment (Charles & Carstensen, 2010).

Older people employ more passive strategies to deal with disagreements. For example, they try to avoid conflict escalation. They find social harmony more important than problem-solving and conflict resolution. Moreover, it was shown that older individuals adopt strategies to reduce the negativity of conflictual situations such as infusing negative comments with positive ones when resolving a conflict with their spouse (Levenson et al., 1994). Such emotional strategies may lead to better social relations and support and thus foster social development. The social *sources* of positive and negative emotions might change across the lifespan. For example, older adults report experiencing positive emotions with family members or in connection to other close important social relationships, while young adults report positive emotions from interacting with new friends (Charles & Piazza, 2007). Young people prefer to interact with emotionally close partners because these provide them with more positive emotions. Providing social support to others is also a source of positive emotions, a greater purpose in life, and even reduced mortality (Greenfield & Marks, 2004; Krause, 2006). All in all, positive emotions such as happiness and well-being have a positive impact on social relations in older age (Steptoe & Fancourt, 2019) and, the other way around, socializing in older age improves emotional well-being (Talmage et al., 2020; Heo et al., 2010; Sposito et al., 2010; Anaby et al., 2011; Bowling, 2011).

In general, it was reported that emotions tend to improve with age as compared to our cognitive functions that are likely to decrease (Scheibe & Carstensen, 2010). But how do our emotions impact *cognitive development*? Receiving good emotional support was linked to better *cognitive functioning* in older age (Seeman et al., 2001). Positive emotions that we can experience during social interactions may facilitate better cognitive functioning (Blanchard-Fields, 2007; Charles & Carstensen, 2010). In contrast, people who report experiencing negative emotions in their networks show greater cognitive decline over time (Hughes et al., 2008). Future research should investigate the causal relations to see how emotional and cognitive developments influence each other and whether the positivity effect impacts cognitive processing, problem-solving or decision-making (see Reed and Carstensen (2012)).

Cognitive control strategies are crucial in this respect and so is the connection between emotional and cognitive developments. Namely, cognitive control strategies need to remain intact or develop in order to stimulate our emotional growth. The ageing brain model has suggested that the positivity effect is the result of a shrinking amygdala that is responsible for emotional processing and emotional learning. Results of the study by Sakaki et al. (2019) show that the positivity effect depends on the preservation of cognitive control mechanisms rather than impaired emotional control function due to an ageing brain. In this context, cognitive control

was defined as a person's ability to coordinate thoughts with behaviours based on current goals (Miller & Cohen, 2001). Cognitive control includes inhibitory control, performance monitoring, working memory and goal-directed attention. In general, positive emotions tend to expand people's way of thinking and foster creativity for problem-solving (Layous et al., 2014; Fredrickson, 2001; Lyubomirsky et al., 2005). In contrast, frequent negative emotions can lead to cognitive decline and even the onset of dementia (Sutin et al., 2018; Boyle et al., 2010).

As discussed in the chapter on *personality development* (see chapter on personality development in this book), our personality does not suffer great modifications with age (McCrae et al., 2000). However, some traits may be further developed. One study followed the evolution of neuroticism in men aged 40 and older for over 12 years (Mroczek & Spiro, 2003). Findings reflected that neuroticism decreased with time until around the age of 80. Extraversion, a trait that is connected to positive emotions, positive appraisals, and friendliness, remained stable over time. The tendency to ruminate (e.g. recurring, automatic thoughts about anger-provoking circumstances) was lower among older adults compared to younger people (McConatha & Huba, 1999). In terms of personality modifications, researchers report reductions in negative thoughts with age and a decrease in neuroticism after the age of 40 among men. The tendency to ruminate over negative events was lower in older adults. Neuroticism means more reactivity to negative emotions. People who are more neurotic tend to dwell on past events and have more negative reactions to recurring problems. In contrast, extraversion, referring to the tendency to be outgoing and sociable, seemed to remain stable over time. All in all, emotional development means a change in motivation and implies a focus on the emotional aspects of things. With age, the motivational balance shifts from learning about new things from negative experiences to finding balance in life by concentrating on the positive aspects. Traits such as emotional stability, conscientiousness, extraversion, and agreeableness as well as openness to new experiences were shown to predispose people to being happier (Chung et al., 2019; Oerlemans et al., 2011; Chamorro-Premuzic et al., 2007) (see chapter on happiness, this book, part III).

In what concerns *physical development*, positive emotions such as happiness can have a beneficial effect on health (see chapter on happiness, part III of this book), while negative emotions have a detrimental one. For example, happiness was shown to be associated with better health and longevity (Steptoe, 2019) (see also chapter on happiness, this book, part III), while negative emotions (e.g. depression, anxiety) are linked to illness (Power et al., 2016; Lenze and Wetherell, 2011; Byrne, 2016). Happiness among older adults is said to enhance heart functioning (Steptoe et al., 2005), augment the immune system (Cohen et al., 2003), ease pain (Zautra et al., 2005), decrease morbidity (Ostir et al., 2001), and increase longevity (Danner et al., 2001; Martin-Maria et al., 2017). Positive emotions help to encourage a healthier lifestyle among older adults (e.g. exercise, healthy diet, good sleep quality) (Steptoe & Fancourt, 2019).

How to Foster Emotional Development in Middle-Aged and Older People

With age, people have more capabilities to regulate their emotions. This helps them to experience higher levels of emotional well-being. However, even if they regulate negative emotions well, if they experience stress for a prolonged amount of time, this may trigger negative consequences (e.g. illness, cognitive decline, loss of social connections, etc.). When situations that cause high levels of distress are unavoidable, age-related advantages disappear. Thus, middle-aged or older individuals also need to learn or improve their emotional regulation strategies in order to deal effectively with ageing. Emotional regulation is relevant at any age and is associated with experiencing fewer negative emotions as compared to positive ones (Blanchard-Fields et al., 2004). For example, one study, looking at how older adults compared to younger ones solve problems and manage emotions associated with that particular problem, showed that older people used more passive emotion regulation strategies (e.g. avoidance such as redirecting thoughts from the situation, acceptance of a situation as it is) as compared to proactive emotional regulation styles (e.g. seeking emotional support, consciously dealing with one's emotions and those of others) that were preferred by middle-aged individuals (Blanchard-Fields et al., 2004). This may be adaptive for older individuals since negative emotions consume more energy. Thus, by applying passive emotion regulation strategies, they prevent negative arousal from occurring (Blanchard-Fields et al., 2004). Nevertheless, no age differences were found concerning the use of instrumental strategies (e.g. cognitive analysis, planful problem-solving), applied to solve the problems themselves. These age differences in emotional regulation were observed only for dealing with emotions that are associated with daily problems (Blanchard-Fields et al., 2004).

Emotion regulation strategies can be measured with the *emotion regulation questionnaire* (ERQ, Gross & John, 2003). This questionnaire consists of six items assessing reappraisal and four items measuring suppression. Reappraisal refers to reinterpreting the situation to generate a new emotion, while suppression refers to inhibiting the response to emotions (Gross & John, 2003). Suppression can control the expression of a negative emotion but not the frequency of negative emotions (Gross & John, 2003; Masumoto et al., 2016). Concerning gender differences in using emotional regulation strategies, men tend to employ more suppression, while women use reappraisal (Gross & John, 2003). Nevertheless, other studies reported that women also increase the use of suppression with age (Nolen-Hoeksema & Aldao, 2011). A study with Japanese older adults showed that they used cognitive reappraisal to enhance their positive mood and lower negative emotions (Masumoto et al., 2016). Findings pointed out that older men used cognitive reappraisal more frequently to enhance their mood (Masumoto et al., 2016). Another study on Japanese older adults showed that cognitive reappraisal may contribute to differences in experienced affect (Nakagawa et al., 2017). Such findings highlight the relevance of cognitive reappraisal as an emotion regulation strategy and suggest that one needs to tailor emotion regulation interventions to the specific needs of older

men and women. Nevertheless, another study with older adults showed that these were inclined to use suppression as an emotion regulation strategy and that this was not associated with experiencing higher distress levels (Brummer et al., 2013). As discussed earlier in this chapter, according to the *socioemotional selectivity theory* (Carstensen et al., 2003; Carstensen, 1993), a shrinking time perspective motivates older people to focus on emotions, and thus, it is not surprising that they tend to use suppression as a strategy to manage their emotions or that its use does not have negative emotional consequences as it does in case of young adults (Brummer et al., 2013).

The change in emotional strategies constitutes an argument for development and also for the necessity to sometimes apply novel strategies to deal with emotions triggered by daily issues. Strengths and limitations of older individuals influence emotional regulation. One strength is that older people tend to choose with whom they spend their time and which situations they encounter (Urry & Gross, 2010; Charles, 2010). Despite the large evidence base on the positivity effect (i.e. increase in older people's well-being despite experienced losses), recent literature shows more nuanced results, suggesting that changes in emotions may not be as positive after all in older age (Isaacowitz et al., 2017). Thus, one important topic of discussion is how to help foster emotional development in midlife or older age in order that middle-aged or older individuals experience well-being. Another chapter (see chapter on happiness, this book, part III) deals specifically with how to foster happiness among older individuals. In this chapter, I will consider some general principles regarding how to help middle-aged and older individuals improve their emotional regulation strategies and deal more effectively with negative emotions (e.g. cope with stress in effective ways).

Since negative life events unfortunately sometimes become more frequent with age (e.g. illness, loss of significant others, financial issues, retirement, etc.), it is also very important that older adults possess useful stress coping strategies. Stress and coping are relevant for ageing because it is said that repeated experiences of stress can accelerate the ageing process (Seeman & Gruenewald, 2006; Almeida et al., 2011). Effective coping strategies can help increase health and longevity, while negative coping such as expressing hostility and blaming others has determinantal effects on health (Aldwin, 2011; Aldwin et al., 2014). Avoidance-coping usually diverts attention from the stressor, while an approach-coping style refers to actively confronting the stressor (Aldwin, 2011). Another classification organizes coping as problem-focused (e.g. concentrated on solving the problem or on removing the stressor) or emotion-focused (e.g. centred on reducing the negative emotions). People may use both coping styles at the same time or in a sequential manner. Also, it is relevant that people can change their coping styles, either with age and experience or following an intervention. Research looking at how older individuals deal with stress found that the use of a problem-focused coping is more effective in inducing positive emotions (Chen et al., 2017). Compared to younger adults, older people identified several sources of stress such as health-related issues, financial problems, family issues, relationships, and in some cases work-related stress (Chen et al., 2017). Older adults used predominantly emotion-focused coping, namely, either positive (e.g. searching for social support, taking time out) or negative

strategies (e.g. blaming others, avoiding confrontation) and fewer problem-focused strategies (e.g. concentrating on changing the situation and on finding alternative solutions) (Chen et al., 2017). However, those who used problem-focused coping were more effective in controlling their stress (Chen et al., 2017). Thus, teaching problem-focused coping to middle-aged and older adults, as well as identifying situations to apply it in, may be useful for improving their overall emotional development.

Ageing can have a negative effect on coping styles, in the sense that, with increasing health problems and cognitive decline, it may become more difficult to apply effective coping strategies. One study on older adults in their 80s showed that they used routines (e.g. shopping for food on a certain day of the week, having dinner at the same time each day) and anticipatory coping (e.g. planning carefully when going to a new location) as strategies for dealing with stress (Johnson & Barer, 1993). Downward comparison (e.g. comparing oneself to others who have a worse situation) was also applied as an effective coping strategy (Johnson & Barer, 1993). Another study on coping and stress in older adults found that coping with three types of stressors (e.g. health, financial, and interpersonal) generated similar coping strategies. Individuals who interpreted the situations as being a challenge used more the approach-coping style and experienced more benefits (Moos et al., 2006). Older adults who applied avoidance-coping were more likely to have drinking problems and were more depressed (Moos et al., 2006). Findings point out that teaching older adults approach-coping skills may prove useful when they deal with interpersonal problems, health issues or financial matters (Moos et al., 2006). One important objective of stress management programmes for older adults is to motivate them to try out new coping strategies, be more assertive, and find benefits in dealing with severe stressors (Moos et al., 2006; Snyder et al., 2000). The outcome of such coping trainings should not be measured just by focusing on the level of reduced negative emotions (e.g. depression level was reduced) but also by assessing the extent to which the novel coping strategies work for controlling the stressor, if people can focus on potential benefits of the stressor and invest it with meaning (Moos et al., 2006). According to the broaden and build theory (Fredrickson, 2001), positive emotions help people to expand their cognitive abilities, broaden their attention span and motivate them to learn new things. By expanding their horizon, people experience more positive emotions that lead to an upward spiral (Fredrickson & Joiner, 2002) and eventually to building more developmental resources, such as health (Kok et al., 2013). Thus, measuring the level of positive emotions that was felt following an intervention can provide information on the emotional development experienced by middle-aged and older participants.

All in all, interventions targeting emotional development in older adults could aim to (1) improve emotional regulation (e.g. promote cognitive reappraisal as an effective strategy), (2) increase problem-focused coping and positive emotion-focused coping and learn how to apply each type of coping strategy effectively, depending on the nature of the stressor, and (3) increase positive emotions (e.g. through engagement in positive activities, see chapter on happiness promotion, part III in this book). For example, one intervention targeted emotional intelligence in

older adults in order to improve well-being and resilience (Delhom et al., 2020). Emotional intelligence is important for positive ageing because it determines positive outcomes at the cognitive and behavioural level and provides adaptation strategies (Delhom et al., 2018).

From a positive psychology perspective, a *strength-based approach* (Peterson & Seligman, 2004; Seligman et al., 2005; Parks & Biswas-Diener, 2014) can be used to tackle the abovementioned objectives, in addition to boosting developmental assets among middle-aged and older individuals. Building a developmental assets tool kit is relevant for emotional development since development in all life areas is linked to older age. Thus, for example, improving social skills and enhancing social support networks (i.e. social development), promoting a healthy lifestyle (i.e. physical development), stimulating cognitive fitness (i.e. cognitive development), and fostering optimism, extraversion, and openness to new experiences (i.e. personality development) can have a positive impact on emotional development in midlife or older age. Encouraging strengths such as communication abilities, correct identification of emotions, expressing emotions in assertive ways, conflict resolution skills, self-efficacy, gratitude, and forgiveness, can help people regulate their emotions better, cope with stress, and foster positive emotions. Training emotional intelligence as a strength can prove very useful in case of emotional development in midlife and older age. Both building strengths and developmental assets may lead to resilience in older age, because it helps older individuals experience positive emotions despite the challenges inherent to ageing. Resilience is also linked to emotional intelligence (Armstrong et al., 2011), and some authors argue that emotional intelligence is an antecedent of resilience (Liu et al., 2013). In this sense, resilience has been described as a self-regulatory defence mechanism (Mayordomo-Rodríguez et al., 2015; Mayordomo et al., 2016) and may also constitute the focus of emotional development interventions targeting middle-aged and older adults.

Emotional intelligence encompasses an aptitude to perceive, appraise, and express one's emotions with accuracy (*perceiving emotion*), the capability to access and produce feelings that facilitate thought (*facilitating thought through emotions*), the ability to understand emotions and emotional knowledge (*understanding emotions*), and the ability to regulate emotions and promote emotional and personal growth (*managing emotions*) (Mayer et al., 2016; Mayer & Salovey, 1997). Especially the last component, namely, managing emotions, is relevant to emotional growth in the sense that it simulates better emotional regulation and coping with negative feelings. Emotional intelligence can be assessed with the TMMS (Trait Meta-Mood Scale)-24 (Fernández-Berrocal et al., 2004) that evaluates attention, emotional clarity, and emotional repair. The attention dimension refers to the degree to which people pay attention to their feelings. The clarity dimension refers to how people perceive their emotions while the repair means to what extent people can regulate their negative emotions and prologue their positive ones. Attention to one's emotions also implies a certain balance, since constantly focusing on our emotions can lead to rumination (Lloyd et al., 2012). Emotional intelligence is strongly associated with well-being (Kong et al., 2019) and life satisfaction (Delhom et al., 2017) and thus makes an important objective for emotional development interventions.

One intervention targeting emotional intelligence among older adults constituted of a programme that included weekly sessions of 90 min (Delhom et al., 2020). The objectives of the programme involved getting familiar with what emotional intelligence is and why it is important, developing an average degree of attention to one's emotions, achieving better emotional clarity, using cognitive behaviour strategies to regulate emotions and learning how to integrate the new skills into daily lives (Delhom et al., 2020). The 10 sessions were delivered to groups of 8–12 individuals. The sessions were based on the model of stimulating attention and clarity and repairing emotions. In each session, exercises were carried out and some homework activities were given to participants. The emphasis of the exercises was on emotion management and repair. Sessions included providing information on the importance of identifying emotions, learning tools such as empathy and assertiveness, emotion management tools for conflict or stress situations, and how to integrate attention, clarity, and repair to strengthen emotional intelligence (see Delhom et al. (2020) for a full account of the sessions). Findings showed that the intervention was effective in promoting emotional intelligence among older adults, and there was also an increase in life satisfaction and resilience (Delhom et al., 2020).

Other programmes focused specifically on stress management skills, such as an eight-week multimodal stress management intervention targeting older women (Papageorgiou et al., 2016). The intervention included progressive muscle relaxation training, guided imagery, abdominal breathing exercises, physical exercise, nutrition counselling, and cognitive restructuring training (Papageorgiou et al., 2016). Participants received information on cognitive restructuring, exercise, and nutrition and learned relaxation exercises within the sessions and then practised these as homework. They also received a pedometer for the self-monitoring of physical activity and a relaxation diary to write down details about their relaxation practice at home (Papageorgiou et al., 2016). Findings pointed out that the programme can lower stress and depression levels as well as promote well-being among older women (Papageorgiou et al., 2016). The intervention may also be adapted to fit the stress management needs of other older individuals. In terms of stress management intervention, there is a rising interest in developing stress management apps for older individuals, for example, concentrating on physiological aspects such as improving sleep quality among stressed older adults (Wilson et al., 2015).

In terms of interventions to promote positive emotions, those relying on engagement in positive activities were proven to be effective (Layous et al., 2014). According to the positive activity model (Lyubomirsky & Layous, 2013), engagement in positive actions can trigger well-being through engagement in cognitive (e.g. imagining one's best possible self) or behavioural activities (e.g. expressing gratitude, performing acts of kindness). Taking part in gratitude and optimism exercises may increase the frequency of positive thoughts and positive assessments of life situations (Layous et al., 2014). This can help in situations when older adults face age-related challenges (e.g. illness, death of loved ones, retirement). Engaging in positive activities also inhibits the possibility of rumination (e.g. excessive focus on negative aspects of life). For instance, gratitude exercises can help ruminators broaden their perspective and realize that not only bad things happen to them on a

daily basis. Additionally, it can help these people engage in social comparison and acknowledge that there are individuals with bigger problems out there (Fredrickson, 2004). Another exercise consists in affirming one's most important values (e.g. seeing oneself as competent, capable, caring, kind, etc.). This type of exercise can help people improve the self-view and build self-efficacy (Sherman & Cohen, 2006). Additionally, it was shown that positive activities can add up and reinforce each other and determine an upward spiral (Fredrickson & Joiner, 2002) and thus increase well-being. One example of an intervention promoting happiness among older individuals is "the Art of Happiness" (Orsega-Smith et al., 2019) (see also chapter on happiness promotion, this book, part III). The eight-week programme included weekly 90-min sessions on different topics such as the definition of happiness, reflecting on happiness (e.g. recognize individual sources of happiness, make a distinction between happiness and pleasure), compassion and human connection (e.g. discuss the importance of human connection, intimacy, and sharing), learning stress management (e.g. understand causes of stress and learn ways to cope), forgiveness (e.g. understand the link between forgiving and happiness), transforming suffering (e.g. dealing with guilt, learning how our suffering can make us develop), learning mindfulness (e.g. understand how living in the present can improve happiness), and practising humour (e.g. understand how humour can foster happiness) (Lyubomirsky, 2008). Each session comprised teaching, didactic materials, interactive activities, and homework (e.g. assignments and reading material). Assignments included accomplishing three acts of kindness for three different people (i.e. compassion, kindness) or writing down each day three things for which one is grateful (i.e. gratefulness), writing a letter of apology to someone whom you offended, writing a letter of apology to oneself for something you regret doing in the past (i.e. forgiveness), and reflecting on a negative experience and how one dealt with it (i.e. transforming suffering) (Lyubomirsky, 2008; Orsega-Smith et al., 2019). The "Art of Happiness" intervention had an impact on older individuals' well-being and psychological health (Orsega-Smith et al., 2019). Components as well as the structure of the "Art of Happiness" intervention can be applied to promote positive emotions among middle-aged and older individuals and thus stimulate their emotional development.

Conclusion

Emotions are an important component of our lives, and they continue to be so in midlife and old age. In this chapter, I discussed what emotional development means in midlife and older age and how it is connected to other developmental domains and made some suggestions concerning how to foster emotional development among middle-aged and older people. One important take-home message is that emotional development is still possible in older years. In this sense, an argument for the continuous development is represented by the *positivity effect* (Charles & Carstensen, 2010; Mather & Carstensen, 2005), namely, an increased tendency observed in older individuals to experience positive emotions despite age-related losses. With ageing,

there is also a shift in coping strategies and emotional regulation strategies that are being applied. This constitutes a further argument that emotional development occurs in older age and also can inform interventions to improve it.

Emotional development is relevant because it affects also other domains of growth in older age. For instance, experiencing positive emotions is linked to health and longevity (Steptoe, 2019), healthier lifestyle (Steptoe & Fancourt, 2019), better social support and increased social network, personality growth, and cognitive functioning (Layous et al., 2014). The relation is reciprocal. This means that development in all areas influences emotional development. Having good social relations and strong social networks (i.e. social development), being cognitively fit (i.e. cognitive development), extraversion and agreeableness (i.e. personality development), and health and mobility (i.e. physical development) influence how older individuals develop on an emotional level. Emotional development helps to prevent loneliness (see chapter on loneliness, this book, part III), anxiety (see chapter on anxiety, this book, part III), and depression (see chapter on depression, this book, part III) in older age. Also, emotional development happens within couples (see chapter on love, this book, part III) and friendship relations (see chapter on social relations, this book, part II) or family (e.g. relations with grown-up children) and concomitantly influences the quality of these different socioemotional relations. Interventions to boost emotional development in older age can aim to improve emotional regulation, stimulate the use of effective coping strategies, and increase the frequency of positive emotions. Developing emotional intelligence and resilience among middle-aged and older individuals can help stimulate emotional development in midlife and older age.

Reflection Questions

1. Define in your own words what emotional development means. Give an example.
2. What can you do for your own emotional development? Provide three examples.
3. What is the positivity effect and how would you explain it?
4. How does the positivity effect impact development in older age?
5. Why is emotional development important in older age? Provide three arguments.
6. Formulate three objectives and three strategies for boosting emotional development in older age.

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Chapter 9

Personality Development in Midlife and Older Age: Mission Impossible or a Necessary Goal for Positive Ageing?

"It is never too late to be who you might have been" (George Elliot)

Introduction

As we have seen also in other chapters of this book (see, for example, in Chaps. 1, 2, 3, 4, 5, 6, 7 and 8), when we think about personality development, mostly children and teenagers come to mind. The personalities of children and teenagers are thought to be still in a process of development, while having a defined personality represents a sign of maturity. This may happen also because as adults, people have the responsibility to shape the personality of children and adolescents. Shaping young minds and character traits represents one of the tasks and challenges of parents and teachers. But how about these adults involved in this process of personality shaping? Does the role of parent or teacher have an impact on shaping their own personalities? Teenagers are often described as "difficult" because they are going through "personality crisis", which, if solved, will lead to their emergence as mature individuals. Nevertheless, middle-aged and older adults also experience personality crisis such as the famous "midlife crisis". One is left to wonder what effect such crises have on shaping the personality of the middle-aged or older adult.

A stereotype often associated with older age is that older individuals have rigid mindsets, as "you cannot teach an old dog new tricks". However, we have seen in the chapter on cognitive development (see chapter on cognitive development in part II, this book) that learning is still possible in older age and experiences surely leave their mark on one's personality as well. Certain life's experiences (e.g. marriage, divorce, death of loved ones, becoming a parent, getting a job) or certain people may have an impact on how we think about life and ourselves, and they could contribute to personality changes during later adult life. How we react to life's challenges and resolve inner crises also frames who we are at a certain stage in our life. In this sense, sometimes changes in personality are seen as a negative sign of

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ageing,, for instance, somebody becoming more aggressive because of a diagnosis of dementia or just more introvert and sad in preparation for death. Nevertheless, in this chapter, I will mainly refer to changes that are positive in the sense that they happen because people desire, initiate and invest time and effort to realize them.

As mentioned in previous chapters (see Chaps. 5, 6, 7 and 8, this book), personality changes may not be as visible or as dramatic as in younger years, which leaves many to wonder if we develop our personality at all past the age of 30. Also, while personality represents something that needs to be shaped during adolescence and youth, little is known about how we can shape our personality during middle and late adulthood. Nevertheless, there are shelves of self-help and life coaching literature out there on how to become a better person or how to improve oneself to be better at managing relationships or facing the many challenges of the work environment. All these behavioural changes imply a certain modification in our personality, for example, that we should become more extrovert in our relations with people, more conscientious at work, or more optimistic about life in general. Thus, this large supply of self-help literature and life coaching services proves that adult people are actively reflecting on the topics of changing aspects of their personality and seek advice in order to do so. In this context, positive psychology principles (Seligman et al., 2005; Layous & Lyubomirsky, 2014) can provide a scientific frame for designing interventions to promote personality development in older age.

All in all, this chapter will explore questions such as "how does personality change happen in midlife and older age?" and "is personality change an inevitable development process or something that happens because of conscious time and effort investment?" In an attempt to answer these questions, I will first define personality and explore how one can measure its development. Then, I will go on to describe research concerning the models that set out to explain personality development across midlife and older age and reflect on how one can foster personality development among middle-aged and older individuals. Last but not least, I will discuss how personality development is related to cognitive improvement, emotional and social growth, and physical development.

Defining Personality Development: A Necessary Process or an Inevitable Outcome?

Personality is considered to comprise the stable interrelated traits or characteristics of a person or "individual differences in characteristic patterns of thinking, feeling and behaving" (APA, 2017). In short, personality represents what makes us unique as human beings during all stages of life. However, studies have shown that personality can change across the lifespan (Ardelt, 2000; Roberts & DelVecchio, 2000; Hennecke et al., 2014; Specht, 2017). Even if by its definition, personality implies a certain degree of stability, it also allows for a particular amount of flexibility. Studies point out that personality shows a degree of continuity and change over the

lifespan that can often be traced down to experiences and life transitions (Lodi-Smith & Roberts, 2007; Lüdtke et al., 2011). This is good news since it implies that we can attempt to change things that we do not like about ourselves or highlight certain traits to improve our quality of life. For example, if we are already a responsible kind of person (e.g. innate trait), through our work choices (e.g. jobs that imply a high degree of responsibility), we can become even more conscientious and dependable during our midlife and older years. In contrast, if we are low on conscientiousness, by choosing certain activities that provide structure in our lives, we may eventually become more responsible.

In the chapter on cognitive development (see chapter on cognitive development, part II, this book), one of the important concepts I discussed was *plasticity*, namely, the capacity of modifying the developmental paths within an individual (Baltes et al., 2006). There is scientific evidence that cognitive plasticity is possible, for example, because of cognitive training (Kray & Lindenberger, 2007) or physical activity (Voelcker-Rehage et al., 2011). Similar to cognitive development, *personality development* represents the process of changing personality traits across the lifespan. As argued in previous chapters (see Chaps. 1, 2, 3, 4, 5, 6, 7 and 8), development in midlife and older age implies a series of gains and losses and a certain degree of plasticity. This is applicable also to the realm of personality, and thus research has started to focus on the plasticity of personality development during adulthood (Böhmig-Krumhaar et al., 2002). In contrast to cognitive development, where it is easier to define what the desirable outcomes would be, in case of personality, it is more difficult to decide what exactly should change so that we can say that our personality has improved. Since personality is what makes a person unique, interventions need to be adapted to the needs of the individual. In order to better understand what gains and losses could mean for each particular case or how one could measure personality change, I will first explore some theoretical models that attempt to explain personality and its evolution across the lifespan. Then, I will go on to discuss if personality change happens automatically because of social events and life's experiences (a passive path) or represents the result of conscious efforts of self-improvement (the active path).

One of the classical models of development, including personality and its evolution across the lifespan, is *Erikson's psychosocial development* model (Erikson, 1959; McLeod, 2018). According do Erikson, there are *eight stages of psychosocial development*, and each stage implies a psychosocial crisis that can have a positive or negative outcome on personality development. Successful accomplishment of each stage results in a healthy personality. In contrast, failure to resolve the crisis characteristic for each stage has negative implications for the evolution of a persons' personality. However, the crisis can also be resolved at a later point in life. The first stage "trust versus mistrust" refers to the first 18 months of life, when babies should develop a sense of trust and security that will affect their social relations later in life. If the received care is inconsistent, the infant will develop a sense of mistrust and anxiety. The second stage is "shame versus doubt" where infants between 18 months and 3 years should develop a sense of control over the environment and autonomy. If children are often criticized and overcontrolled, they will become insecure, often

developing a sense of shame and doubting their own abilities. The third stage concerns "initiative versus guilt". This is the stage where children become active and, if allowed to take initiative, they develop their social skills (e.g. leadership). If children at this stage are overcriticized and controlled, they tend to develop a sense of guilt. The fourth stage is called "industry versus inferiority". At this stage, children learn many new things such as writing and reading, and they develop various interests. The child seeks approval by demonstrating competencies (e.g. showing their skills in front of parents, teachers, and the peer group). If children receive encouragement for their efforts, they develop a sense of competence. In contrast, if children fail to develop skills that are considered desirable (e.g. being good at sports, playing a musical instrument well, being good at math), they may develop a sense of inferiority. The fifth stage is named "identity versus confusion" (12–18 years old). Adolescents are searching for their own identity, questioning their values and goals, and acquiring sexual and occupational identities. If teenagers fail to develop a clear sexual and occupational identity, they may enter young adulthood in a state of confusion. The sixth stage (18–40 years old) is the stage of "intimacy versus isolation" where the major challenge is to form intimate, loving relationships with other people. Successful accomplishment of this stage results in love and commitment while failure leads to avoiding intimacy and being in an intimate relationship. The seventh stage (40–65 years old) is the "generativity versus stagnation" stage, where people either find a way to give back to society (e.g. by making their mark through their work, by raising children) or they feel unproductive and stagnant. The eight and last stage (65 years until death) refers to "ego integrity versus despair" where people either develop wisdom by accepting their life as it was and is at present, or in contrast, they become depressed because they feel lack of accomplishments in life. This theory offers quite a rigid framework for development. In addition, it implies that changes in personality during adulthood take a long time, namely, around 20 or 25 years. The Eriksonian theory was also criticized because it does not really explain how development occurs. The framework itself however has its advantages in the sense that it provides a "life story", a certain red thread that provides structure to a person's goals, creating expectations concerning the changes that may occur across the life course and influence individual's personality development.

As a critique to stage models, other researchers focused on traits that individuals possess and can evolve across the lifespan, in contrast to a certain number of predefined stages with developmental challenges. One of the best-known frameworks attempting to explain personality is the five-factor model of personality, also known as the *Big Five or OCEAN (openness, conscientiousness, extraversion, agreeableness, and neuroticism) model* (Goldberg, 1990; McCrae & Costa, 2010; Costa et al., 2019). Traits are defined as more or less consistent dispositions that manifest in patterns of thought, feelings, and behaviours. However, personalities also include attitudes, motives, beliefs, and life narratives (Costa et al., 2019). Research has shown that this framework is applicable across different cultures (Schmitt et al., 2007; McCrae et al., 1999), and it also provides a reliable instrument for assessing personality. The acronym OCEAN makes it easier to remember the five traits.

However, one needs to take into account that the OCEAN model does not represent an exhaustive framework; it just comprises the most common factors that were found to be related to personality evolution. In the following section, I will describe each factor with its characteristics.

Openness to experience comprises an individual's willingness to try out new things, the ability to make oneself vulnerable, and the capacity to think outside the box. Common personality traits related to this factor are curiosity, insightfulness, originality, daringness, creativity, heightened imagination, and varied interests. People with high levels of openness are likely to engage in lifelong learning, are eager to meet new people, and engage in creative careers and hobbies (Lebowitz, 2016). People who are low on openness prefer routines and are likely to stick to their groups of known people. *Conscientiousness* was described as the tendency to control impulses and act in socially acceptable ways and facilitate goal-directed behaviour. Among the traits associated with the factor conscientiousness are self-discipline, persistence, reliability, resourcefulness, perseverance, dutifulness. Conscientious people are good at delaying gratification, are efficient organizers and planners and work well in contexts where the rules are clear. They are likely to have academic or career achievements and become good leaders (Lebowitz, 2016). People who score lower on conscientiousness are more likely to be impulsive, to procrastinate and to adapt with difficulty to contexts where they must follow clear rules. *Extroversion* refers to the degree to which a person is outgoing, sociable, friendly, talkative, affectionate, fun-loving, and socially confident. People who are extroverts seek out opportunities to interact with others, are comfortable in social situations and are prone to action rather than contemplation (Lebowitz, 2016). Extroverts draw energy from being among people. The opposite of extroverts are introverts, who tend to be more quiet, thoughtful, solitude loving, reserved individuals. Introverts draw energy from being by themselves. *Agreeableness* refers to how people interact with others in social situations. Traits that are associated with this factor are altruism, trustworthiness, patience, humbleness, politeness, kindness, loyalty, helpfulness, consideration. People who are high on agreeableness are sensitive to the needs of others; they are affectionate with their loved ones and kind to strangers (Lebowitz, 2016). People who are low on agreeableness tend to be rude, blunt, ill-tempered, careless of the needs of others, sarcastic and sometimes even cruel or mean. *Neuroticism* refers to how comfortable we are with ourselves and how emotionally stable. Common traits that are usually associated with neuroticism include moodiness, pessimism, jealousy, anxiety, insecurity, self-criticism, instability, and oversensitivity. Those who are high on neuroticism are prone to mood swings, negative emotions in general (e.g. sadness, worry), suffer from low self-esteem, are often self-conscious, and unsure of themselves (Lebowitz, 2016). In contrast, those who score low on neuroticism tend to be more self-confident and adventurous or brave. Individual personalities usually represent a mix and match from all these principal traits. Also, theses five main traits can evolve across the lifespan (e.g. people become more introvert or more extrovert with age and more emotionally stable or more neurotic). One important advantage of the Big Five model is that it facilitates the process of measuring personality traits and therefore

also personality changes. The *Big Five Inventory* and the *Revised NEO Personality Inventory* (NEO-PI-R, Costa & McCrae, 2010) were developed to assess personality according to the OCEAN/Big Five model.

How are all these five traits of the OCEAN model connected with lifespan development? For example, openness to experiences can increase with age as we accumulate experience and knowledge (Schretlen et al., 2010). Also, openness may be connected to wisdom, as wise people are more willing to explore themselves, reflect on situations and learn from the experiences of others or their own. This trait is less likely to decrease over time, namely, individuals who are open and curious are less likely to become more rigid as they age. Furthermore, openness is relevant for the process of development. People who score high on openness are more willing to explore themselves, acknowledge deficits, and change. In case of conscientiousness, as mentioned above, people who are high on this trait value self-discipline and achievement, two important ingredients for self-development. Conscientiousness was found to be related to post-training learning (Woods et al., 2016) and working to achieve increased competence (Roccas et al., 2002). One study also pointed out that conscientious people adjust better to life's challenges (Soldz & Vaillant, 1999), which can also be an important trait for positive ageing. One downside of conscientiousness is that these people may be over perfectionistic in some situations, which can be a drawback and could represent something that they would need to change in order to cope with work and life tasks in general. Extroversion is associated with sociability and openness and thus extroverts may learn a lot through their social contacts, and this will have a positive impact on their development. Similar to extroverts, people who are high in agreeableness tend to have good social relations, enhanced social support networks and volunteer for their communities (Ozer & Benet-Martinez, 2006). Agreeableness was found to be correlated to high social support and healthy midlife adjustment (Soldz & Vaillant, 1999). Since social support and good social relations are relevant resources for positive ageing, agreeable people can rely on these for their own ageing process. In contrast to all of the other traits, neuroticism is linked to low motivation, low self-efficacy, risk behaviour, and mental health issues (Soldz & Vaillant, 1999; Judge et al., 2002). Thus, people high on neuroticism are probably the least likely to seek personal development although they would need it in order to lead happier and healthier lives. All in all, one can state that the Big Five or OCEAN model can assist us in our quest to learn more about ourselves, to see where our strengths lie, what are our deficits, and set personal improvement goals for ourselves.

Another relevant question concerning personality development is whether the Big Five or OCEAN model traits really change with age. There is a growing evidence base pointing out the plasticity of personality based on the Big Five model (Costa et al., 2000; Roberts & Chapman, 2000; Robins et al., 2002). Costa et al. (2000) showed that divorce increased neuroticism and decreased extroversion among men, while for women, it increased extraversion and decreased neuroticism. Undergoing tense, abusive relationship was associated with increased neuroticism in women (Roberts & Chapman, 2000), while work satisfaction was linked to a

decrease in the level of neuroticism among women (Roberts & Chapman, 2000). Research also pointed out that psychotherapeutic interventions can impact personality change. For example, agreeableness and extraversion were shown to increase and neuroticism to decrease after a psychological intervention (Bagby et al., 1995). What can foster these changes in personality traits? Authors suggest that both contextual and personal resources are needed to stimulate the plasticity of personality. Although personality plasticity is possible, it does not happen at random. People need competence training and internal control beliefs in order to change and also need supportive contexts that help them initiate and maintain change. Appraising a new situation as a challenge not as a threat makes it more likely that an individual will venture out to do something new. For instance, if a working mother wants to go back to university in her 40s, she is more likely to do so if she feels she can master the challenge of work, motherhood, and studies. Having social support (e.g. a caring husband, children who are already independent and encouraging, friends who believe in her) will also increase the likelihood that she will open up to the experience of going back to university. If she is successful at the task of studying, she will develop self-efficacy that will make her take on the next challenge and look for a better job once she got a university diploma.

There is a whole evidence base suggesting that there is plasticity of the personality (Mühlig-Versen et al., 2012). For example, openness can increase even among older adults, if they are stimulated in this sense and taught with the necessary skills in order to have positive novel experiences. In this sense, personality plasticity does not happen naturally as we age. One needs to actively invest time and effort to acquire novel skills that would improve the desirable personality traits. In addition, critically reflecting on personal resources (i.e. strengths and weaknesses) constitutes a necessary process of personality development in midlife and older age. Having the right social contexts for personality change may also help in the process (e.g. people who provide social support and guidance, training opportunities). Once a person exposes herself or himself to novel social situations, new experiences, and meeting stimulating people who represent models of personality growth, personality change may happen without conscious awareness.

All in all, cognitive plasticity is relevant for obvious reasons. People want to be mentally fit in order to maintain their autonomy until old age. So, what would be the benefits of personality plasticity? Do we need to change our personality to be happy? In some circumstances and depending on which traits we want to improve this is exactly the case. For example, people who score high on openness also tend to have higher life satisfaction in older age (Stephan, 2009). Becoming more conscientious can improve our work performance, while being more agreeable or extrovert can increase our social network, the quality of our social relations and the level of social support. In the following section, I will examine how personality growth is perceived by individuals themselves as well as how the process of personality development is explained by existing theoretical models.

Experiences with Personality Development

Whether personality changes or not over the lifespan has been the subject of a long debate in personality research (Diehl & Hooker, 2013). The definition of personality implies a certain degree of stability since it refers to individual characteristics that persist over time (e.g. specific cognitions, actions, motivations, emotions) and make an individual unique (DeYoung, 2015; McCrae & Costa, 2008). Enduring characteristics include behavioural dispositions (e.g. optimism, extroversion, agreeableness, etc.), motivational orientations (e.g. values, personal aims, etc.) and life narratives (e.g. the subjective story of individuals' traits and experiences) (DeYoung, 2015; McCrae & Costa, 2008; McAdams & Olson, 2010). Studies based on the Big Five traits show that there are increases in agreeableness, conscientiousness, emotional stability, and openness during middle adulthood (Lucas & Donnellan, 2011; Roberts & Mroczek, 2008). This was explained by referring to the social roles that people embrace during midlife such as becoming parents or taking on work responsibilities. For instance, life transitions (e.g. getting married, having children, entering the workforce) (Le et al., 2014; Zimmermann & Neyer, 2013), personal relations experiences (Mund & Neyer, 2014; Wrzus & Neyer, 2016), and work environments (Hudson et al., 2012) shape personality evolution during midlife. Regarding older age, a decrease in agreeableness, conscientiousness, openness, and emotional stability was reported in longitudinal studies (Lucas & Donnellan, 2011; Kandler et al., 2014). Thus, it is relevant to understand why such changes in personality would occur in late life. Moreover, concerning older age, it is also important to reflect if and how personality change is still possible as well as to assess how older adults experience it.

There are several ways to measure personality change. For instance, it can be measured with self-report instruments (e.g. interviews, questionnaires such as the NEO-PI-R), reports from others (e.g. significant others evaluate the changes in personality), and behavioural observation (e.g. observing the actions of a person not just relying on what they report). More specifically, personality can be evaluated with explicit mental representations (e.g. self-report questionnaires, interviews), implicit associative representations, biological functioning, observable actions, and reputations (e.g. behaviour that is reported by others) (Wrzus & Roberts, 2017).

Longitudinal studies pointed out the existence of significant changes in personality traits across the lifespan (Helson et al., 2002; Roberts & Mroczek, 2008). Following such findings, researchers became interested in how personality traits are linked to behaviours and developmental changes and outcomes (Diehl & Hooker, 2013; Hampson, 2012). Structural trait and social-cognitive processing approaches were combined to explain how personality develops (Hooker & McAdams, 2003; Diehl & Hooker, 2013). For instance, the *CAPS (cognitive-affective processing system) model* proposes that personality represents a cognitive-affective processing system that predisposes people to act in specific ways in response to certain contexts (Mischel, 2004; Mischel & Shoda, 2008). The *six-foci personality model* (Hooker & McAdams, 2003) involves a system where personality structures at three

different levels are mapped into three distinctive personality processes. The personality structures include traits, life stories, and personal action constructs, while the processes comprise states, self-regulatory processes, and self-narration processes (Hooker & McAdams, 2003). From the perspective of the six-foci model, personality change can happen because continuity and discontinuity exist simultaneously at different levels and concern different processes of a person's personality (Diehl & Hooker, 2013). Continuity and discontinuity of the personality processes depend on the circumstances that contextualize a person's life (Diehl & Hooker, 2013). This type of model highlights the role of the individual in shaping his or her own development (Diehl & Hooker, 2013; Brandstädter & Rothermund, 2002). From a positive psychology and developmental perspective, the role of the individual in shaping development is very important since personal strengths and developmental assets are specific to a certain person and require time and energy to evolve.

From a positive psychology viewpoint, personality development in older age means boosting individual strengths (e.g. gratitude, optimism, forgiveness) in order to stimulate growth and change across personality traits and consequently to foster well-being among older adults. However, there are just a few reported studies that explored what well-being in older age means from the perspective of older individuals themselves (Donaldson et al., 2015). One such qualitative study asked older adults to name the strengths that they considered important for reaching a good old age and how they experienced well-being in their older years (Kirkby-Geddes & Macaskill, 2016). Findings showed that older individuals connected well-being in older age with the choices and freedom that ageing brought with itself (e.g. not working anymore and having time for oneself), with being engaged in pleasant activities, with relationships such as friendships or with family members (e.g. time with grandchildren) feeling free to be themselves (Kirkby-Geddes & Macaskill, 2016). In terms of strengths that they needed for experiencing well-being in older age, participants mentioned gratitude, curiosity and optimism (Kirkby-Geddes & Macaskill, 2016). These strengths can be linked to the Big Five model (Costa et al., 2019; Costa & McCrae, 1994), in the sense that they can stimulate traits such as openness to new experiences and extraversion in older age.

Personality change was explained in different ways ranging from recurrent daily experiences that shape its character (Wrzus & Roberts, 2017) to lifespan developmental tasks (Hutteman et al., 2014) and self-regulation (Hennecke et al., 2014). A review of clinical intervention studies pointed out that personality change (e.g. decrease in neuroticism, increase in extraversion) can be an effect of interventions that target mental health issues (Roberts et al., 2017). Some authors argue that personality change in older age is adaptative since it allows older people to implement the generativity principle and transmit their knowledge to the next generations (Costa et al., 2019). For instance, age-related personality changes that favour positive emotionality, cooperation and consistency can facilitate effective intergenerational communication and thus boost knowledge transfer from the older to the younger generation (Carstensen & Löckenhoff, 2004). Costa and collaborators (2019) argue that personality development goes beyond changes in traits. For instance, life stories and narratives as well as individual goals are relevant and

reflect a person's personality and its evolution (Costa et al., 2019; McAdams & Olson, 2010).

The five-factor theory (McCrae & Costa, 2008) illustrates how dispositional traits are translated into goals and personal narratives. The five-factor model postulates that dispositional traits represent basic, biological tendencies. Through experience, these traits are translated into characteristic adaptations or maladaptations, namely, goals, attitudes, and the self-concept (e.g. life story, self-schemas) (McCrae & Costa, 2008). This model can serve as a frame to explain how people adapt to ageing-related changes (Riffin & Löckenhoff, 2017). According to the selection, optimization, and compensation model (Baltes, 1997), older individuals adjust to ageing by selecting goals (e.g. spending time with significant others instead of doing activities to meet new people, taking up yoga to increase one's bodily strength and flexibility), optimizing their means to reach these goals (e.g. organizing activities to keep in touch with friends and important family members, focusing on exercises that enhance strength, flexibility, and endurance and help one stay active and fit for performing daily activities), and compensating in the areas where they experience losses (e.g. doing video calls when they cannot meet in person with their friends or grandchildren because of health reasons or physical distance, taking daily walks to keep active and compensate for the fact that one cannot go jogging as before). Personality traits may influence how individuals select, compensate, and optimize (Costa et al., 2019). For example, people who are high on extroversion may select those opportunities that are related to social contact, while people who are high on openness will prioritize opportunities for continuous exploration (Costa et al., 2019). Lower neuroticism and higher conscientiousness can assist an older person to establish successful routines and compensatory habits (McCrae & Löckenhoff, 2010) and thus facilitate development.

The *TESSERA framework* states that long-term personality development happens because of repeated short-term situational experiences (Wrzus & Roberts, 2017). TESSERA stands for triggering situations, expectancy, states/state expressions, and reactions (Wrzus & Roberts, 2017). Daily experiences that cumulate over time determine personality growth (Wrzus & Roberts, 2017; Hennecke et al., 2014). Therefore, what activities one engages in play a crucial role in personality development? From a positive psychology perspective, engaging in positive activities (e.g. leisure time activities, being kind to others) can have a positive influence on personality growth. *Triggering situations* can include life's experiences (e.g. entering retirement, death of a significant other, illness), new social roles (e.g. becoming a grandparent), behaviour of other people, and psychological interventions (Wrzus & Roberts, 2017). *Expectancy* refers to motivational constructs (e.g. thoughts, emotions) that determine which kind of state will follow as a response to the triggering situation (Wrzus & Roberts, 2017). For example, what expectations one has concerning retirement will determine the state responses to the triggering event of getting retired. *State and state expressions* (e.g. cognitions, feelings, actions) indicate the core of personality and personality development (Wrzus & Roberts, 2017). Personality characteristics were defined as individual, recurring, time and situation consistent actions, thoughts, and emotions (Wrzus & Roberts, 2017). The repeated

sequences of reactions to triggering situations can in time become embedded patterns of thinking, feeling, and acting. *Reactions* refer to responses that come from oneself (e.g. how one feels about one's actions) or from others (e.g. punishment, reward, etc.) in response to one's states (Wrzus & Roberts, 2017). It is important to note that short-term experiences become long-term personality change through repetition (Wrzus & Roberts, 2017). Thus, personality change certainly takes time to happen. Concerning the processes that underlie personality change, reflective and associative processes were shown to be important (Back et al., 2009; Rothman et al., 2009). If a person frequently experiences TESSERA sequences, this can lead to inherent changes in personality due to implicit learning and habit formation (Wrzus & Roberts, 2017). For instance, it was shown that recurrent attention to pleasant stimuli (e.g. as part of a cognitive bias modification training) can reduce trait anxiety (Hallion & Ruscio, 2011). Reflective processes imply that people intentionally think about their past actions, feelings, and cognitions and this leads to change. Moreover, this happens when people decide to change something about themselves or when they go to counselling or therapy (Wrzus & Roberts, 2017). In older age, life reflections and self-narratives may become relevant and help change personality.

According to the *cumulative continuity principle*, middle adulthood is not accompanied by many or drastic changes where personality is concerned (Wrzus & Roberts, 2017). This is due to role continuity, namely, the fact that middle-aged people are likely to have rather stable social roles (e.g. work, parents, spouse, etc.) and established environments (Roberts & Wood, 2006). Also, according to the *identity development principle* (Roberts & Wood, 2006; Diehl & Hay, 2007), middle-aged individuals have more knowledge about themselves. The niche-picking assumption postulates that people tend to select life's experiences that contribute to the stabilization of personality over time (Wrzus & Roberts, 2017). Compared to middle adulthood, older age is associated both with decreases and increases in personality traits (Gerstorf et al., 2014; Jackson et al., 2012). According to the *plasticity principle* (Roberts & Wood, 2006), people have the capacity to adapt to changes that occur in older age. Unfortunately, many ageing-related changes are negative (e.g. illness, frailty, loss of significant others, loss of social status) and thus may determine decline in personality as well (Wagner et al., 2015). The diversity in personality changes in older adults depends on how people interpret triggering situations (Wrzus & Roberts, 2017). For example, if individuals interpret retirement as loss in social status and social support or rising financial problems, entering retirement may lead to an increase in neuroticism. In contrast, if older individuals interpret retirement as a new beginning, a chance to invest time in oneself and significant others, one may increase in openness and extraversion after retiring. According to Wrusz and Roberts (2017), young adulthood represents a time for greater personality change, middle adulthood a time of continuity and older adulthood a time of diversity and heterogeneity where personality growth is concerned. The heterogeneity of personality in older age makes it relevant that people know how to stimulate positive changes in their personalities. Furthermore, personality improvement is also related to other domains of development (i.e. cognitive, social, emotional, and

physical). In the following section, I will explore some of the links that exist between personality development and other domains of change in older age.

How Is Personality Development Related to Other Domains of Growth?

After examining what personality development is and how it is experienced by middle-aged and older individuals, I will look at how personality development is connected to other domains of individual growth (i.e. social, emotional, cognitive, physical). Apart from personality, cognition often represents a construct that is extensively researched when studying individual differences across the lifespan (Stieger et al., 2021a). There is a growing body of evidence that shows cognitive abilities and personality traits that are linked (Stephan et al., 2020). In what concerns late adulthood, studies examined whether personality traits are related to differential shifts in cognition and in dementia onset (Terracciano, 2017). *Cognitive development* is usually related to traits such as openness and conscientiousness. For instance, studies show that general and personal wisdom is linked to openness (Mickler & Staudinger, 2008; Staudinger et al., 2005). Openness and emotional stability predict better memory in late adulthood and are linked to executive functions and episodic memory (Stephan et al., 2020; Williams et al., 2010). Higher levels of openness were also shown to constitute a resource for Alzheimer disease prevention (Duberstein et al., 2011). In contrast, among patients with Alzheimer disease, there was an increase in neuroticism and decrease in conscientiousness (Robins Wahlin & Byrne, 2011). One study showed that lower emotional stability was related to cognitive decline in late life, while higher conscientiousness and emotional stability were associated with slower cognitive decline (Chapman et al., 2012; Luchetti et al., 2014). Higher neuroticism (i.e. tendency to experience negative emotions and distress) was linked to lower performance at episodic memory tasks and with higher openness (i.e. predilection for variety and intellectual curiosity). Conscientiousness (i.e. tendency to be organized) was related to better memory functioning (Chapman et al., 2017; Graham & Lachman, 2012; Klaming et al., 2017). In addition, personality development was linked to specific cognitions such as views on ageing (Kornadt et al., 2019). For example, lower levels of neuroticism, higher conscientiousness and higher openness predicted more positive attitudes towards ageing (Kornadt et al., 2019). The other way around, the way people think about ageing and older individuals may shape their personality (Kornadt et al., 2019). How people react to certain age-related situations depends on their views on ageing and influences their personality (Rothermund & Brandstätder, 2003; Kornadt, 2016; Kornadt et al., 2015). When facing stressful situations in older age, if a person has the idea that older people are wiser and calmer, then they will tend to act in order to confirm the positive stereotype. In time, according to the TESSERA frame, this can result in less neuroticism and more agreeableness (Wrzus & Roberts, 2017).

Emotional development is connected to certain personality traits. For example, neuroticism implies by definition that people are more emotionally unstable and have a tendency to experience negative emotions such as depression or anxiety. Thus, individuals who are high on neuroticism may be at risk of developing anxiety disorders or depression in older age. In accordance with the TESSERA model (Wrzus & Roberts, 2017), this tendency to experience negative emotions can be accentuated with age, especially if people have recurrent negative age-related experiences (e.g. loss of health, death of loved ones, etc.) or interpret age transitions (e.g. retirement, grandparenthood) in negative ways. In contrast, traits like emotional stability, openness to new experiences and agreeableness predispose people to being happier in older age (Chung et al., 2019; Oerlemans et al., 2011; Chamorro-Premuzic et al., 2007).

In terms of *social development*, one can become more sociable or lonelier with age. Likewise, as suggested by the transactional model of personality change, it is known that social relations are chosen based on personality traits and that, in turn, social relations shape personality (Neyer & Asendorpf, 2001). Having a large support group can foster personality development by being exposed to different influences. People who have several social relations were also shown to be more optimistic (Antonucci, 2001). Also, across the lifespan, being high in neuroticism and low on conscientiousness and agreeableness was shown to be linked to relationship dissolution (Roberts et al., 2007). Consequently, such individuals may lack the necessary social support networks in older age. The interaction with new social situations and social groups can foster personality plasticity (Baltes et al., 2006). Novel social contexts or social roles can lead to new expectations and the need to change something about oneself. As people adapt to novel situations, personality modifications may take place. For example, it was shown that people who are involved in caring for their ageing parents often report an increase in neuroticism (Savla et al., 2008). Neuroticism can represent a problem for social development since people who are more neurotic tend to find it difficult to make friends (Charles & Carstensen, 2010). Thus, individuals who score high on neuroticism are at greater risk of suffering from loneliness in older age. In contrast, extroversion, openness, and agreeableness may act as protective factors regarding loneliness in later life. Personality influences the selection of certain social situations and environments (Kandler et al., 2012) and thus shape the experience of old age (e.g. do older individuals choose to attend activities and meet new people or they prefer to spend time with their lifelong friends). Personality traits that are associated with socio-emotional competence (e.g. extraversion, empathy, etc.) were found to predict the duration and quality of social relations across the lifespan (Liew et al., 2004). For instance, marital satisfaction was shown to be related to agreeableness and extraversion (Donnellan et al., 2004; Watson et al., 2000) while marital unhappiness was linked to neuroticism (Donnellan et al., 2004).

Physical changes such as modifications in the brain structure through illness can also determine personality changes. Additionally, chronic illness can influence personality change in the sense that people become more neurotic (Costa et al., 2019). For instance, one study conducted with multiple sclerosis patients showed that these

patients experienced a decrease in extraversion and conscientiousness (Roy et al., 2018). Health behaviour such as regularly engaging in physical exercise can assist in shaping personality. For example, it was shown that extroversion and conscientiousness remained at stable levels in a group of older individuals who were physically active (Stephan, 2014). A potential explanation is that physical exercise helped sustain the energy needed to convey these traits (Costa et al., 2019).

How Can We Foster Personality Development in Midlife and Older Age?

As discussed in the previous section, personality development is linked to other developmental domains in older age making it relevant to target in developmental interventions. Also, studies have shown that personality predicts important outcomes in life such as job success or happy relationships (Borghans et al., 2008; Roberts et al., 2007; Soto, 2019). For instance, higher conscientiousness was found to be associated with better relationships, improved job performance, better physical health, and longevity (Hill et al., 2014; Kern & Friedman, 2008; Dudley et al., 2006; Hampson et al., 2013). Thus, personality improvement interventions could help to promote healthy, active ageing.

Before we reflect on how to determine personality change, we need to identify factors that foster change in personality in midlife and older life. For instance, does personality plasticity depend on major life events, on the social context or more on interior maturity and successful resolution strategies for crisis situations? For instance, we know from the *Eriksonian theory* (1959) that development represents a function of solving a crisis that is characteristic for a certain life stage. Trait personality theory regards personality development differently. Authors working from the trait model perspective, or the Big Five model (McCrae & Costa, 2008), suggest that personality changes over the lifespan, with more transformation happening in young and old years. Also, it postulates that personality change is partially attributable to social demands and experiences (Specht et al., 2011). Change in personality across the lifespan can be ascribed to several causes such as recurrent daily experiences (Wrzus & Roberts, 2017), lifespan developmental tasks (Huttemann et al., 2014) and how one masters self-regulation (Hennecke et al., 2014). Stability of the traits across the lifetime was explained by a propensity to choose those environments that end up reinforcing our current traits (Roberts & Nickel, 2017). For instance, if we tend to be extrovert, we are likely to choose activities where we can meet new people, while if we are more introvert, we are inclined to select activities such as reading a book or going to the cinema that we can do by ourselves. Other authors (Mõttus et al., 2016) argue that this selection can also lead to change, but only in the sense of identifying already existing traits. For instance, conscientious people become even more conscientious in a work environment that reinforces this trait through recurrent exposure to the prevailing work demands. Individual changes

in personality were ascribed to psychosocial processes (e.g. the birth of a child, stressful life events) or biological processes such as genes and engagement in physical activity (Kandler et al., 2010; McGue et al., 1993; Stephan, 2014). The relationships we choose (Neyer & Asendorpf, 2001) and our peer group (Reitz et al., 2014) are suggested to play a role in shaping personality during adolescence. But relationships (e.g. relationships with life partners, children, parents, etc.) and peer groups (e.g. friends, work colleagues) are very likely to continue to play a role in shaping personality across midlife and older age. Social relations and the social support that individuals receive represent developmental assets that people can use to improve their personality.

Plasticity and change depend significantly on the individual resources such as internal versus external control beliefs. *Internal control beliefs* refer to a persons' beliefs that his or her ability to perform a task depends on his or her own behaviour, skills, or effort (Levenson, 1981). *External control beliefs* refer to the belief that the ability to perform a task depends on chance, on luck, and on fate and is controlled by powerful others (Levenson, 1981). These resources are important because research has pointed out that people with high internal control beliefs benefit more from competence training and experiential interventions. Because they believe that the training will have the expected benefits, such persons are much more motivated to learn, and the probability that they will apply what they learned is also higher. For example, studies have shown that people with high internal control beliefs are more likely to engage in physical exercise and adopt a healthy diet (Lachman & Prenda Firth, 2004). Internal control beliefs can however become problematic when people attribute failure to internal, stable causes. This could result in apprehension to approach new challenges. Thus, the effective combination may involve having the strategies and competencies to master the challenges from the environment and the belief that one can master that particular challenge. People with high internal control beliefs are more likely to increase the personality trait of openness because they will perceive stressors as challenges not as threats, will have a proactive attitude towards change, and attribute success to their own capabilities. All these three reasons would increase their openness to novel situations and meeting new people. For instance, Mühlig-Versen et al. (2012) tested the effects of a volunteering programme and the associated volunteering experience on participants' openness personality trait. During the intervention, participants were encouraged to reflect on their strengths and weaknesses and focus on their expectations concerning the experience of being a volunteer. After this critical reflection exercise, participants had to devise their own volunteering project. Additionally, participants were taught skills relevant to volunteering such as management and leadership of groups. Results indicated that volunteering on its own was related to stability in openness during late adulthood. Results differed depending on the internal control beliefs of the participants, but the effects were visible only in time. The authors argue that people need time to apply the skills they learned in order to have positive experiences and increase their openness (Mühlig-Versen et al., 2012).

In general, empowering programmes were shown to be effective for personality plasticity because they provide participants with opportunities to increase skills and

competencies, offer social support for applying their talents, and consequently increase their personal development. Empowering programmes were reported to increase autonomy and self-determination among older adults (Perkinson, 1993). Moreover, as mentioned also in previous sections of this chapter, personality development depends a lot on the individual (Wrzus & Roberts, 2017). Intervention studies pointed out that the more individuals made an effort to change personality characteristics, the more their self-perceived traits changed over the following months (Hudson & Fraley, 2015; Martin et al., 2014). This is encouraging since it shows that if we motivate people for behavioural change, this is more likely to happen. Also, research indicates that individuals usually desire positive personality change (Hennecke et al., 2014). Thus, motivating individuals for positive personality change should not pose a very difficult task. One needs to highlight the benefits of positive personality change and disadvantages of maladaptive changes. Also, individuals need to be informed that the latter can happen implicitly when people experience negative life events (e.g. loss of workplace, financial issues, termination of a relationship, death, illness). In midlife and older age, many people will face negative experiences (e.g. illness, relationship stress, work stress, death of loved ones, etc.), thus increasing the probability of maladaptive personality changes. The latter include a decrease in emotional stability, increase in neuroticism, and decrease in extroversion and are linked to negative life's experiences (Chow & Roberts, 2014). One should also take note that the valence of the life transition is important for triggering change (Wrzus & Roberts, 2017). For instance, the same life transition (e.g. retirement) can trigger different changes in personality – either maladaptive (e.g. decrease in emotional stability), if it is interpreted as a negative event (e.g. loss of social status, financial issues, etc.), or adaptive (e.g. increase in agreeableness or openness), if it is interpreted as a positive experience (e.g. more time for oneself; a time to relax, spend time with loved ones and try out new hobbies; etc.). In this sense, learning positive reframing and building optimism can represent developmental assets that sustain adaptive personality changes in older age. Models such as the TESSERA (Wrzus & Robets, 2017) show how personality change happens naturally during our lives and that it is often a slow and implicit process. However, there is evidence that personality change can also take place following a smart phone intervention and that the time required for changes to happen can be shorter, with the condition that the adults who use the application are motivated to change (Stieger et al., 2021b). For instance, the PEACH (PErsonality coACH) application was designed to assist people in achieving their personality change goals and providing them with micro interventions (i.e. specific tools and techniques) to help them change their behaviour and experiences in order to maintain the achieved personality change (Stieger et al., 2021b). Participants who received the intervention showed significant personality trait changes compared to the control group (Stieger et al., 2021b). Another relevant point of this study was that it showed personality trait changes reported by participants themselves (i.e. through self-report) aligned with those from other reports (e.g. observed by intimate partners, friends, and family) (Stieger et al., 2021b). Furthermore, self-reported and other reported changes persisted also 3 months after the intervention, supporting the

idea that personality trait change can be not only implemented but also maintained (Stieger et al., 2021b). The PEACH digital coaching intervention also showed that interventions that use multiple components can be effective in modifying personality (Stieger et al., 2021b). Previous interventions to change personality usually applied only one strategy such as implementation intentions or behavioural activation to change personality (Hudson & Fraley, 2015; Hudson et al., 2019). Only a few interventions examined the effect of multiple strategies on changing personality (Stieger et al., 2021b). For instance, one study tested the effect of a 10-week coaching programme to change personality traits and resulted in increases in conscientiousness and extraversion and reduction in neuroticism level (Allan et al., 2018; Martin et al., 2014). Digital interventions aiming to change personality traits often use multiple strategies and were proven effective in determining lasting changes (Stieger et al., 2018, 2020, 2021b). However, these types of digital interventions still need to be tested with older adults to see if these can use such tools to improve their personality traits. The fact that digital interventions allow people to use them irrespective of time and space and other resources such as financial ones (Stieger et al., 2021b) could prove to be an advantage for both middle-aged and older users.

Positive psychology interventions to foster personality growth focus on identification of individual strengths. Although it may seem like something easy to do, many people usually are inclined to think about their weaknesses and focus on these as a priority when trying to improve on a personal level. If we think about changing something about ourselves, we most probably would start with the things we do not like about ourselves. This is not a bad approach in itself, but it can also decrease our self-efficacy which represents a relevant individual strength for fostering change. In contrast, identifying and working on our strength can build up a secure resource for self-development. This can be followed by an analysis of the weak points and how we can apply our strengths to build the qualities that we lack.

Individual strengths are defined as the personal capacities (e.g. behavioural skills, thinking style, etc.) that enable optimal functioning and development for an individual (Linley, 2008). Some authors suggest that most people are not aware of their strengths (Linley, 2008; Jones-Smith, 2011; Niemiec, 2013) mostly because they take these for granted (Niemiec, 2013). Also, sometimes, other people with whom we need to deal with in our social interactions and groups tend to highlight our weaknesses (e.g. teachers, parents, partners). Thus, sometimes we end up focusing more on our weaknesses instead of our strengths. In this context, *personality improvement interventions* can assist people in identifying and working to enhance their individual strengths and developmental assets. The frame used by Stieger and colleagues for their successful personality digital coach intervention PEACH (Stieger et al., 2021b) can be adapted to be applied also for positive psychology personality development coaching, targeting middle-aged and older adults. The frame is based on psychotherapy research and entails several points (Allemand & Flückiger, 2017). First, personality improvement interventions should help people identify a discrepancy between their desired personality and their current traits. Second, the intervention should stimulate strengths (e.g. individual strengths according to the positive psychology principles) and resources (e.g. developmental

assets from all domains of development) to initiate and maintain change through positive feedback and expectations. Third, interventions should assist people in becoming aware of their expectations, beliefs, and motives so that change is facilitated. This can be done by improving a developmental asset, namely, the capacity to reflect on one's own experience and associated thoughts and emotions and use the obtained information to improve personality traits. Fourth, the intervention should aid people in learning new skills and gradually applying these in their daily lives (e.g. learn new behaviours and gradually implement them by getting out of one's comfort zone). Another important point concerning interventions targeting middle-aged or older adults would be to address their views on ageing (e.g. decrease negative views and increase positive views) because these can act as barriers (i.e. negative views concerning old people being rigid and not able to change) or facilitators of personality change (i.e. positive views regarding still being able to learn new things in old age and change one's personality).

Several exercises have been designed from a positive psychology perspective to help people identify their strengths and implement them in their daily lives. The *strengths wheel exercise* developed by Matt Driver (2011) guides people to identify their strengths, see what strengths are used too much or too little and make plans about how to increase and optimize strengths use. The exercise makes use of a visual representation of a wheel. The middle of the wheel represents a 0 and the edge a 10. The person is asked to think about a context (e.g. work, study, relationships) for which he or she wants to identify strengths (e.g. curiosity, perseverance, humour, etc.) and then reflect what these strengths are and evaluate on a scale from 0 to 10 for each strength how much he or she implements them in that particular context. After reflecting on this, they will make a mark on the wheel to illustrate this. Second, people need to think about how much potential there is for increasing the use of that strength in that particular context and mark this on the wheel as well. Next, people are asked to draw lines to connect the dots and design a triangle. The larger the gap between the current use and the scope, the bigger the triangle. The graphic representation of the wheel provides an opportunity to plan how to optimize the use of the strength. People can reflect on what they see when they take a look at the graphic representation their strengths' actual and potential use. For instance, people can think about how they could implement their strengths more in that specific context (e.g. how to use their curiosity to find new hobbies in older age that they can engage in despite their limited health capacities), about why they believe that their strengths are useful in that particular context (e.g. why is curiosity helpful for engaging in health behaviours), and about what they can do to increase the use of their strengths in that context (e.g. how can they put their curiosity to good use in the context of engaging in health behaviours). The identification of strengths can be related to the personality traits, for example, what strengths are linked to extroversion or to conscientiousness. The person can reflect which strengths they need to improve or develop and how these are connected to personality traits and plasticity (e.g. friendliness linked to extraversion, dutifulness linked to conscientiousness). Once people know what strengths they have, and how these are connected to the development of personality traits, they need to develop concrete action plans to

change. At this stage, exercises such as *goal visualization* can be very useful. Goal visualization is another positive psychology tool that refers to mentally imagining outcomes for our goals. Mental imagery enhances the probability that the goal will be implemented (see cognitive development chapter).

Positive psychology interventions can be applied to change more than just the personality traits (e.g. extraversion, neuroticism, conscientiousness, etc.). Positive psychology principles (Seligman et al., 2005; Peterson & Seligman, 2004; Peterson et al., 2007) can be applied to change a person's goals, stimulate positive values, and reframe the personal narrative in a positive way. Enhancing character strengths such as curiosity or love of learning (Peterson & Seligman, 2004) can help to improve openness in middle-aged and older individuals. Engaging in positive relations can assist in enhancing extraversion among older adults. Enhancing character strengths was shown to improve well-being (Wood et al., 2011) which can act as a facilitating factor for personality change in midlife and old age. Middle-aged and older individuals would feel good after participating in such personality improvement interventions, and this would represent a motivation to invest effort and time in improving their personality. The principle of *savouring*, namely, focusing attention on positive aspects in the present and from the past, generates positive emotions (Bryant & Veroff, 2007). Additionally, savouring can help people to reframe their life narratives in positive ways and focus on positive values in life or set goals related to positive experiences. Savouring as a strategy was shown to enhance life satisfaction and decrease anxiety and depression among the elderly (Bryant et al., 2005; Westerhof et al., 2010). Performing acts of kindness in daily life can also help enhance personality traits and values and reframe life stories in optimistic ways. Engaging in acts of kindness helps people to build better social relations, promotes action, distracts from problems and helps to raise self-efficacy (Lyubomirsky et al., 2005). Giving was shown to activate the brain reward system more than receiving (Harbaugh et al., 2007), and thus, engaging in acts of kindness can trigger happiness and life satisfaction in older age. Gratitude, namely, noticing and appreciating the world and the actions of others (DeWall et al., 2012), represents another strength that can be enhanced in order to promote positive values, life narratives and personality traits. Gratitude can be enhanced by keeping a journal to record things for which one is grateful such as experiences, health, other people's actions and so on (Emmons & McCullough, 2003). One can also write gratitude letters (Boehm et al., 2011; Lyubomirsky et al., 2011) or organize gratitude visits (Seligman et al., 2005). Writing about one's life in general or specific experiences by focusing on the positive aspects was also shown to improve mood (Burton and King, 2009). Moreover, writing could be beneficial for personal narratives in midlife and older age. Another strategy that can be effective in midlife or older age is represented by self-compassion exercises. These exercises involve being kind to oneself and accepting oneself rather than constantly judging oneself (e.g. compassion-focused therapy (Gilbert, 2010)) and can be useful to counteract feelings of self-blame and regrets that middle-aged or older individuals may have (e.g. regretting lost opportunities for career change or having a family). Self-compassion exercises can include letter writing,

visualization, the use of a positive phrase for oneself, interpersonal activities, employing compassionate cognitive responding and behavioural habits (Gilbert, 2010).

Conclusion

Personality development is important because it is part of our identity as human beings and directly connected to all forms of personal development in older age (i.e. cognitive, emotional, social, physical) and is also considered part of positive ageing (Diehl & Hooker, 2013). Contrary to assumptions that personality development stops around the age of 30, individuals continue to evolve, and some personality traits may get accentuated or diminished. Personality development is somehow challenging to consider since its definition implies a certain stability of individual characteristics over time (McCrae & Costa, 2008). The change versus stability debate constitutes the subject of several personality studies (Diehl & Hooker, 2013). Enduring patterns within personality include behaviour dispositions such as the Big Five (e.g. extraversion, openness, etc.) and motivational orientations (e.g. goals, values) (McCrae & Costa, 2008; DeYoung, 2015) as well as the life narrative, namely, a subjective life story of a person's experiences and characteristics (McAdams & Olson, 2010). All these components need to be included in personality change interventions. Similar to designing a perfume that has several layers (i.e. the top, the middle and the deep layer) that make up the whole scent, interventions that target personality improvement need to address more than just the Big Five personality traits which could be similar to a middle layer of a perfume. The top layer could be a persons' goals and values, while the life narrative can be represented as the deep layer.

Similar to other domains of personal development in midlife and older age, personality growth depends on the individual's will and invested effort to change. There is a theoretical debate if personality change happens through a passive path (e.g. following external events) or an active path (e.g. as a consequence of intentional effort). The evidence base points out that mostly personality change represents an interaction between an active and a passive path that leads to personality growth across the lifespan and particularly in midlife and older age. Nevertheless, personality change depends mostly on the individual in midlife and older age, and this has important implications for practice. Also, there is great heterogeneity in what concerns personality development in older age (Wrzus & Roberts, 2017), which constitutes yet another argument for designing interventions to foster personality improvement.

Personality development in older age is challenging to define. Several theoretical models have attempted to capture personality change beyond midlife. The best-known theories are the Eriksonian stage model of personality change and the Big Five or OCEAN model of personality. The Eriksonian stage model (Erikson, 1959) focuses on the different stages of personality evolution across the lifespan and the

challenges that one faces when transitioning from one stage to the next. Erikson calls the transition phases crises that need to be resolved in order that a person develops successfully. Other models, such as the Big Five or OCEAN model (Costa et al., 2019) of personality, focus on traits rather than processes and stages. The Big Five model makes it easier to evaluate personality traits and also assess changes that take place in our personality as we age. There is a growing body of evidence that illustrates personality plasticity based on the Big Five model (Costa et al., 2000; Roberts & Chapman, 2000; Robins et al., 2002). The TESSERA framework (i.e. triggering situations, expectancy, states/state expressions, and reactions) asserts that long-term personality development happens because of recurring short-term situational experiences (Wrzus & Roberts, 2017). According to this model, daily experiences that cumulate over time determine personality growth (Wrzus & Roberts, 2017; Hennecke et al., 2014). In this sense, from a positive psychology viewpoint, engaging in pleasant, fulfilling activities may shape personality growth in midlife and older age.

All in all, one can affirm that personality development in midlife and older age is possible and depends on both internal and contextual resources (Mühlig-Versen et al., 2012). Personality improvement in midlife and older age is relevant since it is linked to other domains of growth (i.e. cognitive, emotional, social, and physical development). Furthermore, personality development predicts outcomes such as health and longevity (Kern & Friedman, 2008; Hampson et al., 2013). Thus, interventions to improve personality may have an indirect impact on other developmental domains in middle and late life. Furthermore, developmental assets (e.g. emotional regulation, reflective ability, memory capacity, social skills, physical health) can assist personality growth in older age. Positive psychology principles can be applied to increase individual strengths (e.g. optimism, gratitude) and thus boost developmental assets (e.g. emotional regulation, social skills, reflective capacity, memory, physical health) in all life domains and foster personality growth among middle-aged and older individuals. The existing evidence base points out that people often desire to improve their personalities, for instance, to increase openness, conscientiousness, agreeableness, or extraversion (Hudson & Roberts, 2014; Costa & McCrae, 1992). Furthermore, interventions to change personality traits were shown to be effective among middle-aged and older adults (Stieger et al., 2018, 2020, 2021b; Munro & Coulson, 2016).

Refection Questions

1. Reflect on your own strengths and weaknesses in terms of personality. What would you change? Formulate plans on how to implement personality changes for yourself.
2. Help another person (e.g. your grandparents) reflect on the strengths and weaknesses in terms of personality, identify what they wish to change and make a plan to do so.

3. Define personality development in your own words.
4. What is personality plasticity and how does it work? Provide two examples.
5. How is personality development connected to other domains of development? Give three examples.
6. Formulate three objectives and three strategies for a personality improvement intervention designed from a positive psychology perspective.

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Part III
Implementing Positive Developmental Changes

Chapter 10
Addressing Ageism and Development in Midlife and Old Age

Introduction

Ageing is influenced by the social context where people grow old, and several social factors shape the experience of growing old (Ayalon and Tesch-Römer, 2018; Crăciun, 2019). For example, even if biological, cognitive, or emotional processes are similar, it is not the same if one grows old in Western countries or Southern European countries, if one has a stable income or is poor, if one comes from an individualist or a collectivist culture, and if one has a large family or is single. As discussed in the chapter about social development (see chapter on social development in part II of this book), social relations are very important for well-being and health in midlife and older age. Apart from this, the way we think about ageing and older individuals as a social group can influence the ageing process and the quality of life of middle-aged and older people. Individuals hold implicit and explicit beliefs about old age as a life stage, older people as a social group and ageing as a developmental process. These beliefs can be positive or negative and affect the way individuals grow old in a certain social context or how older people are treated in different social settings (e.g. hospitals, work, shops, parks, family gatherings, etc.). Ageism has been defined as a series of stereotypes, prejudice, and discriminatory actions towards older people based on their chronological age (Ayalon & Tesch-Römer, 2017). Discriminatory behaviours can be either against or in favour of older individuals and can be manifested at individual, institutional, community or cultural level. Ageism was also said to take several forms such as a hostile one (e.g. refusing older people healthcare or work because of their age) or a benevolent one (e.g. insisting on providing unwanted help) (Cary et al., 2017; Kornadt et al., 2021). The similarities in what concerns the different forms of ageism are that the characteristics of older people are generalized and the heterogeneity of the group is ignored (e.g. not all old people are ill or need help), and it is assumed that ageing is directly associated with negative characteristics (e.g. loss, illness, disability, dependency, etc.) (Kornadt et al., 2021).

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The negative consequences of ageism are well documented and include poor health and decreased well-being at the individual level and a negative impact in terms of healthcare and social services at a societal level (Levy et al., 2020; Chang et al., 2020). Concerning individual development in older age, ageism can play an important role and thus represents a relevant topic to be addressed in this book. Although a lot has been written about ageism (Ayalon & Tesch-Römer, 2018; Kornadt et al., 2021), this chapter will tackle the topic from a positive psychology and developmental angle. At first glance, ageism may not be linked with positive psychology concepts. Nevertheless, one can design interventions to address ageism by using positive psychology principles and activities (Seligman et al., 2005; Lyubomirsky & Layous, 2013) to boost individual strengths and developmental assets. In this chapter, I will first examine how ageism is defined and explained from different theoretical perspectives. Then, I will go on to examine the potential links between ageism and development across several life domains (i.e. cognitive, emotional, social, personality, and physical). Last, but not least, I will explore some intervention possibilities to reduce ageism by using positive psychology principles and fostering development in midlife and older age.

Explaining Ageism

Ageism has been a relevant topic for gerontology during the last decades, and due to its negative consequences at both individual and societal levels, it constituted the topic of many scientific studies and political debates. Although it represents a widely discussed topic, ageism is not easy to define because it represents a complex phenomenon. The first definition of ageism was formulated by Robert Butler (1975) who described it as being a form of prejudice manifested by one age group against another age group. This means that ageism does not refer only to older individuals but can target any age group (e.g. young people, middle-aged individuals, or older persons). For instance, during the Covid-19 pandemics, this situation became obvious since not only older individuals were regarded as "victims" of an inefficient health system but also young people were often depicted as a "lost generation" or "irresponsible spreaders of the virus". Although ageism can target in principle any age group, in this chapter, I will address ageism towards older individuals, outline some explanatory mechanisms for this phenomenon and reflect on how to act to prevent or reduce its occurrence.

Iversen et al. (2009) reviewed various definitions of ageism and described the concept as including negative and positive stereotypes, prejudice, and discrimination against or to the advantage of elderly people, based on the perception of their chronological age. To note, ageism can also be positive in the sense that people may receive some advantages because of their age (e.g. free entrance to events, free public transport). Nevertheless, ageism is mostly negative and is manifested as discriminatory actions towards older people. Ageism can be demonstrated through attitudes, behaviours, institutional practices, and policies. Research has shown that

ageism may be both explicit and implicit (Iversen et al., 2009; Levy, 2009) and can be expressed at individual, institutional and society level. Studies usually focus on three types of ageism, the one manifested at individual level (e.g. how a person feels when discriminated because of their chronological age), the one expressed at institutional level (e.g. integration of older workers at the workplace, health services offered to older individuals, etc.), and the one shown at societal level (e.g. mass media representations of older adults, integration of older adults within society). These manifestations are relevant because they form the basis for intervention at different levels to reduce or prevent ageism.

An important point to remember is that ageism may be expressed in positive ageing stereotypes and through a benevolent attitude. For example, the *stereotype content model* shows that older adults are often perceived as warm but incompetent (Levy et al., 2018). Such perceptions determine emotions like pity or sympathy and often actions targeting the protection of older adults. Nevertheless, actions that restrict the autonomy of older adults and reflect pity more than respect can also prove harmful for older adults. Such attitudes may also lead to avoiding the company of older individuals or to patronizing language towards them (Nelson, 2005). Also, positive stereotypes such as older people being wise and autonomous (i.e. this represents a stereotype because it implies a positive overgeneralization) can prove to be harmful since they place a pressure on older individuals to live up to these standards (Palmore, 1999). Older individuals themselves often perceive forms of positive ageism as being paternalistic and infantilizing rather than nice or empathic (Chonody, 2016).

Several *theories* attempted to explain the phenomenon of ageism. We can differentiate between theories providing explanations at individual, institutional, or society levels. At *micro level* or individual level, the theories mostly originate from social psychology or developmental psychology. For example, the *terror management theory* (Greenberg et al., 1997) explains ageism as a consequence of the fact that older people as a group represent a constant reminder that we are vulnerable and will all die one day. This determines feelings of anxiety about death and being vulnerable in general. Thus, to deal with this anxiety, a person needs to assert their difference to the old people social group, and negative ageing stereotypes provide a way to do so. Psychological threat is often the cause of prejudice and discrimination manifested towards another group (Greenberg et al., 1986). Another social psychology theory, namely, the *social identity theory* (Tajfel & Turner, 1979), postulates that people want to have and maintain a positive social identity. Therefore, they will often compare themselves to other social groups in order to stress that they (i.e. the in-group) are better off than others (i.e. out-group). Age is a criterion for group identification, which in itself does not represent a problem, but may become a criterion to discriminate other age groups. For example, young or even middle-aged people may feel the need to emphasize the characteristics that make them "young" to differentiate themselves from the "old people" group and thus feel better or more useful to society by comparison.

Another theory deriving from developmental psychology, namely, the *stereotype embodiment theory* (Levy, 2009), postulates that we are exposed to negative stereotypes our whole lives and we come to internalize these as self-perceptions of ageing.

During their lifetime, people adopt negative stereotypes about older adults, often in an implicit manner. Stereotypes are considered to have become embodied when their assimilation from the sociocultural context leads to self-definitions that have an impact on health and functioning (Levy, 2009). The negative ageing stereotypes become negative self-perceptions of ageing and have a detrimental effect on one's health, cognitive performance or even longevity (Levy, 2009; Wurm et al., 2007; Wurm & Benyamini, 2014). According to this theory, the process of internalizing the negative ageing stereotypes begins during childhood and continues over the lifespan. Research has pointed out the existence of negative ageing stereotypes in all age groups (Crăciun & Făgărășan, 2020; Gonzales et al., 2010; Levy, 2009). Also, negative ageing stereotypes were shown to be present in different cultures from Western countries (Levy, 2009) to Eastern European countries (Crăciun, 2011, 2012) and Asian countries (Cuddy et al., 2005) showing their universality.

The *stereotype embodiment theory* also assumes that stereotypes often operate at an unconscious level (Levy, 2009). Most people are not aware that they hold negative ageing stereotypes or may even believe they have positive stereotypes of ageing when in fact they act in a discriminatory fashion towards the elderly. A series of experimental studies using a priming task (i.e. presenting words characterizing old people such as "wise" or "senile", at a fast speed so as not to permit conscious awareness but slow enough to allow encoding of the information) have shown that both negative and positive stereotypes can be activated and influence functioning on an unconscious level (Levy, 2009).

A third assumption of the stereotype embodiment theory suggests that stereotypes become more salient through self-relevance (Levy, 2009). Hence, a person may not become aware of negative stereotypes until these refer to himself or herself. Several people start to consciously think about ageing and old people only when they become part of the "elderly" category themselves. When people objectively (e.g. they retire from work, they notice that they need glasses or the first grey hairs appeared) or subjectively (e.g. they start feeling old, they perceive a limited time left to live and start re-evaluating their lives) are included in the elderly category, they start acting the part and thus enact their stereotypes about ageing. Therefore, in this context, it becomes relevant if ageing individuals hold more negative or positive ageing stereotypes. Old age cues that mark the transition from age stereotype to self-relevance and self-perceptions of ageing can originate, for instance, from interpersonal communication. People often use patronizing speech with older individuals, assuming that they need help or do not understand and need to be told what to do (e.g. when they are in a hospital environment, when they buy a smartphone, etc.). Other cues can be institutional, when, for example, older individuals are denied medical treatment because they are considered too old to benefit from it.

A fourth assumption of the stereotype embodiment theory is that stereotypes utilize multiple pathways (Levy, 2009). Researchers identified a psychological, a behavioural, and a physiological pathway. The *psychological path* refers to the fact that peoples' expectations about old age can become self-fulfilling prophecies. For example, people think that ageing is automatically connected with illness, so when they get diagnosed with a chronic condition in older age (e.g. hypertension), they

attribute it to ageing and consider it normal. The *behavioural path* refers to the health practices that people adopt. For instance, negative age stereotypes can decrease the self-efficacy of older individuals (e.g. they start to believe they cannot move as quickly as before) and even consider health practices pointless since negative ageing stereotypes imply that old age means "being ill or less mobile". The *physiological path* involves the autonomic nervous system. For example, in one study, older people who were unconsciously exposed to negative ageing stereotypes displayed a heightened cardiovascular reaction to stress as opposed to those who were exposed to positive ageing stereotypes (Levy et al., 2000). This means that people who have negative ageing stereotypes potentially suffer more from the negative health impact of stress.

All in all, according to the stereotype embodiment theory, stereotypes are transmitted top-down from society to the individual and evolve over time, from childhood to older adulthood (Levy, 2009). Children are often exposed to negative stereotypes about older individuals. These stereotypes usually originate from the media, from children's books or from negative examples of older adults in their immediate social context, who are ill or cognitively impaired, and thus strengthen the negative stereotype. Because these stereotypes do not currently refer to themselves, young people do not feel the need to activate any defence mechanisms to protect themselves from the incoming negative information. Moreover, young people may benefit short-term from negative ageing stereotypes if they get access to jobs or other social benefits that are refused to older adults. However, studies show that, in the long term, having negative ageing stereotypes has a negative impact on one's own health (Levy et al., 2002a, b, 2009).

Meso-theories, or theories that explain ageism on a group level, are for example the *evolutionary theories of group membership* (Burnstein et al., 1994). This theory proposes that assistance within a group depends on the person's age and health. For example, when a group finds itself in a crisis where lives are at risk, group members are more likely to help the young people from the group. When there is no life-threatening risk, then people would assist also older members of the group (Burnstein et al., 1994). Implicitly, this means that younger lives are valued more than older ones, since the former represent "the future of the group". *Intergroup threat theory* assumes that people react in hostile ways towards outgroups, especially when the latter are perceived as somehow dangerous. The threats can be realistic or symbolic. Realistic threats are when the power, resources, and wealth of a group are endangered (e.g. during an armed conflict, during the corona pandemic). Symbolic threats refer to challenging the belief system, the world view, or the values of a specific group (Stephan & Mealy, 2011). This theory can be applied to the situation of ageism where young people may feel threatened by the older people group (e.g. they have to work to help sustain a large number of elderly within the society, they feel that the older group is vastly represented in the society and gets to vote and decide for their future, they feel discriminated because old people get to be vaccinated first against Covid-19). The *intergenerational conflict theory* is somehow similar in that it assumes there is a conflict of values between generations. This theory implies that young people have certain beliefs about the roles and behaviour of the older

generation, and when these expectations are not met, this leads to displays of ageism. Nevertheless, according to the intergenerational conflict theory, older people should not attempt to be too similar to the younger generation either, because when they do so, this may lead to intergenerational conflicts as well (North & Fiske, 2013). This situation occurs, for example, when teenagers disapprove of their parents dressing and acting too much as teenagers themselves.

Macro-level theories attempt to explain ageism at a societal level. For example, the *modernization theory* (see also Chap. 2 in this book) described by Cowgill and Holmes (1972) assumes that through the technological advances, older adults lose their roles as important members of society. Advances in medicine and technology have made it possible for people to live longer but also have made old age less special (e.g. in terms of knowledge provision or wisdom). Namely, it means that not "only the strong survive" but also people who rely on medicine to do so. Consequently, more people get to live with a chronic illness until an old age, but by doing so, they also strengthen the stereotype that associates old age with illness and frailty. Also, older people may lack the skills that are needed on the job market (e.g. technology related competences), making them less powerful and important within society overall. Increased urbanization and work patterns are becoming more abstract (e.g. IT or innovation engineers as opposed to factory workers or peasants), and younger people moving far away from their old parents also changes the family structure and affects the intergenerational communication. When families have a good intergenerational communication, old people can learn from the young to keep updated with technological advances and have a chance to develop constantly (see also chapter on grandparents' roles in this book). Isolation, by contrast, leads to less personal development and identification with negative ageing stereotypes (see chapter on loneliness in this book) and eventually to social inequalities between age groups. Older persons are often described as poor in comparison to other age groups within society. However, the *intersectional theory* points out that it is not age itself that causes social inequalities between social groups but the intersection of age, gender, sexual orientation, socioeconomic status, and other factors resulting in discrimination. One social group is not disregarded just because of their age, but also factors such as gender, race, financial status, or other factors lead to discrimination (Krekula et al., 2018). According to this theory, we can think that there are still many wealthy, older adults around the globe who are not victims of ageism but, on the contrary, control several resources and can manifest power (e.g. several of the political leaders or rich business owners around the globe can be integrated in the older people age group).

Why Intervene: Ageism and Development

Above I have discussed what ageism means and outlined some theoretical explanations at individual, group and societal levels. In the following section, I will attempt to answer the questions of why ageism constitutes a problem for the individual and society and why is it important to act to prevent or reduce its occurrence?

In terms of *physical development* in older age, negative ageing stereotypes can influence functioning and health and even impact a person's will to live (Levy, 2009). For instance, concerning the latter, in an experiment, researchers primed positive and negative ageing stereotypes. Then participants were presented with a terminal illness scenario and asked if they would accept a life-prolonging treatment. The ones who had been primed with negative ageing stereotypes were more likely to refuse the treatment, while those who had been primed with positive ageing stereotypes were more prone to accept the life-prolonging treatment (Levy et al., 2000). Thus, in the long term, positive stereotypes on ageing may prove to be useful, while negative stereotypes on ageing might be associated with poor health and shorter lifespans (Levy, 2009). Concerning physical development in older age, ageism constitutes a barrier. For instance, ageism was shown to predict functional impairment, chronic health conditions and hospitalization (Chang et al., 2020). Also, ageism was associated with a poor diet, lower medication adherence, and risk behaviours like drinking and smoking (Chang et al., 2020). Thus, experiencing ageism at an individual level may affect health through the adoption of an unhealthy lifestyle. In what concerns *emotional and social development*, at an individual level, ageism is associated with negative emotions (e.g. depression, anxiety, loneliness) and social isolation (see chapter on depression, anxiety, loneliness, social development, and emotional development in this book). Ageism has been associated with decreased social support, reduced social engagement and increased social isolation (Chang et al., 2020). There is also an association between experienced ageism and depression (Chang et al., 2020). *Personality development* at an individual level can also be hindered by negative ageing stereotypes since these can encourage neuroticism and impede the manifestation of openness to new experiences or optimism.

Negative stereotypes of ageing are embodied during the lifespan and often have an unconscious effect on us (Levy, 2009). One unique feature of ageism is that it eventually becomes self-destructive in the sense that, in younger years, it may be targeting older age groups, but with ageing, people get to be in the age category they had discriminated and suffer from the negative consequences. Stereotypes of ageing become self-perceptions of one's own ageing process, and the negative stereotypes are directed at oneself. In this sense, holding such negative beliefs about older adults or old age represents a form of self-harm since it leads to the experience of negative emotions and may be even poor health and a shorter life.

In the context of workplaces and organizations, it has been shown that ageist attitudes can negatively affect the productivity of older adults and their commitment to the company and indirectly also harm the company since it may be deprived of relevant human resources. Several factors were shown to be related to ageism: the company's structure, the company size, the human resource strategy, the age friendly climate and corporate identity, the sectorial affiliation, and the legal framework (Naegele et al., 2018). For example, in terms of company size, larger companies may have human resource departments that develop anti-ageist strategies. By contrast, smaller companies provide the opportunity for more intergenerational direct contact and communication and thus set the stage for potential positive interactions and implicit change of negative ageing stereotypes.

At a societal level, ageism has mainly implications for the marginalization and discrimination of certain age groups. For example, older people may be denied with proper medical care because of their age, or they may be abandoned by their relatives who do not consider them useful or even regard them as a burden. Even if one considers that ageism as a practice is not that bad, or even justified when it is targeting older members of society, one should not forget that ageism can become a way of thinking, an acceptable social practice in a particular context. For instance, when facing a crisis situation like the Covid-19 pandemic, it was noticeable that both young and old people became targets of prejudice and discrimination. This could be explained also through the normalization of discriminating certain groups based on their age. Marginalization and discrimination, particularly in the older age group, can lead to isolation, lack of access to resources, illness and even death. Also, for example, during the Covid-19 pandemic, a form of benevolent ageism has been expressed towards the elderly, where in a desire to protect them, they were not allowed to leave their homes or see their families. In elderly homes, during lockdowns, visits were not allowed, making older people feel cut off from the world and their families. In several situations, this led to a worsening of their mental (e.g. depression) and physical health or even death.

How to Address Ageism: Prevention and Intervention Principles and Examples

One important point when attempting to change ageism is first *to measure* it. How can we determine that somebody is acting in an ageist way or not? As discussed above, ageism is often implicit, and several people would answer negatively if asked directly if they discriminate older adults or hold some form of prejudice against them.

There are several instruments that can be used to measure ageism such as the Fraboni Scale of Ageism, the Ageing Semantic Differential, and the Facts of Ageing Quiz. The *Fraboni Scale of Ageism* (Fraboni et al., 1990) comprises 19 items that asses the cognitive and emotional aspects of ageism. The Fraboni Scale of Ageism includes three factors: separation and avoidance (six items), stereotypes and antilocution (eight items), and affective attitudes and discrimination (five items) measured on a 1 (strongly disagree) to 4 (strongly agree) Likert Scale. The *Ageing Semantic Differential Scale* (ADS, Intrieri et al., 1995) measures the impact of stereotypes on attitudes regarding older adults. It includes 20 pairs of differential adjectives related to four dimensions, integrity, acceptability, instrumental, and autonomy, all measured on a seven-point semantic differential scale. Integrity comprises pairs of adjectives such as "optimistic/pessimistic", acceptability items like "friendly/unfriendly" and instrumental items such as "active/passive" and autonomy "organized/disorganized". The *Palmore's Facts on Ageing Quiz* (Palmore, 1977) measures the level of knowledge one has about ageing, especially potential misconceptions concerning ageing. The scale contains 25 true/false items. Correct items are summed up and, thus, higher scores correspond to a better knowledge of

ageing. Once we know how to measure ageism, we can identify who is ageist and how ageism is manifested in particular settings. To note, people may be or act ageist depending on the context and may sometimes not be aware of the ageist attitudes they hold. More modern measurements of ageism include the succession (anticipated role changes as people grow older), identity (what social roles are considered acceptable for older adults) and consumption (beliefs about the distribution of resources) (SIC) scale (North & Fiske, 2012, 2013; Hancock & Tally, 2018). The scale uses prescriptive (i.e. "should") statements instead of descriptive ones (i.e. based on "are" statements). Conformity to prescriptive norms forms the basis of ageing stereotypes (Fiske & Taylor, 2017). The SIC scale can be applied in various settings and is especially useful in organizational settings (e.g. work contexts, hospital, etc.). SIC measures both hostile and benevolent ageism (Hancock & Talley, 2018), which makes it very useful for identifying more subtle manifestations of ageism.

After figuring out how to identify ageism, a further step is to understand what triggers ageism. Knowing the causes of ageism helps to take action and change them and thus prevent or reduce ageism. In this sense, researchers have concerned themselves with the *predictors* of ageism (Donizzetti, 2019). Lack of knowledge about ageing and interaction with the elderly were suggested to be important predictors of negative ageing stereotypes. Studies have shown that people who hold prejudices against older people manifest little knowledge about them and there is a negative correlation between ageing stereotypes and knowledge about ageing (Donizzetti, 2019). Knowledge about ageing is negatively correlated with anxiety about ageing (Goriup & Lahe, 2018), meaning that if people have little knowledge about ageing, they will be more anxious when it comes to thinking about old age. Anxiety about ageing was defined as general worries and anticipation of losses regarding one's own ageing process (Lasher & Faulkender, 1993). Knowledge is linked to the formation of attitudes and providing new information on a topic and is considered an effective way to change attitudes on the targeted topic (Donizzetti, 2019). Thus, in order to change attitudes about ageing or older people, we need to provide novel information about these. In this sense, one relevant objective of ageism prevention or interventions should be offering *knowledge* on the topic of ageing and older individuals as a social group.

Based on the stereotype embodiment theory (Levy, 2009), ageism includes age discrimination, negative age stereotypes and negative self-perceptions of ageing. Also, we know from this theory that ageism influences health through a psychological, a physiological, and a behavioural path (Levy, 2009). Within the psychological path, self-efficacy plays a relevant role, among perceived control and purpose in life (Chang et al., 2020; Kim, 2016). Thus, when designing interventions to prevent or reduce internalized ageism, one can target for instance self-efficacy for engaging in health behaviours or social activities.

Strategies that can prove effective are education in order to increase knowledge about old people and ageing, priming positive stereotypes of ageing to induce more positive self-perceptions of ageing in the elderly group or providing positive role models for ageing well. If one wants to replace or change negative stereotypes of

ageing, one needs to find alternatives. Positive stereotypes of ageing or views on ageing are an evident alternative. Such positive views on ageing and old people, such as active, wise, or socially engaged, are in line with successful ageing theory (Rowe & Kahn, 1997) or active ageing policies. However, some authors argue that adopting positive views on ageing can only be effective in the short term. For a long-term adaptation, people need to accept that ageing implies a certain degree of decline and deterioration. Instead of looking for perfection or success in older years, a better alternative would be to look for harmony. In their model of harmonious ageing, Liang and Luo (2012) propose a balanced outlook on ageing, accepting the natural changes in the human body and adapting oneself to the challenges of ageing. Also, working on strengthening specific skills such as selection, optimization and compensation (Baltes & Baltes, 1990) (see Chaps. 1, 2, 3 and 4 and chapter on social development in this book) can prove beneficial in this context.

All in all, if one were to outline some *principles* for ageism prevention and intervention campaigns, these would include (1) fostering *knowledge* about ageing and challenging misconceptions about old people, (2) stimulating *awareness* of one's own negative and positive stereotypes of ageing, (3) finding adaptative *alternatives* for the negative stereotypes on ageing, (4) identifying *positive role models* for ageing well and (5) *facilitating* interaction with older individuals and intergenerational communication. A review of the effectiveness of ageism reduction interventions showed that educational interventions as well as those promoting intergenerational contact and especially interventions that combine both these strategies generated the best results (Burnes et al., 2019). Education and narrative reframing interventions may be useful because they help older adults understand the advantages of a healthy lifestyle in older age (Burnes et al., 2019; Busso et al., 2019; Sweetland et al., 2017). For the physiological path, which links negative stereotypes of ageing to negative health outcomes, stress management interventions can prove to be effective. For example, mindfulness and meditation are interventions that can help reduce stress (Sharma & Rush, 2014; Hersoug et al., 2018). Reframing how people think about ageing is crucial for reducing ageism. Thus, the FrameWorks Institute (www.frameworksinstitute.org) developed several educational, narrative interventions to reframe how people think about ageing and target several ageism-related outcomes such as attitudes towards ageing, implicit age bias and "us-versus-them" type of thinking (Busso et al., 2019; Sweetland et al., 2017). Combining strategies that target the physiological, psychological and behavioural pathways could be more effective than just focusing on one path at a time. However, such intervention decisions also depend on the needs assessment that would be conducted before designing the intervention programme. As discussed above, predictors of ageism depend on the social context, and thus interventions need to be adapted to the specific setting where they will be implemented.

At an *individual level*, ageism was described as "prejudice against our feared future self" (Nelson, 2005) pointing out that ageism may be an internalized experience. This internalized experience means that in time, negative ageing stereotypes become negative self-perceptions of ageing or negative views on ageing. The latter have a negative effect on health or on the well-being of the individual and thus require change. Unfortunately, until they reach middle age, people have spent already decades of their lives holding negative age stereotypes (Levy & Banaji,

2002). When such people eventually reach old age, they simply start to enact the internalized negative stereotypes about old age and older individuals. One explanation refers to the defence mechanism, namely, that older people do not want to identify with the elderly group but instead identify with the young, which are usually prioritized at a social level (e.g. they are treated as the future of a society and several services target their well-being). In order to reduce this tendency, we need to make the older people group worth identifying with. Why would a person want to be old or to be identified as old? Only when individuals will perceive the benefits of identifying with a social group will they do so. All in all, at an individual level, interventions should aim to reduce fear of ageing and change negative views on ageing or old people. These aims can be reached through educational interventions and promotion of intergenerational contact. Nowadays, social media provides an extra tool for intergenerational interactions that are not limited by regional boundaries (e.g. grandparents can keep in touch with grandchildren who live in another city). Also, on social media, people can share stories about situations when they encountered ageist attitudes and how they dealt with them. Sharing stories helps to empower older individuals to fight ageism. Mass media campaigns to prevent ageism can also take the educational and intergenerational contact into account when promoting images of young and old together, solving a task or presenting the benefits of an ageism-free society as opposed to the negative consequences of ageism.

At a *group or society level*, ageism prevention or intervention programmes can be part of social change, of how society functions as a whole. Several legislative measures were proposed, such as giving incentives to companies who hire older workers or financing housing projects that have an intergenerational component (Levy, 2017). Since negative ageing stereotypes were shown to emerge during childhood (Levy, 2009), educational policies should propose ageism prevention programmes that start as early as kindergarten, providing children with information about old people and ageing and encouraging positive interactions with older adults. At group level, Levy (2017) proposed a model for collective mobilization to fight ageism. This is modelled on other existing social movements to support the rights of women or persons with disabilities. According to Levy (2017), this social movement would require three stages: collective identification, mobilization, and confrontation. The collective identification stage includes a cognitive liberation, meaning that people stop accepting the condition of stigmatization and start challenging it. One way to do this is to express complaints openly, for instance, publicly complaining about ageism and its effect. Criticisms can be identified in the stories of older individuals who have experienced ageism in their everyday lives (e.g. similar to the #Me Too campaign). Such narratives help other people identify with their stories and strengthen their feelings of belonging to a group. Narratives can become collective action frames (Polletta & Gardner, 2015). Moreover, presenting research findings about the negative effects of ageing in an accessible way can help at this stage. The aim of the second stage is *mobilization*. This implies finding suitable leaders who can communicate the anti-ageism messages to a large audience. Leaders could be older individuals with whom the older people can identify but also young individuals who can help persuade the youth about the importance of fighting ageism. The third stage entails *confrontation*, and this can either imply becoming active and lobbing for policy and legislation change (e.g. to increase the rights of older

people) or designing education campaigns for all age groups to reflect on the effects of ageism on society as a whole. Such educational campaigns should also highlight the constructive long-term effects of positive ageing stereotypes. Art represents an important medium to deliver social movement messages and could be also applied in case of challenging ageism (e.g. portraying ageing in positive ways in paintings or photographs, theatre plays with positive messages about ageing, hiring ageing dancers for dance shows, etc.).

Positive psychology can provide some specific strategies to tackle ageism at individual level (Seligman et al., 2005; Lyubomirsky & Layous, 2013). For instance, boosting inner strengths (e.g. gratitude, optimism, communication skills, positive views on ageing) and developmental assets (e.g. social networks of support, critical thinking, emotional regulation, openness to new experiences, health behaviour) can be effective in reducing or preventing ageism. Such interventions may be particularly effective in case of addressing implicit, internalized ageism when individuals are not aware that they hold negative ageing stereotypes or act in discriminatory ways towards older adults. Because positive psychology interventions focus on building individual strengths and well-being and not specifically on reducing ageism, people may be more motivated to take part. For example, according to the stereotype self-embodiment theory (Levy, 2009), ageism includes age discriminatory actions, negative ageing stereotypes and negative self-perceptions of ageing. In a positive psychology-based intervention, we would primarily aim to increase positive self-perceptions of ageing instead of just reducing negative self-perceptions of ageing, to increase critical thinking abilities, not just focus on reducing negative ageing stereotypes and increasing positive intergenerational communication rather than just reducing age discriminatory behaviour. Boosting developmental assets, such as critical thinking, social skills (e.g. intergenerational communication, assertive communication), emotional regulation (e.g. addressing fears of growing old) or openness to new experiences (e.g. befriending an older adult to get out of one's social comfort zone), can serve as strategies to be included in such a programme. The main objectives would also not be just to reduce ageism but to increase intergenerational communication and collaboration and promote more balanced views on ageing (e.g. with positive and negative aspects of growing older). Studies suggest that self-efficacy, perceived control, and purpose in life, as well as healthy lifestyles and productive engagement, can influence the relation between ageism and health (Steward, 2021; Kim, 2016; Levy et al., 2020; Chang et al., 2020). Thus, one could also include self-efficacy, purpose in life, and perceived control as individual strengths to be part of ageism prevention and intervention programmes. Strategies to influence self-efficacy in older adults include engagement in physical activity like Tai Chi (Tong et al., 2018), engagement in cognitive activities or social actions (Wang et al., 2011). Other strategies such as education and narrative reframing interventions (Burnes et al., 2019; Busso et al., 2019), mindfulness (Sharma & Rush, 2014), and intergenerational contact (Steward, 2021) that were successfully shown to help in reducing ageism can also be applied to increase individual strengths and boost developmental assets to promote positive views on ageing and intergenerational collaboration.

Conclusion

The manifestations of ageism include prejudice or discrimination against any age group based on chronological age. Thus, it is a false assumption that ageism refers only to older people, although old individuals are usually the target of it. From a developmental viewpoint, ageism is harmful because it affects any person during their development in all life domains (i.e. cognitive, health, social, emotional, personality). Negative ageing stereotypes can be internalized during childhood and have long-term effects on health and longevity (Levy, 2009; Steward, 2021).

Ageism is unfortunately part of our daily lives, and people may not notice it until it refers to them in particular. The reason that people often do not notice ageism is because this can be implicit as well as explicit (e.g. clear discriminatory actions against older people such as refusing them medical services because of their age). In terms of implicit ageism, this can also be benevolent (e.g. people want to protect older individuals, provide unrequested help) but nevertheless harmful for older people, for instance, even if sometimes older people may even get some benefits following ageist attitudes (e.g. during the Covid-19 pandemic, older individuals were among the target groups who got the vaccinations first, policies were developed to help older individuals to stay at home such as groceries being brought by volunteers or delivery firms). However, in the long run, these benefits are outnumbered by costs to older people's health and autonomy (e.g. older people went out less during the lockdowns, became more anxious and depressed because of not meeting other individuals in person, etc.). Both hostile and benevolent ageism have negative consequences for individual development in older age.

Ageism represents a complex phenomenon, and its emotional, cognitive, and behavioural manifestations are visible at micro (e.g. individual), meso (e.g. institutions, community, neighbourhood), and macro levels (e.g. health policies, pension policies, etc.). Thus, interventions need to tackle all levels to reduce ageism within society as a whole. Positive psychology principles can be used to boost individual strengths (e.g. optimism, gratitude, positive views on ageing) and enhance developmental assets (e.g. openness to new experiences, critical thinking, social support networks, health behaviours, emotional regulation abilities, etc.) in order to prevent and reduce ageism.

Reflection Questions

1. Reflect on your own views on ageing. How do you think about old age and older individuals? How do you behave towards older people in social interactions?
2. If you have negative views on ageing and older people, what can you do to change these? Brainstorm some ideas and make concrete plans.
3. Would you say you are living in an ageist social context? Explain your answer.
4. How does ageism affect individual development? Give examples.

5. Wisdom is part of a positive ageing stereotype (i.e. unfortunately not all old people are automatically wise). What is your opinion; do we need wisdom in our society nowadays? If yes, how do you think we can use wisdom to solve problems in contemporary society?
6. Formulate objectives for a "stop ageism" app. What components and strategies would you include based on a positive psychology perspective?

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Chapter 11
Love Knows No Age: Fostering Romantic Relationships in Midlife and Older Age

Introduction

According to Eric Fromm (1956), love represents an active power that brings people together and, thus, from a positive psychology perspective, it can constitute an important strength for enjoying a happy middle and older age. Love represents a defining feature across the lifespan, closely intertwined with our identity as human beings and our development in all life domains. Since we continuously develop as individuals, it comes as no surprise that our relationships change and evolve across time. Couple relationships develop over the years and impact the individual development within the pair at an emotional, social, cognitive, physical and personality levels (see also chapter on social development, chapter on emotional development chapter on grandparenthood, part III of this book). Even if successful relationships are long lasting (i.e. length being one of the criteria for a successful relationship), it does not mean they stay the same over time. We can be happy in different ways at different times in our romantic relationships. Also, if one romantic relationship terminates in older age because of various reasons (e.g. death, divorce, separation, illness), one can still fall in love again, and this constitutes a reassuring feeling. As long as we live, we do not lose our capacity to love and the right to be loved by others. Associating ageing with being less worthy of love or eligible for having romantic relations represents a manifestation of ageism. Already during our childhood, we have learned that in fairy tales, a young princess meets a prince, they fall in love, they face several challenges to be together, get married and live happily ever after. However, real life is more about what happens during the "happily ever after", namely, how people manage to stay together and love each other despite facing different challenges (e.g. parenthood, grandparenthood, financial issues, job-related problems, illnesses, etc.). In this sense, midlife and older age can be quite difficult stages in our lives as already discussed in the previous chapters of this book. Nevertheless, one important strength that ensures happiness in midlife and older age

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refers to keeping the capacity to love, aiming to form significant relationships built on trust, respect, care, and communication.

Sometimes one hears about older couples behaving just like "teenagers" because they are freshly in love. This happens because passion and attraction can occur at any age (see also chapter on sexuality, part III of this book). Thus, it is interesting to explore how love can be experienced at older stages in our lives, what meanings and actions are associated with it, what are the factors that play a role for satisfactory romantic relations, how do such relationships shape our development and what can we do to foster fulfilling romantic relations? Love is relevant for enduring romantic relationships and was also associated with mental and physical health (Fehr, 2001; Kim & Hatfield, 2004). Thus, giving and receiving love and having fulfilled romantic relationships can represent sources of development in midlife and older age.

From a positive psychology perspective, it is motivating to examine what are the strengths that a person needs in order to maintain romantic relationships into an older age and what developmental resources can make a difference. Furthermore, one should keep in mind that middle-aged and older individuals are involved in different types of love relationships at the same time, such as, for example, love of their children, grandchildren, spouses or life partners, parents, siblings, friends, and so on. This means that they sometimes need to negotiate different roles in parallel (see chapter on grandparents in part III, chapter on social development in part II), which can be a source of distress or well-being, depending on the number of resources (e.g. physical, emotional, cognitive) one possesses.

In this chapter, I will focus on romantic relationships and their influence on development in midlife and older age. First, I will discuss how love is defined and what theories attempted to explain how love happens as well as what instruments were developed to measure it. Second, I will examine what older people think about love and relationships and what are the characteristics of romantic relationships in older age including positive and negative aspects. Third, I will analyse the relation between romantic relationships and personal development and reflect on how positive psychology principles and developmental resources can be applied to help middle-aged and older individuals to achieve their desired relationships as well as foster their developmental potential.

Explaining Love in Midlife and Older Age

Across time and disciplines, many researchers attempted to capture and explain the meaning of love as well as identify and describe the existing types of love. For instance, one definition by Hendricks and Hendricks (1986) describes love as the tendency to think, feel, and behave positively towards another person. In their view, love represents a complex phenomenon and entails subjective feelings and beliefs as well as objective actions and physical reactions. Concerning the latter, one method that researchers used in order to understand love was to explore the *neuropsychology of love*. Studies have shown that certain brain areas are involved in

romantic love, especially the reward system (Aron et al., 2005; Fisher et al., 2005). For instance, neuroimaging studies showed that passionate love and maternal love activate the reward system in our brains (Aron et al., 2005; Bartels & Zeki, 2000, 2004).

The brain reward system entails a circuit involving several areas that are activated when we are engaged in pleasurable activities (e.g. being in love, kissing, enjoying our favourite food, listening to our favourite music, etc.). When the reward circuit is activated, our brain notices that something important is happening and that the event is worth remembering and repeating. Neurons from the different brain regions that form the reward circuit are using a hormone and neurotransmitter called dopamine to communicate with each other. Dopamine-producing neurons are found in the ventral tegmental area and communicate with various other brain regions such as the nucleus accumbens. The latter is responsible for processing rewards and motivating behaviour, strengthening synapses in the hippocampus (i.e. brain area involved in memory and learning), the amygdala (i.e. brain region involved in processing emotions), and the prefrontal cortex (i.e. brain area engaged in planning, reasoning, and creating associations with emotions such as linking a person with certain emotional experiences). All these brain regions are activated when experiencing love (Bartels & Zeki, 2000; Acevedo et al., 2011), because loving a person means we feel motivated to see the beloved and do things together, we want to create memories together, we make future plans and we are motivated to think about the person frequently. Also, we are likely to associate a number of emotions with that particular beloved person. This explains why rewarding stimuli (e.g. the loved person, activities with the loved person) stimulate goal-directed behaviour (e.g. we desire to see the person to get to know him or her better, we want to understand him or her) and produce positive emotions and a desire to repeat the experience. In contrast, activation of the caudate nucleus (i.e. brain area linked to obsessive thinking) was shown to be present in case of romantic love (Acevedo et al., 2008) and was associated with ruminating about the relationship. However, fortunately, researchers differentiate between romantic love (e.g. intense feelings of attraction) and obsession (e.g. intense feelings of jealousy, intrusive thoughts about the partner) (Acevedo & Aron, 2009).

Other researchers have investigated the *neurobiology of love*, namely, the role of oxytocin, vasopressin, dopamine, serotonin, testosterone or cortisol in love and attachment relations (DeBoer et al., 2012; Seshadri, 2016; Feldman, 2017). Based on neuroimaging studies, some scholars even proposed that love represents a form of positive addiction when feelings are mutual (Fisher et al., 2016) and a negative addiction when love is unrequited, when people feel rejected or experience heartbreak (Fisher et al., 2010, 2016). This is based on findings that show that individuals in the first stages of passionate romantic love relationships display symptoms similar to drug addictions such as euphoria, craving, emotional or bodily dependence, withdrawal, tolerance, and relapse (Fisher et al., 2016). In the initial stages of passionate love, people focus on the beloved, desire to see them (i.e. craving), and experience a "rush" when being with the beloved or thinking about the loved person (i.e. euphoria). As the relationship unfolds, people want to see each other more often

(i.e. tolerance) to experience the same positive feelings. If a separation happens, people are likely to experience symptoms that are similar to withdrawal in drug addiction, namely, crying fits, protest, anxiety, insomnia, hypersomnia, loss or increase in appetite, and feeling of intense loneliness (Fisher et al., 2016). Just like drug addicts, rejected lovers also engage in risk behaviours such as stalking and degrading oneself to get the person back and sometimes even engage in aggressive actions triggered by jealousy (Meloy & Fisher, 2005; Fisher et al., 2016). Additionally, just as drug addicts, lovers can also relapse (e.g. when a person gets back together with that "toxic" partner, despite all friends advising against it). For example, even after the relationship has ended, certain cues in the environment (e.g. specific places, people, songs, time of the year, etc.) can trigger memories of the beloved, craving, and obsessive thinking (Fisher et al., 2016). A second reason to consider love an addiction is because the brain areas that are activated when experiencing passionate love are very similar with the areas and neural pathways activated during drug addictions (Fisher et al., 2016). Interestingly, similar neuronal pathways are activated in case of people who are happy in love or rejected by their love interest (Bartels & Zeki, 2000; Acevedo et al., 2011). From an evolutionary perspective, love is divided into passionate love (e.g. physical attraction needed to initiate sexual relations) and compassionate love (e.g. the care needed to decide to stay with a person and raise children) (Graham, 2010). Thus, even biological and evolutionary theories of love recognized different patterns in love relationships. Furthermore, just considering love to be a form of addictive behaviour ignores the complexity of the romantic relationships (e.g. cognitive aspects such as beliefs about love or expectations about how a couple should function, social aspects like social norms concerning love relations in a certain culture).

Several psychologists attempted to put together a *theory of love* by observing all aspects that characterize love relations. One of the most popular theories on love is the *triangular theory of love*, which was put forward by Sternberg (1986). As its name suggests, this theory proposes three pillars as the basis of romantic love relationships, namely, passion, intimacy, and commitment. *Passion* refers to the attraction that one feels towards another person and the corresponding behaviour of increased energy and attention dedicated to the subject of passion (Fisher et al., 2006). Attachment is central to *intimacy*, while *commitment* implies interdependence and social exchange (Stanley et al., 2010) and ultimately caregiving. However, romantic love is also stimulated by personality traits such as warmth, generosity, or humour. From a positive psychology perspective, investing in building such positive strengths (e.g. optimism, warmth, humour) could make a person more attractive. Physical attraction is necessary for a romantic relationship, but it is by far not sufficient. Sexual appeal may fade with age, but personality traits can keep the attractiveness alive within an enduring couple. Other challenges such as loss of status or financial resources may affect the degree of attractiveness of a partner. Findings point out that frequent fights about money (e.g. when one partner loses their job, when both partners do not earn enough to sustain a desired lifestyle, when both partners enter retirement) can increase marital conflicts (Papp et al., 2009; Dew & Dakin, 2011).

Similar to Sternberg's theory on love, other researchers outlined three aspects that characterize all forms of love, namely attraction, attachment, commitment, and care. These elements delineate the *AAC (attraction, attachment-commitment, and care) theory* (Tobore, 2020). *Attraction* refers to the evolutionary adaptation of human beings for mating, reproduction, and parenting (Fisher et al., 2006). *Attachment* bonds are relevant for several types of relationships not just romantic ones. For example, they were shown to be important for parent-child relations or friendships. Feldman (2017) describes the relevance of neural networks for attachment, including the interaction of oxytocin and dopamine in the striatum. Attachment implies the maintenance of proximity, seeking safety and security and preventing separation anxiety (Berscheid, 2010). According to *attachment theory* (Bowlby, 1980), attachment refers to a person's ability to form trustful relationships and has its origins in a person's early childhood, namely, in the relation with a significant other (i.e. usually the mother). People can have a secure attachment or insecure form of attachment. Securely attached persons typically have positive views of themselves and their partners and frequently report greater satisfaction with their relationships. Insecurely attached individuals fall into three categories, namely, anxious-preoccupied, dismissive-avoidant, and fearful-avoidant (Bowlby, 1980). People with an anxious-preoccupied attachment style will often worry excessively about the relationship, ruminate on what is "not working", show intense emotions (e.g. having bouts of anxiety, fits of anger), manifest impulsiveness, doubt their worth as a partner and blame themselves for the other person's behaviour (Bowlby, 1980). People with dismissive-avoidant attachment style are likely to supress or conceal their feelings, distance themselves from the other person when they feel rejected or blame the other person (Bowlby, 1980). Individuals with fearful-avoidant attachment style often deny or conceal their feelings, do not seek intimacy and are not comfortable with expressing emotions (Bartholomew & Horowitz, 1991). Romantic attachment was found to be essential for commitment and relationship satisfaction (Péloquin et al., 2013). The attachment system is complemented by a caregiving system that appears also to be characteristic for humans and essential for love. *Caregiving* involves showing concern for another person, tenderness, offering support and trying to understand the other person within the relationship. Mutual attendance to needs and welfare is essential for any type of relationships, be it romantic love, friendship, or family bond (Berscheid, 2010). There is a reciprocal influence relationship between attachment and caregiving. Over time, sustained caregiving can help form and strengthen attachment, while the latter has a positive influence on care within relationships (Péloquin et al., 2013).

The *AAC theory* includes four important factors: attraction, connection, trust, and respect. These factors need to be present for satisfactory romantic relationships. Attraction as mentioned above refers to a positive evaluation of another person. Connection implies the feeling of resonating with another person and is strengthened by proximity, familiarity, similarity, and shared positive experiences (Beckes et al., 2013). Similarity plays an important role for attachment and companionship, two relevant features for long-lasting relationships across the lifespan (Lutz-Zois et al., 2006; Berscheid, 2010). If people are more similar in what concerns their

personalities, values, or desired lifestyle, they are more likely to be attracted to each other and connect and maintain their relation for longer time periods. Trust is another relevant component of happy love relationships and is linked to intimacy and connection. As a fourth factor included in the AAC theory, respect is fundamental to love, attachment, intimacy, and commitment (Hendrick et al., 2011). If all these four factors are present, then love will be experienced as being more intense. Each factor is influenced by external events (e.g. economic crisis, war, pandemic), circumstances (e.g. financial issues, patchwork families where each partner brings children from previous relationships into the present one) or the setting (e.g. living in the parental home, living in a small flat with several children, etc.) where the couple lives. This means that as environmental conditions fluctuate with time, so does the intensity of different factors, and this impacts the love that one feels.

Attraction involves both physical (e.g. looks, sexual appeal) and personality traits (e.g. humour, kindness). Romantic love was defined by scholars as an advanced form of human attraction (Fisher et al., 2005). Attraction is essential for romantic relationships and sexual attraction often provides the motivation to start dating. Studies show that the love path and the sexual path in the brain are complementary (Seshadri, 2016). Sexual activity stimulates the hormones involved in the experience of love, such as vasopressin and oxytocin. Also, sex triggers the release of dopamine that strengthens the preference for a certain partner and promotes attachment (Seshadri, 2016) (see also chapter on sexuality in this book).

Connection helps to build intimacy and friendship, elements which are very important for long-lasting romantic love. Connection is strengthened by sharing experiences and communicating. It is expressed through behaviours, such as seeking proximity, expressing concern, or compassion for the other person (Neto, 2012). Both sexual attraction and friendship are necessary for romantic love to flourish (Berscheid, 2010; Hendrick & Hendrick, 1993). People who share interests and values are more likely to fall and stay in love (Jin et al., 2017). Effective communication within the couple helps to build intimacy and a sense of security. Intimacy and connection grow through mutual self-disclosure, fun time together and reciprocal positive feedback. Sexual activity also contributes to building intimacy and connectedness because it reinforces emotional attachment (Seshadri, 2016). Jealousy and separation anxiety are also features of romantic love relationships (Fisher et al., 2002) even if they represent a downside of romance. In this sense, anxiety was found to correlate with love, and there is a stable link between romantic love and jealousy in stable relationships (Gomillion et al., 2014). Connection in romantic relationships is weakened by distance, by communication problems, divergences in values, dissimilarity of interests, monotony and too much predictability (Tobore, 2020).

Trust represents the belief that the partner is reliable and dependable (Cook, 2003). Trust is vital for successful romantic relationships and relates to the components of intimacy and commitment from Sternberg's theory of love. Researchers suggest that love activates specific brain regions that are associated with reduced fear and thus with trust (Seshadri, 2016). Trust is vital for fidelity, monogamy, commitment, intimacy and emotional vulnerability in romantic relations (Laborde et al.,

2014). People who experience high levels of trust in their partner tend to prioritize the romantic relationship over their own vulnerability (e.g. being aware that sharing intimate secrets with our partner puts them in the position to potentially hurt our feelings). In contrast, people with low trust in their partner tend to prefer their own emotional safety over the relationship (Luchies et al., 2013). Trust takes time to build up and thus it comes as no surprise that it characterizes mostly relationships that are long lasting. Trust stimulates caregiving and compassion because people tend to believe that their partners will do the same for them if needed (Clark & Monin, 2006). This can also be an advantage for relationships in midlife and old age when caregiving and compassion become very important for facing challenging, multiple tasks (e.g. parenthood, grandparenthood, work issues, illness, caregiving roles, etc.). Lack of trust or diminished trust can mean the end of the romantic relationship as studies pointed out that lack of trust and diminished intimacy led to the dissolution of love (Sailor, 2013; Towner et al., 2015).

Respect in romantic relationships means that we have consideration for our partner and that we admire and value our partner as part of our life (Hendricks et al., 2011). Respect is important in friendships, and thus it comes as no surprise that it is mentioned on the list of things that people desire to receive from their love partners (Gottmann, 1999). Respect is vital for long-term romantic relationships as it is relevant for intimacy and relationship satisfaction and was found to be positively correlated with self-disclosure, passion, and altruism (Hendrick & Hendrick, 2006; Frei & Shaver, 2002). When people feel that they are not respected within a relationship, they react badly, and it may also lead to the relationship ending. Gottman (1993, 1994) identified the so-called four horsemen of the apocalypse that represent ways of disrespecting the partner, namely, stonewalling (e.g. blocking, disappearing, not talking, refusing to cooperate or communicate, etc.), showing contempt (e.g. not treating our partner with respect), criticism (e.g. constantly criticizing the behaviour of our partner), and defensiveness (e.g. trying to justify our behaviour and feelings by verbally abusing our partner). These are four behaviours that can lead to the erosion and termination of love relationships at any life stage.

All the abovementioned constructs that are relevant for fulfilled romantic relationships may sound a bit abstract when it comes to practice, and individuals would ask "so what should I do to improve my relationship?". Based on the review of the literature and experience from practice, I have extracted three important behaviours that can make romantic relationships function for longer time periods. This I have called the *share, inspire, and support (SIS)* model. *Sharing* refers to communicating about one's life, beliefs, and feelings as well as sharing experiences and activities together, creating beautiful memories that build the couple's identity. Concerning the latter, sometimes the success of an enduring relationship depends on the lifestyle that both partners want (e.g. they both like to travel a lot, they want to have several kids and dedicate time and energy to raising them, they have mutual career ambitions, etc.). *Inspiring* within the couple refers to making an impact in the other person's life. This does not have to be something very grand. One often hears people who are in love say that they are inspired to be better persons or that their long-term partners helped them grow. This can manifest itself differently in everyday life (e.g.

wanting to be a better communicator, trying to be a better parent and spouse, improving skills to be better at one's job, cooking healthier food, giving up smoking, etc.). *Support* is a component that refers to being there for the other person in times of need. This can happen when there are problems that one needs to face as a couple (e.g. illness, financial issues) or just by supporting each other's dreams and projects by believing in them and doing things to help these dreams to come true. These three love-related behaviours are triggered and maintained by attraction, connection, trust, and respect.

All the above-mentioned aspects are relevant for evaluating the quality of romantic relationships and for designing interventions to help couples who seek counselling (see the "How to Intervene: Fostering Fulfilled Romantic Relationships in Midlife and Older Age" section in this chapter). When thinking about interventions, we know from other chapters (e.g. see Chaps. 3 and 4 of this book) that it is important to evaluate them, and to do this, we would need instruments to measure love. In everyday life, we often hear people ask each other "how much do you love me?" or hear promises of loving one another forever and ever. These questions and promises show that people intuitively think about love in terms of quantity (e.g. loving someone more or loving someone less in comparison to another person or time point), intensity (e.g. casual, passionate, etc.) or duration (e.g. forever, a short time affair, etc.). In this context, researchers have also attempted to use theories of love to operationalize its components and design *instruments to measure love* (Graham, 2010). For example, one of the first theories with applications for measuring love is the one developed by Rubin (1970) who contrasts the experience of loving with that of liking someone. Romantic love according to Rubin (1970) includes three components: *attachment* (e.g. affiliative need, the desire to be close to someone), *caring* (e.g. predisposition to help, putting the other person's needs before one's own), and *intimacy* (e.g. feelings of union with a partner). The *loving and liking scale* consists of 13 items measured on a scale of 1–9 (Graham & Christiansen, 2008). Lee (1973) proposed six love styles that form the basis of the *Love Attitudes Scale* (LAS, Hendrick & Hendrick, 1986). The theory postulates that people approach love by using six different styles, namely, Eros (i.e. passionate, erotic love), Ludus (i.e. love as a game, a series of affairs), Storge (i.e. friendship-based love, compassionate), Pragma (i.e. rational, practical love), Mania (i.e. obsessive, possessive), and Agape (i.e. selfless love, unconditional love). The LAS scale consists of 36 items (i.e. 6 subscales, 6 items for each subscale) measured on a five-point Likert scale, while the short form was developed later to include only 4 items per subscale (Graham & Christiansen, 2008; Hendrick et al., 1998). *The Triangular Love Scale* (TLS, Sternberg, 1986, 1997) is based on the *triangular theory of love* proposed by Sternberg (1986) that assumes love has three elements, namely, passion (e.g. physical attraction), intimacy (e.g. feeling of understanding and connectedness), and commitment (e.g. decision to stay in the relationship). The measure consists of 36 items assessed on a nine-point scale.

Although neuroimaging studies and quantitative measures are promising, to understand love in middle and older age, one needs to explore the perceptions of middle-aged and older people themselves. In the following section, I will examine

the relationship experiences of middle-aged and older individuals with their perceived benefits and drawbacks and focus on some specific situations such as the empty nest syndrome, bereavement, and the grey divorce.

The Experience of Love in Middle and Older Age

Above, I have discussed how researchers formulated different theories to explain love and designed instruments to measure it. However, to understand the experience of love in older age, it is important to look at qualitative research findings that report on how people experience romantic relationships in midlife or older age. Thus, in the following section, I will explore how middle-aged and older people understand the factors leading to marital satisfaction, what are the problems that frequently arise in middle-aged and older couples as well as specific issues such as the grey divorce, bereavement, and empty nest syndrome, and how individuals experience these.

Some studies report that *marital satisfaction* increases with age, and older couples who stay married are happier, as in contrast, disappointing marriages usually end in divorce (Henry et al., 2007). According to some researchers, love and conjugal functioning are different concepts (Narciso & Costa, 1996). Love represents the emotional dimension of relationships (e.g. emotional expression, sexuality, emotional intimacy, opinions about the partner, etc.) (Narciso & Costa, 1996). Conjugal functioning refers to how a couple organizes and manages the relationship (Narciso & Costa, 1996). Several studies point out that constructive or positive communication (Abreu-Afonso et al., 2021; Harris & Kumar, 2018; Bertoni & Bodenmann, 2010), shared problem-solving (South et al., 2010), dyadic coping (Falconier et al., 2015) and intrinsic motivation (Abreu-Afonso et al., 2021) are relevant for marital satisfaction. From a positive psychology perspective, it is interesting to examine how older people think about marital satisfaction and what makes them stay together in long-term relationships. One qualitative study with older couples showed that a strong foundation for living together, mutual commitment for protecting marital cohesion and striving to improve sexual relations helped to sustain long-lasting marriages (Samadi et al., 2020). A strong foundation meant that couples were well matched from the beginning (e.g. similar family background, similar values). Mutual commitment to protecting marriage cohesion referred to having deep emotional ties to the partner, desirable interactions within the couple, positive marriage role models and skills to deal with marital issues (e.g. showing respect for the other's personality, supporting each other's growth, communication skills). Striving to improve sexual relations meant talking about sexual preferences, trying to meet each other's needs, learning new sexual skills, and making oneself attractive to the partner (Samadi et al., 2020).

When applying a positive psychology approach, it is also important to look at problems that can appear in older couples, try to understand them, and find solutions (e.g. what positive strengths need to be built, what developmental resources need to

be activated). In general, older couples were shown to experience less conflict in their relationships (Levenson et al., 1993), undergo on average less relationship stress compared to younger couples and do not desire that their partners should change (Rabin & Rahav, 1995). However, disagreements do happen among middle-aged and older couples as well (Miller, 1997). One qualitative study explored the sources of conflict and disagreement among older married couples (Henry et al., 2005). For this purpose, the authors developed a ten-item questionnaire to measure positive and negative aspects of married life (Henry et al., 2005). A positive item was "you have stimulating exchanges of ideas", and an example of a negative item was "you disagree about something important" (Henry et al., 2005). All items were measured on a five-point Liker scale with 1 being "hardly ever" and 5 "almost always". Results showed that the most frequently mentioned theme concerning disagreements was leisure time (e.g. hobbies, time spent together, politics, religion, travelling). For instance, older individuals complained that they were not interested in the same hobbies (e.g. the other does not enjoy travelling, the other person does not like sports, the partner is not interested in going to cultural events, etc.), or that the partner is too involved in a certain hobby such as watching football, or the poor quality or quantity of the time spent together (Henry et al., 2005). A second theme concerned intimacy (i.e. emotional and physical). Some of the issues raised by the participating older adults involved physical intimacy (e.g. the partners desire different sexual practices, lack of sexual desire) or emotional intimacy (e.g. lack of communication, like not talking about certain topics or talking to other people but not to the spouse, negative ways of communicating, such as hurting one's feelings). A third theme that was addressed as conflictual regarded financial matters, namely, issues about spending or not wanting to spend money on the same things. A fourth theme referred to not having any significant problems in the couple (e.g. if they could not think spontaneously of any, and then it means that there are not any serious issues). Personality was mentioned as a fifth issue, namely, problems with anger management, judgemental attitudes towards others, sexist attitudes (e.g. a husband complained that his wife blames all the ills in the world on men) and attitudes towards the end of life. Intergenerational relations such as relations with adult children (e.g. closeness of the relation, financial support, conflict resolution) and grandchildren (e.g. different educational styles, how much support should be provided) constituted a sixth disagreement theme. A seventh disagreement topic involved household concerns (e.g. where to live and home repairs or improvements). An eighth theme regarded personal habits, such as grooming, driving, and risk behaviour such as excessive alcohol consumption. A ninth theme consisted of health issues, namely, memory loss, hearing loss, and caregiving roles or doctors' appointments, such as being unwilling to go to the doctor (Henry et al., 2005). Work (e.g. current employment and amount of time the spouse was still working) and retirement (e.g. timing of retirement, reactions to retirement) issues constitute a tenth theme concerning disagreements within older married couples (Henry et al., 2005). In terms of gender differences, women complained more about personal habits and health problems, while men were dissatisfied about financial issues (Henry et al., 2005). Such findings are important for practitioners because they delineate the

problem areas where older couples need solutions and support. From a positive psychology viewpoint, one can build strengths (e.g. humour, resilience, optimism, gratitude, etc.) and foster developmental resources (e.g. cognitive problem-solving skills, decision-making abilities, emotional regulation competences, social communication abilities, enhancing skills to seek social support, building physical strength, encouraging health behaviours, etc.) to assist middle-aged and older couples in identifying and implementing solutions to their relationship problems.

Sometimes, older couples cannot solve their disagreements and end up getting a divorce. The "grey divorce" represents a phenomenon that refers to the ending of a marriage where at least one of the partners is over 50 years old (Crowley, 2019). Statistics from the USA show that the number of grey divorces has doubled in the last decades (Brown & Lin, 2012). Apparently, one in four divorces in the USA is being labelled as a grey divorce (Crowley, 2019). To understand this phenomenon, Crowley (2019) conducted a series of in-depth interviews with middle-aged and older individuals who were divorcing, to find out about what motivates them to make this decision in their older age. In order to put the issue of divorce in a social context, Crowley (2019) describes how beliefs about marriage changed during the last decades. Romantic love was not defined just as mutual physical attraction but a series of binding responsibilities within the couple, with clear role division that was called *companionate marriage* (Cherlin, 2009). As gender roles lost in importance over the years, also the definitions of marriage changed and evolved to what Crowley (2019) calls *commitment-based marriages* where divorce was considered only as a last resort alternative (e.g. in case of abuse, adultery, addiction, safety of the children, etc.). However, since the baby boomer generation (i.e. people born from 1946 until 1964) grew up in times of social change, it is not surprising that they challenged these models and valued *expressive individualism* instead (Bellah et al., 2007). This has important implications for personal development since expressive individualism postulates that personal development should be the core interest of an individual. Thus, marriages should provide an opportunity for mutual growth, and the success of a marriage would be measured by the ability of each partner to achieve their own individual goals (Crowley, 2019). When the partners fail to develop within the couple (e.g. partners want different lifestyles, they "grow" apart, fall out of love or fall in love with other people), divorce is regarded as a socially acceptable option to be free to look for happiness and development elsewhere or with other people (Wu & Schimmele, 2007). In case of older individuals, both models of marriage are to be found (Canham et al., 2014; Montenegro, 2004). In terms of the reasons provided for a grey divorce, one study found more motives associated with the commitment-based marriage, such as lack of communication, long-term and short-term adultery, and physical and emotional abuse (Rokach et al., 2004). Findings from the study conducted by Crowley (2019) reflected the expressive individualistic model of marriage to a greater extent. The main reason provided for a grey divorce was growing apart, followed by more commitment-based marriage reasons, namely, infidelity and mental health issues (e.g. depression, narcissism, co-dependency, anxiety) (Crowley, 2019). In terms of gender differences, men provided reasons such as financial problems or issues concerning their children, while

women referred to lifestyle-related matters (e.g. excessive alcohol consumption, drug or pornography addiction) and verbal or emotional abuse (Crowley, 2019). Such findings are relevant because they illustrate what people desire from their relationships in midlife or older age, as well as what beliefs they hold regarding marriage and divorce. Knowledge about such beliefs is important for understanding emotional reactions and actions in the distressing context of divorce in midlife and older age. Moreover, it can help to foster individual strengths (e.g. resilience, optimism, hopefulness, forgiveness, self-esteem) and the developmental potential (e.g. decision-making abilities, problem-solving skills, emotional regulation, social abilities, communication competences, etc.). Some people flourish after having decided to get a divorce and this can happen also in midlife or older age. Potential explanations for thriving after a divorce are, for instance, that people feel free to concentrate on their happiness and personal development and experience love again with another person.

One traumatic event that can happen in older age is the *death of a spouse* followed by *bereavement***.** The latter can have negative consequences for the health and well-being of the widow or widower (Das, 2012). Spousal loss is described as an emotional trauma with severe health consequences, which can even lead to mortality in some cases (Carr & Utz, 2002; Kiecolt-Glaser & Newton, 2001; Hughes & Waite, 2009; Das, 2012). *Weathering* was introduced as a term to define the health impact of cumulative and multidimensional stress and subsequent high effort to cope, which can affect a person through behavioural and social pathways (Das, 2012). Because losing a partner or spouse during midlife or older age is unfortunately not an uncommon event (e.g. due to death or divorce), researchers looked also at the potential for new relationships in case of older adults (Huang et al., 2019). Relationships are important for loneliness prevention in midlife and older age (see chapter on loneliness, chapter on social development, chapter on emotional development in this book), and forming new romantic relations in midlife or older age can be a way to prevent both emotional and social loneliness (Huang et al., 2019; Brown & Shinohara, 2013). Since the proportion of older single adults is on the rise, dating in older age has become more common (see chapter on emotional development, chapter on social development and chapter on sexuality in this book). *Dating* in later life has positive consequences for health, well-being and social connectedness (Brown & Shinohara, 2013). Additionally, it can provide a sense of companionship and meaning in life and prevent depression (Carr, 2004; Watson & Stelle, 2011; Stevens, 2002). Also, dating can help older people experience sexual and emotional intimacy (Määttä, 2011; Watson & Stelle, 2011; Stevens, 2002). Thus, dating can represent an asset for emotional and social development among older individuals. Nevertheless, dating may not be as easy during midlife or older age as at other life stages, and people may want different things from a relationship than they did when they were younger.

Mostly, research about love and dating is focused on young people (Connolly et al., 2004). Thus, until now, little was known about relationships in older age and what older people desire. In case of older adults, romantic love is considered to be more a thing of the past, and their present is seen as fulfilled by love for their

grandchildren, extended family or friends (Määttä, 2011). Negative ageing stereotypes can unfortunately play a part since many older individuals think they cannot love anymore or are not attractive enough (e.g. physically, as personalities, cognitively fit, socially skilled) to find a partner in older age. Such negative stereotypes need to be addressed in interventions to foster love relationships in older age because doing this can prevent loneliness and promote health and well-being in older years. In case of middle-aged adults, factors such as lack of time and energy, work pressures, having teenage children, and ill parents can constitute obstacles for dating.

One qualitative study investigated how people thought about love and romance in midlife and older years and how these beliefs influenced their conduct (Määttä, 2011). Data were collected through open letters written by individuals aged 50–91 (Määttä, 2011). Findings showed how relevant love and relationships were for participants' self-esteem and for their positive ageing (Määttä, 2011). For example, middle-aged and older people who participated in the study reported that falling in love made them feel young again and made them feel healthier and stronger (Määttä, 2011). Moreover, results lend support to the idea that one can fall in love at any age and that this represents a distinctive experience for each person (Hegi & Bergner, 2010; Määttä, 2011). The experience of falling in love in midlife or older age is as unique as in younger years; only the circumstances are different. For example, people experience bereavement associated with widowhood or recover after a difficult marriage or divorce, or they already have children from a previous marriage (Määttä, 2011). Middle-aged and older people can still experience "love at first sight", be charmed by another person and feel the butterflies in their stomach and the uncertainties about the reciprocation of love (Määttä, 2011). One difference is that older individuals sometimes experience shame (e.g. falling in love is not "right" at their age) or fear of being "too old" for romantic relationships. Results from the qualitative study pointed out that individuals perceived several prejudices from the environment concerning love in older age and thus were hiding their relationship to avoid gossip (Määttä, 2011). The good news is that some middle-aged and older people are still willing to take the risk to fall in love, enjoy having romantic relationships and even get married again (Määttä, 2011). Some of the middle-aged and older people participating in the study reported that they found love in older age more fulfilling than in their youth, because now they were free from pressures, such as work, mortgages or raising children (Määttä, 2011). Mature love is demonstrated though active acts, such as sharing, listening, communicating, having a sense of responsibility, caring for the other person, and supporting each other (Määttä, 2011).

Findings from another qualitative study illustrated how older adults experience relationships (Huang et al., 2019). Among the reasons named for initiating a romantic partnership were avoiding loneliness and desire for a stable relation (Huang et al., 2019). New partnerships were formed as the result of matchmaking from acquaintances or as a transition from acquaintanceship to intimacy (Huang et al., 2019). Participants reported that they would prefer to find a partner among their friends, neighbours and acquaintances, who shared common interests rather than meeting total strangers. The novel partnerships were maintained through frequency of interaction, way of interacting and attachment (Huang et al., 2019). Among the

factors that were named as relevant for forming new partnerships in older age were attitudes towards dating, stable relations, and marriage as well as interpersonal influences concerning dating (Huang et al., 2019). All in all, several personal factors (e.g. positive attitudes towards romantic relationships, positive views on ageing, higher self-efficacy concerning relationships, social skills) as well as environmental factors (e.g. support from their children and families, opportunities to date, non-ageist environment) would help older individuals establish novel romantic relations following bereavement, divorce, or separation.

Another external event that can challenge marital satisfaction is when the grown-up children leave home permanently to build their own lives (Mitchell & Lovegreen, 2009). This implies a change in the lifestyle and routines of the older couple. Suddenly, the partners have more time to spend together, and there are no children on whom to focus their attention and educational efforts. *The empty nest syndrome* encompasses the reactions that people have when their grown-up children leave home permanently (Mitchell & Lovegreen, 2009). It is assumed that parents experience predominant negative reactions such as a deep feeling of loss, depressions, and identity crisis (Hiedemann et al., 1998). All these negative emotions may lead to marital conflicts and in some cases to divorce in older age. There is however also evidence that the empty nest syndrome may trigger positive feelings such as parents finding more time for themselves, time to pursue their interests and time to spend with each other as a couple (Dennerstein et al., 2002; White & Edwards, 1990). This can constitute an opportunity to reconnect with each other and consequently can improve the quality of the marital relationship. Social changes also affected the occurrence of the empty nest syndrome in the sense that, for example, middle-aged or older mothers tend to go back to work and not be solely concentrated on raising children. This provides them with other roles and resources in addition to being mothers, so that they do not experience intense negative emotions when the children leave home (Mitchell & Lovegreen, 2009). Another phenomenon is that younger people nowadays sometimes delay the transition period (e.g. because of financial reasons, job search, education, relationship issues) to adulthood and postpone leaving their parental home (Mitchell & Lovegreen, 2009). The empty nest syndrome depends on the parental expectations regarding when children should permanently leave home, reasons why they can make this move (e.g. schooling, work, marriage) and whether these reasons are congruent with the existing cultural and social norms (Veevers et al., 1996). These expectations and meanings determine how the parents react to their children leaving the parental home (Settersten, 2003). For instance, one study showed that parents often experience anxiety when their child leaves home and that this is related to the perceived safety of the child or his/her capacity to be self-sufficient (e.g. finding work, dealing with school, costs of living, etc.) (Mitchell & Lovegreen, 2009). This was explained also by referring to an existing culture of fear encouraged by mass media, which leads parents to believe that their children would be exposed to several threats when they "venture into the world" (e.g. health threats, war, terrorism, environmental catastrophes) (Glassner, 2000). Knowledge of the potential emotional reactions to grown-up children leaving home can help professionals working with middle-aged and older adults to discuss

expectations and highlight the positive aspects, such as the potential for personal development and couple satisfaction.

Why Intervene: Love and Development in Midlife and Older Age

Midlife and older age are life stages where several changes take place (e.g. physical changes, cognitive developments, personality changes) and, thus, these may indirectly affect the quality of the love relationship. Individual development and couple development are interconnected. While people develop as individuals, the changes they go through also affect the couple relationship. The other way around, sometimes the couple dynamic shifts because of external factors (e.g. parenthood, job loss, job promotion, caregiver roles, etc.), and this affects the evolution of the individuals within the couple. This means that when we talk about developmental resources connected to the experience of love and romantic relationships, we refer to both individual and couple changes. For instance, emotional development within the couple can mean that individuals become better at emotional regulation (i.e. individual growth), and this reflects on the improvement of the couple communication (i.e. couple growth).

Relationships are dynamic; they adjust as the people who are within the relationships change. In this sense, love can represent a motivating factor for positive change. The latter can occur deliberately when people make a conscious effort to improve their relationships, and this in turn has an impact on their personal development. Change can also happen unconsciously as couples live together; they may change aspects about themselves without even noticing it at a conscious level. For example, people who are in a long-term relationship come to resemble each other in terms of values (e.g. what they think about education, religion, etc.), beliefs (e.g. what they expect from relationships, gender role expectations, etc.), and behaviours (e.g. they become more organized, they change their diet to eat more healthily or the other way around, they start adopting unhealthy eating patterns, they start or give up smoking, etc.). Nevertheless, when people change in different directions, this might lead to a separation or divorce. Even the couple dissolution (e.g. separation, divorce, death, etc.) can stimulate change on a personal level. In the following section, I will discuss the various benefits and drawbacks that romantic couple relationships may have for development.

Marital quality as a concept and its relevance across the lifespan received more attention from scholars during the last years, because of its association with health and well-being (Bookwala, 2012). The concept comprises both positive (e.g. satisfaction) and negative (e.g. disagreements) aspects of marital life (Bookwala, 2016). Several operationalizations of marital satisfaction were proposed to include the joint effects of positive and negative elements (Hsieh & Hawkley, 2018) or a typology of marital quality (Hsieh & Hawkley, 2018; Liu & Upenieks, 2021). The

typology approach applied cut-off points to categorize individuals into groups based on scores referring to levels of support and stress within the couple relationship. Four typologies were suggested (Hsieh & Hawkley, 2018), namely, supportive marriages (i.e. high support, low strain), aversive marriages (i.e. high strain, low support), ambivalent marriages (i.e. both support and strain are present), and indifferent marriages (i.e. low support and low strain). People who have supportive marriages report more health than those who are in aversive marriages (Hsieh & Hawkley, 2018; Windsor & Butterworth, 2010). Couples who are in indifferent marriages tend to feel lonelier and less satisfied than those who are in supportive couples. However, such indifferent couples report more marital satisfaction than those who are in aversive marriages (Hsieh & Hawkley, 2018). Ambivalent relationships are likely to be less predictable and thus inherently stressful (Uchino et al., 2001), stimulating cardiovascular reactivity (Holt-Lunstad et al., 2007; Birmingham et al., 2015) and negatively impacting health. One study showed that both women and men who were in aversive marriages reported to be less happy, while men also reported worse health (Liu & Upenieks, 2021). According to the gender roles perspectives, women are usually the ones who watch over the health of their spouses, and thus men tend to suffer more in terms of their health behaviours and health when they have unsupportive partners (Rook et al., 2011; Liu & Upenieks, 2021). All in all, it is important to take both negative and positive aspects into consideration when exploring marital quality and its effects on health and well-being in older age. In the following section, I will discuss the various types of development and how these may be influenced by happy or unhappy couple relationships.

In terms of *social development*, both midlife and older age pose several challenges for romantic relationships. For middle-aged individuals, there are various financial worries (e.g. having to pay bank credits), having children or grandchildren to raise or needing to perform caregiving duties for older relatives. Apart from this, there is the notorious "midlife crisis" when people start evaluating their achievements and may desire to make drastic changes in their lives. The latter can include changes in their love lives, for instance, divorce or marrying again. For older couples, facing retirement, health problems, and the empty nest syndrome (i.e. grown-up children leaving home to start their own independent lives) are among the most common challenges that can impact the quality of romantic relationships. Nevertheless, for instance, widowhood or finding a new love partner later in life can prove to be an occasion for personal development.

From a lifespan perspective on social development in later life, the concept of *linked lives* (i.e. interdependence in mutual relationships) is relevant (Elder et al., 2003). The idea of linked lives implies that support and strain associated with relationships influence health. Spousal relationships or life partnerships may become more important in later life (Thomas et al., 2017; Hsieh & Hawkley, 2018; Lee & Szinovacz, 2016) as the social networks tend to shrink with age due to several factors such as retirement or grown-up children leaving home (see chapter on social development in this book). The social support that one receives from spouses and life partners represents a resource for health, while stress within the relationship can become an additional stress factor that negatively impacts health (Liu & Upenieks,

2021). In this sense, it is important to note that positive and negative aspects of relationships not only have independent effects but also joint effects on health and well-being (Liu & Upenieks, 2021; Holt-Lunstad & Clarke, 2014; Uchino et al., 2012). Also, sometimes spouses can feel lonely even if they are in a couple, and this can affect their emotional well-being and development. As discussed in the chapter on loneliness (see chapter on loneliness prevention and intervention in this book), this represents a subjective negative evaluation of one's social relations, where the outcome of the appraisal of current qualitative and quantitative social relations does not match with one's relationship standards (e.g. one wants more social relations or relationships that are more meaningful). Emotional loneliness occurs when a person does not have intimate social contacts (e.g. spouses, best friends), while social loneliness is the result of not having a large, engaging social network (e.g. neighbours, work colleagues, etc.) (Weiss, 1973). One study looking at the quality of marriages in older age found that individuals may experience both social and emotional loneliness within the couple (Gierveld et al., 2009). For instance, this occurred when one partner had serious health problems, when spouses received little support from their husbands or wives, where communication was lacking or there were frequent disagreements, or when their current sex lives were perceived as unsatisfactory or inexistent (Gierveld et al., 2009). Emotional loneliness was more present among women who were married for the second time, while social loneliness was reported more by men who had disabled spouses (Gierveld et al., 2009). Having small social networks or infrequent contact with children also contributed to social loneliness in older spouses (Gierveld et al., 2009).

Concerning *emotional development*, it is interesting to ask whether older couples are happier or if they can regulate emotions better to achieve marital satisfaction? Happiness represents an affective component of well-being and is part of successful ageing (Rowe & Kahn, 1997). Research has pointed out the relevance of social relations, such as, for example, marriage, and the role it can play for experiencing happiness (Lucas, 2007; Diener et al., 2006). Most studies have used the individual as the unit of analysis in studies investigating happiness across the life course. However, there are also studies that consider the couple as the unit of analysis, looking at the interconnections in spousal dynamics and mutual influence across time (Hoppmann & Gerstorf, 2009; Strawbridge et al., 2007). Since married couples usually live together and share several aspects of their lives, they also have the potential to influence each other's development (e.g. health behaviour, stress, coping, etc.). One study using 35-year longitudinal data from married couples that took part in the Seattle Longitudinal Study looked at spousal interrelations in happiness trajectories (Hoppmann et al., 2011b). Findings pointed out that spouses reported similar levels of happiness and that their feelings of happiness also changed depending on how their partner felt. Such results lend support to the idea that individual development is shaped by social relationships, such as in this case by marriage (Hoppmann et al., 2011b; Hoppmann & Gerstorf, 2009; Baltes & Carstensen, 1998). Social and emotional developments are interlinked in later life. For example, it was shown that receiving support within the couple can lead to experiencing fewer depressive symptoms in older adults (Thomas et al., 2017). However, older individuals who

were not satisfied with their marriage were shown to experience depression and distress (Kiecolt-Glaser & Newton, 2001; Sandberg & Harper, 2000). Emotional and verbal abuse is one of the reasons mentioned in case of grey divorces since daily emotional abuse within a marriage can determine "toxic" relationships (Crowley, 2019). The negative aspects of a relationship were shown to have stronger impact on people's well-being as compared to the positive ones (Taylor, 1991). For example, unfortunately, people are likely to ruminate more about the negative aspects of relationships than to think about the positive elements (Taylor, 1991). Moreover, it was shown that spouses are inclined to show similar levels of distress in addition to health and cognition concordance (Lee et al., 2012). This phenomenon was explained by referring to emotional contagion (e.g. the mood of a spouse influence that of the other) (Siegel et al., 2004), shared environment and stressors (Tower & Kasl, 1996), and assortative marriage (e.g. people with similar traits are attracted to each other) (Lillard & Panis, 1996). The social interaction theory (Coyne, 1976) can explain how emotional contagion happens within the couple. For instance, depressed individuals tend to seek constant reassurance and negative feedback (e.g. they express doubt concerning the sincerity of the provided reassurance). While spouses or partners tend to be supportive in the beginning, with time they may lose patience and provide negative feedback, which in turn can validate the negative expectations of their depressed partner. Over time, the spouse who was not depressed may develop depressive symptoms. Depressed individuals can thus spread their depression to their spouses or partners through emotional contagion (Hatfield et al., 1993). Nevertheless, emotional regulation as a developmental asset and building positive strengths (e.g. positive reframing, hopefulness, optimism) can help in dealing with negative emotions (i.e. one's own and that of the partner) and contribute to foster emotional development within the couple.

Concerning *physical development* in older age, health-related changes were found to influence the quality of a couple's relationship (Bookwala, 2014; Burton et al., 2003). Being in a happy romantic relationship can positively influence *physical development*. There is a whole body of evidence concerning the health benefits of being married in midlife and older age. For example, being married was linked to better health and well-being (Liu & Waite, 2014; Thomas et al., 2017; Waite & Gallagher, 2000; Pienta et al., 2000; Zhang & Hayward, 2006), especially for men (Bookwala, 2012). Of course, the quality of the marriage relationship is important. Being happily married is associated with better health in midlife and older age (Bookwala, 2005; Liu & Waite, 2014; Thomas et al., 2017) and represents a buffer when facing stressors (Bookwala, 2011). In contrast, marriage dissatisfaction in older couples was associated with poor general health, especially cardiovascular problems (Carr et al., 2014; Liu & Waite, 2014; Umberson et al., 2006; Kiecolt-Glaser & Newton, 2001, Levenson et al., 1993). Also, people who have an unhappy marriage report worse health compared to divorced individuals (Williams, 2003). Studies point out the existence of a cumulative effect of marital strain on health over time (Umberson et al., 2006). The immunological impairment increases with age and stress experienced within the marriage can stimulate the ageing of the immune system (Keicolt-Glaser & Newton, 2001). Depression and health behaviours also

explain how marital satisfaction influences individual health. Partners involved in intimate relationships such as marriage also share health trajectories and tend to have convergent emotions and well-being (Hoppmann et al., 2011a; Strawbridge et al., 2011; Bookwala, 2014). This is explained, for instance, through the mutual influence on health behaviours and the way the partners express emotions within the couple (Hoppmann et al., 2011b). Solving marital conflicts and fostering happy romantic relationships can help improve the health of middle-aged and older individuals and promote their physical development.

Cognition remains very important for health and well-being as people age (Bookwala, 2016). In terms of *cognitive development*, it was shown that life partners can help and support each other to improve their cognitive performance (Strough & Margrett, 2002). Spouses or intimate partners can play a relevant role in collaborative cognition by enhancing performance on everyday cognitive tasks (Bookwala, 2016). Cognitive concordance happens in similar ways to the emotional one within older couples. For instance, cognitive concordance can be explained through cognitive contagion (e.g. the beliefs and cognitions of one spouse have an impact on those of the other spouse) (Dufouil & Alpérovitch, 2000), through exposure to a shared environment with similar cognitive stimulation (Gerstorf et al., 2009), and through assortative marriage (e.g. those with similar cognitive capabilities tend to marry each other) (Siegel et al., 2004). The social interaction theory (Coyne, 1976) explains cognitive concordance in couples through mutual cognitive stimulation. For instance, some couples coordinate their memories (i.e. shared remembering) to facilitate recall and organization (e.g. share responsibilities, cue each other to remember things), and this leads to better performance on recall tests (Harris et al., 2011). In contrast, the absence of cognitive incentives (e.g. if a spouse has dementia) can lead to lack of intellectual stimulation and cognitive impairment in the other spouse.

Emotion and cognition are often studied together because they are frequently linked (e.g. cognitive processing of a situation determines a specific emotion, emotions are involved in the cognitive processing of information). Especially in case of older adults, emotional distress and cognitive loss are connected (Hendrie et al., 2006). For instance, studies show that negative emotional experiences within a couple are more likely to be remembered than positive ones and thus have a stronger impact on people's health (Lee & Szinovacz, 2016). This may also encourage a negative cognitive bias when recalling or processing information and impact cognitive development. Concentration difficulties are a symptom of emotional distress, and these have a negative impact on the development of the cognitive reserve (Steffens & Potter, 2008). Depressive symptoms take up several cognitive resources and therefore reduce cognitive performance in older individuals (Gerstorf et al., 2009). Negative emotions also have an influence on the capacity of the immune system, and this may have damaging long-term effects on the brain and cognitive functioning (Kiekolt-Glaser et al., 2002). One study looked specifically at how emotional distress and cognitive impairment are associated in case of couple relations (Lee et al., 2012). Findings pointed out that emotional distress and cognitive impairment of a spouse impact on the other spouse, while emotional distress

contributed to cognitive impairment for wives but not for husbands (Lee et al., 2012). Gender difference can also play a role in how cognitive functioning impacts health and well-being within couples. For example, one study showed that worse cognitive functioning in husbands was associated with poorer health and well-being among their wives, while the wives' lower cognitive functioning did not seem to have effects on their husbands (Strawbridge et al., 2009). The *communication theory* assumes that because communication is crucial in intimate relationships, when one partner displays diminished cognitive performance, this impairs communication and becomes a significant stressor within the relationship. Wives tend to place greater importance on spousal relationships (Acitelli, 2002) and often report being less satisfied with couple communication compared to their husbands (Greeff, 2000). Thus, based on the assumptions of communication theory, it would be expected that wives are more affected by the cognitive decline of their spouses (Strawbridge et al., 2009). Also, studies suggest that the negative impact of caregiving for a spouse is higher for women (Argimon et al., 2004).

Regarding *personality development*, studies point out that people who stay together in enduring relationships do also have an influence on each other's personality (Grob, 2016; O'Rourke et al., 2011; Deal et al., 2005). Individual personality development is intertwined within intimate dyadic relations (Grob, 2016). People are likely to marry persons who resemble them in terms of personality features (Robins et al., 2000), and there is also evidence that spouses tend to become more alike over time (Caspi et al., 1992). Personality evolves depending on a person's life's experiences (Roberts et al., 2003), and couples are likely to share several experiences. Marital satisfaction also depends on life events and contexts (Gorchoff et al., 2008). Changes in the life context can trigger personality changes and therefore affect the co-evolving of the partners' personalities within the couple as well as relationship satisfaction (Grob, 2016). Understanding dyadic personality structures and their link to marital satisfaction can differentiate the couples who are at risk of marital stress (Wang et al., 2020). One study identified six types of couple dyads in terms of personality, namely, two opposite types (e.g. positive wife-negative husband, negative wife-positive husband), similar profiles (e.g. similarly positive or similarly negative), and extreme profiles (e.g. extremely negative wife and husband) (Wang et al., 2020). Positivity was defined in terms of the Big Five personality factor model (see chapter on personality development in this book), that is, being low on neuroticism and high on openness, conscientiousness, extroversion, and agreeableness. The best marital satisfaction was found in couples who were similarly positive (Wang et al., 2020). Individual personality traits as well as compatibility between the spouses' personalities continue to shape the evaluation of the couple relationship in older age (Wang et al., 2018; van Schleppingen et al., 2019). The personalities of the partners outline how they usually interact and how they solve everyday problems, cope with stress and thus have an impact on several outcomes such as heath, well-being, and marital satisfaction altogether (Wang et al., 2020). According to the social role theory, people are socialized to hold different gender

role beliefs (Eagly & Wood, 2012), and these play an important part in the evaluation of roles within the couple. For example, men are expected to be more agentic (e.g. assertive, dominant), while women are encouraged to be more agreeable (e.g. concerned with others, emotionally expressive) and value couple relationships (Eagly & Wood, 2012). Thus, men and women may value different personality types in their partners. Research on older couples and personality showed that men valued agreeableness in their wives (Wang et al., 2018) and women perceived the husbands' extraversion level as a problem (Iveniuk et al., 2014). Personality traits and their level of similarity or how they complete each other within the couple can influence marital satisfaction. For example, high intra-couple levels of extraversion predict better marital satisfaction, while between-spouses similarity in openness to experience was perceived as important by men and between-spouse level of agreeableness was relevant for marital satisfaction in women (O'Rourke et al., 2011). Neuroticism was not associated with marital satisfaction (O'Rourke et al., 2011), and other findings showed this trait to be associated with marital discord (Gattis et al., 2004; McNulty, 2008). One study focusing on marital conflict showed that wives reported more disagreements in the relationship when the husbands were high on neuroticism and extraversion and low on positivity (Iveniuk et al., 2014). Positive personality traits (e.g. openness to new experiences, agreeableness, conscientiousness) are usually linked to higher marital satisfaction (Heller et al., 2004; Gattis et al., 2004; Malouff et al., 2010). Optimism was reported to be especially beneficial for relationships, since optimistic persons may perceive demanding events as less stressful and also recover more rapidly after stressful experiences (Oh et al., 2019). According to the *social control theory* (Lewis & Butterfield, 2007), optimistic people may promote better cognitive functioning in their partner because they maintain an environment of healthy norms via informal social control (Oh et al., 2019). Optimistic individuals encourage health behaviours in their partners, such as they promote the idea that physical activity is valuable (Boehm et al., 2018). Optimists tend to use social support more often as well as active coping strategies (Andersson, 2012; Assad et al., 2007). Among older couples, optimism was associated with better cognitive functioning (Oh et al., 2019). Therefore, it was proposed that optimism at the individual as well as couple level could be used as a potential objective for interventions to enhance cognitive functioning in older age (Oh et al., 2019). Optimism represents both a positive strength (i.e. from a positive psychology viewpoint) and a developmental asset (i.e. personality development). Encouraging optimism in individuals and within the couple interactions may enhance relationship satisfaction as well as foster development in midlife and older age. In the following section, I will explore how positive psychology principles and developmental assets can be used to foster fulfilling relationships in midlife and older age as well as stimulate personal growth within the couple.

How to Intervene: Fostering Fulfilled Romantic Relationships in Midlife and Older Age

As the segment of the older population is on the rise in several countries, also the presence of middle-aged and older couples in therapy has become more frequent (Curtis & Dixon, 2005). Nevertheless, older couples still face barriers when accessing therapy, such as believing "they are too old to change", feeling "trapped in their routines" or not being able to clearly verbalize their marital issues. Statistics point out that the older the couple is, the less likely it is that they will attend therapy (Boudin & Saleh, 2021). Among the reasons cited for this are that older people state that they know each other too well, have been married for a long time and believe they can figure things out by themselves (Boudin & Saleh, 2021). The good news is that once in therapy, most middle-aged and older couples usually take it as a serious time and energy investment, have clearly defined goals and report better satisfaction with the outcomes (Ellin, 2013). Research identified two types of older couples who usually seek therapy, namely, those who want to solve a conflict or crisis and those who encounter caregiving issues (Qualls, 1993). Findings from a qualitative study suggest that 60% of older couples seeking therapy are dealing with issues concerning leisure activities, intimacy, and health (Henry et al., 2005). Understanding the type and frequency of problems that older couples face can help validate their experiences in therapy and improve the therapeutic relationship (Henry et al., 2005). In the section about experiences of love in older age, I have summarized some of the main challenges that couples face in older age. As stated, these issues can be reinterpreted as a possibility for individual growth and couple harmony. From a positive psychology perspective, fostering individual as well as couple development represents aims for couple counselling or therapy.

Couple therapy has received more attention during the last decades (Gurman et al., 2015). Nowadays more couples get to grow old together or, on the contrary, live their last years of life being single (e.g. after the death of a partner, divorce). As discussed above, love and romantic relationships have many positive consequences for the health, well-being, and development of older people. Therefore, it makes sense to design interventions to optimize older couples or to help middle-aged and older people to form new romantic relationships. Nevertheless, usually interventions for couples concentrate on the dysfunctions and problems and how to solve them and less on how to raise the developmental potential of the individuals in the couple or well-being within the couple (Antoine et al., 2020; Bolier et al., 2013; Kauffmann & Silberman, 2009). As mentioned in the sections on experience of romantic love and link between relations and development, there is a large body of evidence on how marital dissatisfaction can affect people's health, personal growth, and well-being (Bookwala, 2016; Iveniuk et al., 2014; Lee et al., 2012; Hoppmann et al., 2011b; de Jong Gierveld et al., 2009; Umberson et al., 2006) as well as what problems can contribute to unhappiness within the marriage (Henry et al., 2005; Crowley, 2019; Lebow et al., 2012; O'Rourke et al., 2011). Thus, it comes as no surprise that several couple interventions targeted marriage unhappiness, negative

communication patterns within the couple or relationship distress (Bodenmann et al., 2014; Lebow et al., 2012; Schmidt et al., 2016; Baucom et al., 2015). Several therapeutic traditions constituted the frame for these couple interventions such as imago couple therapy (Schmidt et al., 2016), behavioural couple therapy (Baucom et al., 2015), integrative behavioural couple therapy (Christensen & Doss, 2017) and emotion-focused therapy (Johnson, 2004).

Nevertheless, older couples could benefit from a shift in perspective and a focus on well-being rather than the reduction of distress (Antoine et al., 2020). Moreover, marriage counselling or couple counselling is not just for couples who experience a crisis (e.g. caregiving issues, mental health issues, dementia, divorce, etc.) but also for those who want to improve their relationship or who face stressful life transitions (e.g. retirement, becoming grandparents, etc.). This may be especially relevant for older couples who do not experience high concerns and problems within the couple but just want to improve their marital satisfaction or conjugal functioning and adjustment to the challenges of older age.

Subjective well-being, defined as a combination of high positive emotions (i.e. emotional component) and life satisfaction (i.e. cognitive component), is associated with development across all domains (e.g. emotional, social, cognitive, physical, personality) in older age (Fredrickson, 2013; Hilpert et al., 2016; Steptoe et al., 2009; Lyubomirsky et al., 2005). According to the *broaden and built theory* (Fredrickson, 2001), positive emotions foster development because they stimulate curiosity, creativity, kindness, and sociability. This results in building up a resource base (e.g. social connections, social support, self-esteem, self-efficacy, sense of meaning, optimism, etc.) that can nurture positive experiences and emotions including relationship satisfaction (Fredrickson, 2013). As noted above, developmental assets and positive strengths such as optimism stimulate development at both individual and couple levels (Oh et al., 2019). Individuals who experience positive emotions more often are more likely to report satisfying social relations, have committed romantic relationships and possess more social and conflict resolution skills (Hilpert et al., 2016; Lyubomirsky et al., 2005). Therefore, inspired by positive psychology and developmental theory, one can promote positive strengths and developmental assets to build the necessary toolbox and provide resources for older couples to improve their relationship and experience growth within the pair.

The quality of the romantic relationship was shown to be significant for individual happiness (Hilpert et al., 2016). From a positive psychology perspective, the goal of couple counselling would be to increase positive strengths among individuals with the aim to promote well-being and an elevated quality of the relationship. To promote a high quality of romantic relationships as an intervention aim, it is first important to define what this means. It was suggested that high conjugal quality entails satisfaction with the relation, positive attitudes towards the partner and few negative or hostile actions towards the partner (Robles et al., 2014). Concerning how to ensure high relationship quality, one applicable concept is the *perceived partner responsiveness*, namely, the feeling that one is understood, validated, and cared for by their partner (Kiecolt Glaser & Wilson, 2017). Several developmental

assets may be helpful to promote partner responsiveness, such as good communication skills, emotional regulation, cognitive flexibility, and optimism.

Positive psychology interventions (PPI) were defined as purposeful, empirically derived activities that aim to raise positive emotions and support the use of specific actions and cognitions that facilitate growth (Parks & Biswas-Diener, 2014). In case of romantic relationships, happiness becomes a dyadic quest (Hilpert et al., 2016) and, thus, for couple counselling, one would design interventions that target both the couple and the individuals who form it. The effectiveness of PPI is assessed by looking at the level of well-being, life satisfaction, positive emotions, sense of meaning, engagement within the individuals (Lambert D'raven & Pasha-Zaidi, 2014; Hart & Sasso, 2011; Joseph & Wood, 2010) and in case of couples the quality of the relationship (Robles et al., 2014). Cultivating strengths and well-being with a dyadic approach can help to effectively address daily conflicts and enhance relationship quality and stability (Bradford et al., 2016).

Several aims can be formulated from a positive psychology and developmental perspective to foster high quality of romantic relationships in older age. First, one can promote different positive strengths (e.g. gratitude, optimism, relationship self-efficacy, forgiveness) and developmental resources (e.g. social abilities, cognitive skills, emotional regulation competence, physical health, positive personality traits such as openness to new experiences or agreeableness) at the individual level. Second, one can focus on enhancing the quality of the relationship by promoting specific activities that can be performed by the couple to boost their couple skills (e.g. increase partner responsiveness, bolster positive attitudes towards the partner, teach conflict resolution skills, teach active listening, practise assertive communication and positive emotion sharing).

In what concerns the promotion of individual positive strengths, there are studies that tested the effectiveness of gratitude interventions for enhancing couple happiness (Algoe & Zhaoyang, 2016). Expressing gratitude within the couple helped to foster positive emotions at individual level as well as increase the perceived partner responsiveness (Algoe & Zhaoyang, 2016). According to the *find-remind-and-bind theory*, if one partner experiences gratitude within the couple, this can boost the upward spiral for each of the partners individually (i.e. each partner will experience more happiness) and stimulate relationship growth (Algoe & Zhaoyang, 2016).

Concerning the second objective of enhancing the relationship quality, one intervention focused on increasing the committed relationship excitement (Coulter & Malouff, 2013). This was done by engaging in common pleasant activities, practised for 90 min a week (Coulter & Malouff, 2013). Findings showed that participants reported higher levels of positive emotions and relationship satisfaction (Coulter & Malouff, 2013). Another intervention was based on the principles of social sharing of positive experiences and focused on the training of active-constructive responses (e.g. eager and supportive reactions to the partners' good news) (Woods et al., 2015). Results showed that the intervention improved well-being and relationship satisfaction (Woods et al., 2015).

Some authors argue that multicomponent interventions are more effective for couples because they provide the opportunity for participants to find activities that

are consistent with their own goals and values (Antoine et al., 2020). According to the self-concordance motivation model (Sheldon & Lyubomirksy, 2006) and person-activity fit model (Lyubomirsky & Layous, 2013), multicomponent interventions give participants a choice in what concerns the activities they want to try out and abilities they wish to learn and practise. For example, a multicomponent programme designed by Antoine et al. (2020) followed Seligman's model of intervention (Seligman, 2012). This identifies five components for a well-being intervention: cultivating positive emotions, encouraging engagement in life (e.g. working towards one's goals), enhancing a sense of meaning, encouraging accomplishments (e.g. to achieve something for its own sake), and fostering positive relations. The proposed intervention aimed to prevent problems in the relationship by cultivating resources (Bradford et al., 2016; Atkinson, 2013). Specifically, it targeted an increase in individual satisfaction, shared moments, kindness, gratitude, active and constructive communication, identification and use of the partners' and couples' strengths (Seligman, 2012; Fincham & Beach, 2010). The programme included 4 weeks of mutual activities. For example, the first week was dedicated to activities such as acknowledging and sharing positive emotions with a partner (Seligman et al., 2005), creating a list of positive moments one wishes to share with the partner, formulating a plan on how to make one or more of these positive moments happen, learning to respond constructively to a partners' bad and good news (Kauffman & Silberman, 2009), writing a gratitude letter to one's partner and afterwards discussing the letter with the partner, and practising a 10-min mindfulness meditation exercise (Atkinson, 2013). The second week included identification and realization of intentional activities to cultivate happiness, performing enjoyable activities within the couple (e.g. identify relevant actions together, choose, and implement), nurture the relationship by writing its positive story and then share it with the partner, address any potential resentment and communicate it in a constructive manner to the partner, note the positive moments during the day and savour them, and practise 10 min of mindfulness meditation. The third week comprised activities such as cultivating tenderness within the couple, identifying the partner's strengths, using one's own character strengths (Kauffman & Silberman, 2009; Seligman et al., 2005), practising mindful breathing during daily activities, drawing a couples' current happiness pie chart (e.g. represent the life domains that are relevant for the couples' happiness, the proportion represented in the pie chart corresponds to the time and energy allocated to each domain), drawing the couples' desired happiness pie chart, and planning to implement changes to reach the desired happiness level together. The fourth week included activities such as interplaying with the partners' differences, recognizing and cultivating the couple strengths, playing a humorous game of the couples' representation through metaphors, selecting and sharing with one's partner five significant objects that reflect one's thoughts for future possibilities, and taking part in a 10-min mindfulness meditation exercise (Antoine et al., 2020). In order to test the intervention, several measures were used, such as the *emotional valence measure* (Diener et al. (1995), Antoine et al. (2007), 23 items representing 23 different emotions, responses indicate on a seven-point Likert scale the frequency of experiencing different emotions from 1 "never" to 7 "several times a day"), the satisfaction with

life scale (Diener et al. (1985); 5 items, evaluating on a seven-point Likert scale the overall satisfaction with life with 1 "strongly disagree" to 7 "strongly agree"), the *dyadic adjustment scale* (DAS-16, Antoine et al., 2008), and the *communication patterns questionnaire* (Noller & White, 1990). The DAS-16 assesses the degree of agreement in a couple, and the quality of the dyadic interactions and answers are rated on a six-point Likert scale. Namely, the first items asses the degree of partner agreement or disagreement for several domains. Next, the partners are asked to state to what extent the items match their current experience (from never to always). The last items ask respondents to share their degree of happiness with the relationship (extremely happy to extremely unhappy). The communication patterns questionnaire includes 35 items, measured on a nine-point Likert scale ranging from "not at all" to "a lot". The items include questions about coercion (e.g. threat, blame, physical, or verbal aggression), mutuality (e.g. lack of avoidance, reciprocal discussion, understanding), destructive process (e.g. demand-withdrawal, criticize-defend, pressure-resist), and post-conflict distress (e.g. guilt, hurt, detachment from the situation). Results from this pilot study of a short multicomponent intervention suggest that including dyadic activities into the daily routines of couples could improve positive emotions and eventually enhance dyadic functioning (Antoine et al., 2020). The authors caution that sometimes even positive changes (e.g. improvement of communication skills of one partner, an increase in tenderness within the couple, etc.) can destabilize the existing balance of the dyad and require readjustments (Antoine et al., 2020). Future studies of intervention effectiveness should not focus just on the effects at individual level but also on the couple (Robles et al., 2014) or how the partners influence each other within the couple (Kiecolt-Glaser & Wilson, 2017). Moreover, there is a need to study marital counselling in case of LGBTQ+ ageing couples. For instance, one study concerning the LGBTQ+ older individuals' needs during the Covid-19 pandemic pointed out the difficulties experienced during lockdowns as well as the adaptability and strengths displayed by the members of this group (Hafford-Letchfield et al., 2021). For example, participants who were in a couple reported that they enjoyed the lockdown period because they felt secure and enjoyed the time spent with their partner without the pressures of a stigmatizing social environment (Hafford-Letchfield et al., 2021). In general, more research is needed concerning marital satisfaction within LGBTQ+ couples and applying positive psychology interventions to improve it. Nevertheless, this represents a whole research and practice area and would make the subject of a specific book dedicated to LGBTQ+ ageing couples' issues.

Conclusions

Love represents an important strength in the lives of middle-aged and older individuals (Freund & Riediger, 2003). In addition, one can say that individuals develop within the couple, and in turn how the couple evolves across time affects the personal development of the people involved in the couple relationship. However,

romantic relationships can be both beneficial and detrimental to development depending on the couple dynamics. Studies pointed out that older individuals who are unhappy in their marriages or relations have worse health, diminished cognitive functioning, feel lonelier, or become more neurotic or depressive with age (Kiecolt-Glaser & Newton, 2001; Gierveld et al., 2009; Birmingham et al., 2015; Liu & Upenieks, 2021). In contrast, people who are happy in their romantic relationships can thrive as human beings, they can be healthier, more cognitively fit, develop more positivity in terms of personality (e.g. fortify features such as openness to new experiences or agreeableness), and feel they receive social support (Hsieh & Hawkley, 2018; Hoppmann et al., 2011b; Liu & Waite, 2014; Thomas et al., 2017).

Unfortunately, ageing brings with itself many challenges for couples such as death of a spouse or friends, bereavement, a grey divorce, grown-up children leaving home, illness, retirement, and grandparenthood. All these issues can have either a positive or negative impact on marital satisfaction and individual well-being. In general, there are more studies looking at what does not work (e.g. marital dissatisfaction, divorce) as what works regarding married life in older age (e.g. factors that influence relationship quality and marital satisfaction). This shows a focus on problems to solve, rather than on the skills, behaviours, and beliefs one would need in order to improve the romantic relationship quality. From a positive psychology perspective, it is important to note that all the challenges that older couples face (e.g. illness, bereavement, grown-up children leaving home, grandparenthood, retirement, etc.) entail a potential for individual growth and relationship satisfaction. A *positive psychology approach* shifts the perspective from focusing on marital dissatisfaction and conflict on marital satisfaction and individual development. Identifying individual and couple strengths as well as developmental assets can help foster individual growth and relationship improvement. In accordance with the *broaden and built theory* (Fredrickson, 2001), positive emotions promote development because they stimulate curiosity, creativity, kindness, and sociability. This results in building up a resource base (e.g. social connections, social support, self-esteem, self-efficacy, sense of meaning, optimism, etc.) that can trigger positive experiences and emotions including relationship satisfaction (Fredrickson, 2013). As noted above, developmental assets and positive strengths, such as optimism, stimulate development at both individual and couple levels (Oh et al., 2019). Thus, from a positive psychology viewpoint, marriage counselling for older adults can foster individual strengths (e.g. optimism, gratitude, self-esteem, self-efficacy) that stimulate positive emotions and enhance relationship satisfaction. From a developmental perspective, boosting various developmental assets such as optimism or openness to new experiences (i.e. personality development), cognitive flexibility (i.e. cognitive development), emotional regulation competences (i.e. emotional regulation), health behaviour (i.e. physical development), or communication skills (i.e. social development) can build a resource base for middle-aged and older couples to use in order to thrive even when facing challenges connected to ageing.

Reflection Questions

1. Reflect on your romantic relationship(s); which of the components from the theories of love are (were) present?
2. What are your individual strengths that you can use and develop in your romantic relationship?
3. If you think about your parents, how did they react to your leaving the parental home (e.g. to study, to travel, to get married, etc.)? Did they display any symptoms of the empty nest syndrome? If yes, how did they deal with these?
4. How do romantic relationships change in midlife or older age? Name three factors that can play a role.
5. Explain the relationship between love relationships and development. Illustrate it with three examples.
6. Formulate two objectives for marriage counselling in case of older couples and name three strategies to achieve each of these aims.

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Chapter 12
Sexuality and Development: Towards a Fulfilling Sexuality in Midlife and Older Age

Introduction

Imagine Tom, a man in his 70s who goes to a regular check-up concerning his cardiovascular and blood pressure problems and complains to his general practitioner (GP) that he is not as intimate with his wife as he used to be. The GP dismisses this complaint and does not address the topic of intimacy and sexuality. Instead, he tells Tom that this happens in long-term relationships, and it is "to be expected" at his age. Linda, a woman in her 50s goes to her gynaecologist and would like to address the topic of post-menopausal symptoms and her increased interest in sex. However, her gynaecologist dismisses these topics and diverts the conversation to lecture Linda about preventive check-ups for cervical cancer. Unfortunately, such situations occur in practice, because health professionals sometimes hold stereotypical beliefs that older individuals, especially older women, are asexual (Syme, 2014). Other health professionals declare that they feel they lack the knowledge or are embarrassed to address such topics during their consultation with older patients (Hinchliff & Gott, 2011; Syme, 2014). Every so often sexuality is regarded as a taboo topic when it comes to midlife and especially older age. Since older people live longer and are on average healthier compared to previous generations, they also continue to engage in intimate relationships (Lindau & Gavrilova, 2010). Earlier surveys pointed out that older individuals seem to have lost interest in sex (Helgason et al., 1996; Buono et al., 1998). Nevertheless, sexuality and sexual expression represent relevant components of well-being and quality of life (De Lamater, 2012; Robinson & Molzahn, 2007) as well as successful ageing (Marshall, 2011) and fulfilled relationships (Fisher, 2010). Furthermore, recent qualitative studies have given a voice to older individuals to talk about their sexuality, and findings show that the elderly still consider sex as an important part of their lives (Gott & Hinchliff, 2003). Also, in a survey study, 67% of the participating older men and 50% of the ageing women stated that sex is crucial for happy relationships (Fisher, 2010). In addition, 85% of

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the older men and 61% of the older women said that sex constituted a component of quality of life (Fisher, 2010). Considering its importance in the lives of older individuals, it becomes significant to examine the topic of sexuality in relation to development in midlife and older age.

Sexual health and the expression of sexuality are important at any life stage and are relevant also for adults aged 65 and over (De Lamater, 2012). However, specifically the older individuals' sexuality is often overlooked because of negative ageing stereotypes such as "older people are undesirable" or "older people are not interested in sex anymore". Negative ageing stereotypes predominate in connection to sexuality despite older people becoming more liberal where sexual activity in old age is concerned (Syme, 2014). Internalizing negative ageing stereotypes frequently leads to older people being ashamed of their bodies and their sexuality and not talking about it. This may explain why some studies show sexual activity decreases in older age (Araujo et al., 2004; Fileborn et al., 2015a). Underreporting of sexual activity in older age may also be due to social norms that inhibit sexual expression among older people (Fileborn et al., 2015a, b). Nevertheless, irrespective of their interest in sexuality, it is true that there are older adults who are less engaged in sexual activities. Among the cited reasons are health problems, emotional issues, boredom within the couple, and widowhood (DeLamater & Sill, 2005). Sexuality in older age depends on physical constraints but also on social norms that regulate it within a certain context and influence attitudes towards sexual activity among older adults (Oppenheimer, 2002). Thus, there are social, emotional, cognitive, personality, and physical factors that impact on the expression and experience of sexuality in older age (World Association of Sexual Health, 2014; World Health Organization (WHO), 2006).

Similar to other developmental domains (e.g. cognitive capacities, personality), there are changes that are happening on several levels in what concerns the development of sexuality in midlife and older age. Physical changes (see also chapter on physical development, part II of this book) constitute the most obvious factors that can influence sexuality, but they provide only a necessary but not a sufficient condition for optimal sexual functioning (DeLamater & Sill, 2005). Sexuality and especially a fulfilled sex life in midlife and especially in older age entail psychological (e.g. beliefs about sex and intimacy in late life, beliefs about not having time for sexual expression when one is part of the middle-aged group and has parental responsibilities as well as care duties for one's ageing parents) and social aspects (e.g. stereotypes about older adults and their attractivity) that may be more relevant than physical ones. Therefore, it is important to examine what middle-aged and older people themselves think about sexuality and what are the barriers and facilitators for experiencing a happy sex life in older age. This knowledge can serve counsellors and therapists who work with older couples and inform health promotion campaigns to include sexuality as a component of active ageing.

In this chapter, I will discuss the characteristics of sexuality in midlife and older age and explore the meaning of a fulfilled sexuality in midlife or older age and the factors that play a role to achieve it from a positive psychology viewpoint. Also, I will look at links between sexuality and physical, cognitive, emotional, social, and

personality development to illustrate how a healthy sexuality can contribute to development in midlife and older age. Finally, I will examine how positive psychology principles and developmental assets can be employed to promote a fulfilled sexuality among middle-aged and older adults.

Explaining Sexuality in Midlife and Older Age: Change and Continuity

Sexuality represents a complex and multidimensional phenomenon that includes biological, psychological, and social aspects (Simpson et al., 2017). Thus, it should come as no surprise that personal development in different areas is intertwined with a healthy sexuality. According to the World Health Organization (WHO, 2006), sexuality includes a series of behaviours and fantasies, desires, attitudes, beliefs, practices, and roles that are perceived as being sexual. Just as in younger life stages, sexuality is not reduced to sexual intercourse but involves kissing, touching, flirting, and several acts of physical and emotional intimacy. Changes in sexuality with age are regulated by physical factors (e.g. health, physical ability) but also by social ones (e.g. stereotypes, norms, values, practices). According to the World Association of Sexual Health (2014), sexual health in middle and older age does not refer just to the physical issues that may arise with age but also to emotional or social factors that affect the healthy expression of sexuality. The shift in the paradigm concerning how one thinks about successful ageing has made a happy sexual life an indicator of a good old age (Marshall, 2011). Therefore, a *fulfilled sexuality* from a positive psychology viewpoint comprises more than just the physical dimension of sexual experiences; it also implies positive attitudes, positive emotions, and acts of intimacy across the lifespan including midlife and older age.

Sexual well-being was introduced as a concept to define the subjective emotional and cognitive evaluation of individual perceived quality of a person's sexuality (Santos-Iglesias et al., 2016). Sexual well-being could be used as an outcome in positive psychology interventions to improve sexuality among middle-aged and older adults. However, one needs to consider several components of sexual well-being, namely, not just focus on sexual activity, sexual interest, sexual function, and sexual satisfaction (Rosen & Bachmann, 2008) but concentrate on the experience of intimacy, enactment of physical closeness, and care (Fileborn et al., 2017; Štulhofer et al., 2019). Recent models proposed components for sexual well-being that are more adapted to midlife and older age. For instance, one model postulates that sexual well-being includes sexual desire, importance of sexual activity, bodily attraction, intimacy with partner and emotional satisfaction (von Humboldt et al., 2020). Similarly, other researchers proposed five components of sexual well-being, namely, sexual intimacy, sexual satisfaction, absence of distress concerning sexual function, cuddling frequency, and perceived sexual compatibility (Štulhofer et al., 2018). For instance, sexual well-being among older adults was associated with better health,

increased cognitive performance, lower levels of stress, higher self-esteem, and lower mortality (Brody, 2010; Santos-Iglesias et al., 2016; von Humboldt et al., 2020). Likewise, other researchers developed the concept of *sexual quality of life* (SQol) defined as a subjective perception of quality of sexual aspects of one's life (Forbes et al., 2016). High SQol was linked to better relationship satisfaction, love, commitment, and relation stability across the lifespan (Davison et al., 2009; Lindau & Gavrilova, 2010). In contrast, low SQol is related to depression, relationship distress and instability (Mitchell et al., 2013; Wang et al., 2015). To measure the quality of sexual relation, people are asked to assess all the sexual aspects of their lives at present by using a scale from 0 ("the worst possible situation) to 10 ("the best possible situation") (Forbes et al., 2016).

Despite the benefits of sexual well-being in midlife and older age, several myths concerning sexuality can constitute barriers towards having a fulfilling sexual life (Henry & McNab, 2003). These myths include ideas such as older people do not desire sex, older people cannot make love even if they wanted to, older people are frail and may injure themselves while attempting to have sex, older people are undesirable and unattractive, and it is shameful or perverse to think about older people having sex (Henry & McNab, 2003; Trudel et al., 2000). In the following section, I will present counterarguments to these myths while discussing continuity and change in what concerns sexual activity in midlife and older age.

One of the negative stereotypes about sexuality among middle-aged or older people is that they are asexual, namely, they are not interested in sex or have ceased to have sex altogether. However, studies have shown that this is not the case. Contrary to negative stereotypes, older individuals are interested and continue to have sex (Taylor & Gosney, 2011). Studies pointed out that people continue to have sex well over the age of 70. For instance, a study conducted in Finland showed that among the 70-year-old participants, one-fourth of the men and one-tenth of the women had sex at least once a week (Kontula & Haavio-Mannila, 2009). Also, at the age of 70, two-thirds of the men and half of the women considered sex to be an important part of their relationship (Kontula & Haavio-Mannila, 2009). Another study reported a decline in sexual activity to happen after the age of 75 (Waite et al., 2009). When older people account a decrease in sexual activity or desire, this is often due to their health (i.e. one's own or that of the partner) and not their age (Freeman & Coast, 2014; Gott & Hinchliff, 2003). Unfortunately, stereotypes about lack of sexuality are more often attributed to older women (Fileborn et al., 2015a, b; Bradway & Beard, 2015). When health professionals avoid addressing sexual issues when treating older women, they indirectly strengthen these negative stereotypes concerning older women and sexual activity (Bradway & Beard, 2015).

Another negative stereotype is that older people do not enjoy sex or do not feel sexual desire anymore. Attractiveness is associated with youth, and this can influence the body images of middle-aged and older individuals in a negative way. Qualitative study findings point out that older people reject asexuality in old age and claim sexuality as an important domain in their lives (Hinchliff & Gott, 2008). Furthermore, studies point out that older people engage in a series of sexual behaviours such as masturbation, vaginal intercourse, and foreplay (Waite et al., 2009),

while some older women even report increased sexual desire post-menopause (de Araújo et al., 2013). In contrast to negative stereotypes, qualitative studies show that ageing is associated with growth and satisfying sexual activity because of more relaxed attitudes towards sexuality, greater self-confidence, and freedom from family responsibilities (Gott & Hinchliff, 2003; Kleinplatz et al., 2013). This may be connected also with different attitudes towards sexuality in the baby boomer generation (i.e. people born between 1946 and 1964) who were more at liberty about sexuality in their youth and may have stayed like this in their midlife and older age. Another factor that studies highlight is that middle-aged and older individuals are often forming new couples, namely, changing their sexual partner because of divorce or widowhood. This change is considered to have positive effects on the quality and frequency of the sexual experiences (Koren, 2011; Rowntree, 2014). As they age, people may know better what they want and how to express their sexual desires, be more open to talk about their needs and more willing to experiment (Rowntree, 2015).

Considering the abovementioned findings, it becomes clearer how negative ageing stereotypes can influence sexual activity in midlife and older age. However, since nowadays a fulfilled sexuality has become part of the successful ageing movement (Marshall, 2011), researchers caution that a lot of responsibility is placed on the individual to enact this ideal (Hinchliff & Gott, 2016). For instance, there is a positive stereotype of the "sexy oldie" representing the standard for a fulfilled sexuality in older age (Hinchliff & Gott, 2016; Gott, 2005). Therefore, older people who are single or do not meet this requirement may be blamed for their failure of having a fulfilled sexual life in older age (e.g. they did not take care of their physical or emotional health). Thus sometimes, positive ageing stereotypes can also create barriers for older people who are not physically or cognitively fit, who do not have a partner or who do not feel attractive enough (e.g. they feel they do not look like the "sexy oldie" stereotype). One should be careful to address both the impact of negative and positive ageing stereotypes when designing intervention campaigns or during sexual counselling sessions with middle-aged and older adults.

Gender differences can also play a role in how sexuality is experienced in older age. For example, a study in Finland showed that the frequency of sexual intercourse among older men was predicted by high sexual self-esteem, good health, active sexual history (e.g., having had many sexual partners in the past, having had pleasant sexual encounters), and considering sex important for the relationship. Valuing sexuality as a relevant component of relationships was also important for the frequency of sexual intercourse among women. However, in case of women, aspects such as a healthy sexual partner, high level of sexual desire and satisfaction with their sexual life overall seemed to matter most (Kontula & Haavio-Mannila, 2009). Therefore, sexual desire in older men and women is not influenced by age itself but by several other factors such as good health, good sexual functioning or importance placed on sex, positive sexual self-esteem, and a skilful partner (Kontula & Haavio-Mannila, 2009). Furthermore, sexual activity and desire cannot be reduced to physical aspects. For instance, one study on middle-aged women's sexuality found that relationship factors were more important than hormonal changes for

sexual activity (Dennerstein et al., 2005). Another study on perimenopausal women showed that hormonal changes mattered less for sexuality in comparison with relationship aspects (e.g. quality of the romantic relationship, partners' problems), subjective well-being, and number or severity of menopausal symptoms (Hartmann et al., 2004). All in all, findings point out that sexuality changes happen with age but less so in terms of physiology as compared to changes concerning the emotional experience (Kontula & Haavio-Mannila, 2009).

Even if older people continue to have sex and enjoy it, some aspects do *change* where the experience of sex is concerned. Developmental changes on a *physical level* can influence the sexual experience in older age. At a physical level, hormonal changes and decreases in sensorial capacities over the years can lead to modifications in the sexual experiences of older individuals (DeLamater & Sill, 2005). For instance, in case of older women, the vagina may become shorter and narrower with age, and the vagina walls may become thinner or lose elasticity (Henry & McNab, 2003). Also, natural lubrication of the vagina can become an issue, making penetration painful. Hormonal transitions mean that women have lower levels of oestrogen and testosterone, which in turn may determine a decrease in sexual desire (Zeiss & Kasl-Godley, 2001). However, on a positive note, the ability to experience multiple orgasms does not change with age (Zeiss & Kasl-Godley, 2001). *Physiological changes* for men include testicles getting smaller, and some form of erectile dysfunctions may occur (e.g. the loss of ability to have or to keep an erection, the time between erections getting longer). After the age of 55, less semen is ejaculated during orgasm, but there is also less need to ejaculate to enjoy the sexual act (Henry & McNab, 2003). These problems are not necessarily a typical development in older age and are usually the consequence of another health problem. Pain and chronic illnesses (e.g. diabetes, heart disease, arthritis, prostate problems, etc.) or emotional issues (e.g. depression, anxiety) can also interfere with a satisfying sexual life in late midlife and older age. Sometimes physical changes that are perceived as negative such as erectile dysfunctions in men can also have positive consequences such as increased intimacy or adoption of sexual practices that are not focused on the penis but nevertheless increase satisfaction for the partners involved in the sexual act (Potts et al., 2006; Sandberg, 2013).

Psychological aspects concerning sexuality such as identity, body image, self-esteem, eroticism, and expressions of emotions may also change with age and influence how sexuality is experienced by middle-aged and older adults (Kontula & Haavio-Mannila, 2009). Even in the absence of physiological problems, a negative body image or lack of self-esteem could decrease sexual desire and activity in older age. For instance, diminished sexual interest was associated with loss of femininity, lower self-esteem, and insecurity (Hartmann et al., 2004). For both men and women, diminished interest in sex during youth predicted a reduced interest in sexual activity in older age (Strong et al., 1999). On a more positive note, communication skills regarding sexual needs and desires may improve with age and a desire for emotional intimacy can increase (Willert & Semans, 2000). Furthermore, studies pointed out a shift in focus from sexual acts to emotional intimacy and behaviours such as

cuddling, hugging, and kissing or statements of love among middle-aged and older individuals (De Lamater, 2012; Waite & Das, 2010; Fisher, 2010).

In addition to physical and psychological factors, *social aspects* like lack of a partner or social norms that inhibit the sexual activity of older people seem to play a role, especially in influencing the sexuality of older women (Fileborn et al., 2015a, b). The expression of sexuality in different societies is guided by a series of norms, values, and practices (Lagana & Maciel, 2010). These influence how we think about sex in older age and how attractive we feel. Factors related to the couple can play a role as well. For instance, with time, the partners may pay less attention to each other, and this reflects badly on their sex life. Nevertheless, the decrease in sexual activity does not have to do with the length of the relationship but with how the two partners change within the relationship, namely, how their needs and desires modify with time. External social stressors such as their roles as parents and grandparents, work stress, working after retirement or financial stressors can also interfere with a fulfilled sexual life. Lifelong conflicts within the couple can come to the fore once their children have left home and the partners suddenly must spend time together, just the two of them (see also chapter about love in older age in this book).

A positive change entails the fact that middle-aged and older people report that they associate ageing with self-growth and better quality of sexual relations because they have a more relaxed attitude concerning sexuality and fewer family responsibilities (Kleinplatz et al., 2013; Gott & Hinchliff, 2003). Concerning changes that happen in midlife and older age, as mentioned also above, it was also shown that "second couplehood" (e.g. when middle-aged or older people are widowed, divorced or separated and form a new couple in older age) can have a positive influence on sexuality (Koren, 2011, 2014; Rowntree, 2014). For instance, people reported feeling free with increasing age and novel relationship patterns that resulted in more sexual experimentation and open communication about preferences and desires (Rowntree, 2015).

Because sexuality often represents a taboo topic, studies showed that when problems in this area arise, older individuals are ashamed to seek advice (Baldwin et al., 2003). Also, health professionals may not be prepared to provide help (Taylor & Gosney, 2011), as they might consider other topics more relevant for the well-being of older adults. Thus, changing negative stereotypes about older peoples' sexuality can benefit both targeted service provisions (e.g. tailor it to the needs of older adults) and stimulate the help-seeking behaviours of older individuals. To change negative stereotypes about sexuality in old age, one needs to understand how middle-aged and older individuals themselves perceive their sexuality, namely, what are their beliefs, values, norms, and practices concerning sex in midlife and older age. In the following section, I will examine the experiences of middle-aged and older people with sexuality, the benefits, and drawbacks that they associate with it, as well as their specific beliefs and behaviours concerning sex in midlife and older age.

Giving Older People a Voice: Testimonials Concerning Experiences of Sexuality in Midlife and Older Age

Qualitative studies have given a voice to middle-aged and older adults to express their fears and wishes concerning their sexuality. In the following section, I will present perceptions of sexuality with all its benefits and drawbacks from the perspectives of older women and men. A study on postmenopausal women's sexual desire pointed out that women found negotiating sexual agency very important for their sexuality (Wood et al., 2007). Postmenopausal women needed to negotiate sexual agency with themselves, their sexual partners, and the medical system (Wood et al., 2007). In relation to their partners, they needed to change the idea that the needs of their sexual partners were more important than their own. The internal sexual self refers to their perception of themselves as sexual agents with their own sexual needs. The messages they had internalized during their education regarding the place of sexuality in their lives played an important part in how they thought and acted. The women who took part in the study had been raised in the 1950s and were exposed to mostly negative messages about sexuality, both from the family and the media (e.g. a double standard in what concerns male and female sexual desire and acting upon it). Women also described how the multiple stressors in their lives made them feel there was no time for sex (e.g. financial worries, family problems, health issues, taking care of grandchildren). However, they reported that a romantic setting could make them think and feel they desired sex. In relation to negotiating agency with their partners, women felt they lacked the communication skills to do so. Also, the belief that their desires were not as important often stopped them from speaking out. When there were problems during sexual encounters (e.g. erectile dysfunction), women worried more about their partners' ego than about their own sexual pleasure. For women, the quality of the couple relationship played an important part for sexual satisfaction. Thus, when designing interventions to improve female sexuality in middle and older age, this information should be taken into account. Some women also talked about how menopause symptoms (e.g. the hot flashes, feeling tired) affected their sexual life (Wood et al., 2007). Therefore, women would need information about menopause symptomatology and its connection to sexuality in midlife and older age. Social support in the form of sharing information and experiences with other women who go through the same menopausal changes can also help improve sexuality and well-being among older women. Another factor that came up in the interviews with women was the pressure to conform to a certain beauty ideal that made them feel unattractive in older age and consequently ignore agency in their sexual lives (Wood et al., 2007). Findings from the qualitative study also pointed out that women did not associate sex with fun, relaxation, and pleasure (Wood et al., 2007). This is also a belief that would need to be changed to achieve a fulfilled sexuality in midlife and older age. An important conclusion of this study is that social factors (e.g. attitudes, beliefs about sexuality and what a woman is allowed to think and do) and psychological factors (e.g. body image issues, feeling embarrassed to talk about one's desires) play a more important role than the

menopausal symptomatology in case of middle-aged and older women's sexuality. This represents a further argument that one should include psychological counselling and interventions to stimulate a fulfilling sexuality in older age. Furthermore, especially in traditional societies, women's sexuality is still influenced by cultural social norms such as women needing to adopt a passive (e.g. women do not initiate sexual relations) or subordinate role (e.g. male sexual pleasure comes first) in intimate relations (de Araújo et al., 2013; Lagana & Maciel, 2010; Yun et al., 2014). Similar results were found also in less traditional societies, where women perceived their sexuality in response to male desire (Hinchliff & Gott, 2008). The difference is that women in Western cultures rejected stereotypes about being asexual in older age and acknowledged that sexuality was an important part of their lives (Hinchliff & Gott, 2008). However, older women in Western cultures also admitted to having little control over the understanding and meaning of sexuality (Fileborn et al., 2015a, b) and admitted that they suffer because of ageism and sexism when trying to find a partner in old age (Fileborn et al., 2015a, b). Another study looking at the perspectives of older women who deliberately choose sexual inactivity showed that the reasons included being glad that sex is not a concern for them anymore, being satisfied with one's memories and wanting to have "the right" partner or no partner at all (Gore-Gorszewska, 2021). Such findings are relevant because they show that sometimes older women are not asexual but deliberately choose to discontinue their sexual activity for various reasons. This choice can reflect a manifestation of sexual agency in older age (Gore-Gorszewska, 2021) and thus can also constitute a manifestation of successful ageing.

In case of middle-aged and older women, sexual counselling can address factors such as (1) physiological changes and their effects on sexuality (e.g. menopausal symptoms and how to deal with them), (2) body image issues (e.g. not feeling attractive enough for sex, not knowing one's pleasure areas within the body, etc.), (3) views on ageing and their connections with sexuality (e.g. feeling "too old" for sex as opposed to claiming a positive sexuality as part of growing old), (4) communication skills (e.g. identifying and expressing sexual desires with a partner), (5) self-efficacy concerning sexuality (e.g. being confident that one has the skills and knowledge to achieve sexual pleasure), (6) coping with ageism and sexism, and (7) issues such as time management and stress (e.g. how stress can affect one's sexuality in midlife and older age, how one can find the right time for sexuality in one's busy life, etc.).

Quantitative studies have repeatedly shown that older men seem to express more interest in sexual activity than older women (DeLamater & Koepsel, 2015; Karraker & DeLamater, 2013; Trudel et al., 2014; Waite et al., 2017). This was explained also by the fact that more older women are widows and thus find it more difficult to have a sexual partner in older age. When exploring older men's sexuality with qualitative research methods, Fileborn et al. (2017) found that the sexuality of heterosexual men does not follow the simplistic decline versus success narratives. Heterosexual older men are influenced by social norms of hegemonic masculinity (i.e. dominating male, macho) that imply that they should be sexually active, take initiative and have several partners to prove their virility (Fileborn et al., 2017). However, the

interviewed older men did not reduce sexual activity to penetrative intercourse but rather defined sexuality in terms of intimacy and bonding. When asked whether their sexual practices changed over time, participants talked about the refinement and diversification of sexual practices that came with age and highlighted the importance of learning opportunities across the lifespan and the relevance of physical health. Several participants mentioned how sex was important for them because it was fun and helped to release stress. When talking about sexual pleasure, most participants referred to orgasm and physical pleasure, but also almost all interviewed men placed great importance on mutual pleasure. Moreover, for some participants, sexual pleasure was about bonding and intimacy (Fileborn et al., 2017). These findings show that some middle-aged and older men are similar with middle-aged and older women in what concerns their wishes and desires regarding sexuality. Open communication about sexuality instead of stereotypical expectations may help achieve a fulfilled sexuality within the couple also in older age. Furthermore, similar to research outcomes about women's' sexuality, such findings point out the importance of psychological factors for male sexuality in midlife and older age.

In terms of sexual counselling for older men, one can include (1) information about psychological changes and their impact on sexuality (e.g. information about erectile dysfunctions that may occur and how to deal with these), (2) discussing a broader definition of sexuality focused on intimacy and bonding, (3) challenging negative views on ageing (e.g. the idea that one is too old for sex but also stereotypes pressuring one to be successful and attractive despite older age), (4) examining body image issues (e.g. challenging ideas about erectile dysfunctions representing decline in sexual desire in old age, challenging ideas about loss of attractivity), (5) learning and practicing skills of communication and building emotional intimacy within the couple, (6) increasing sexual self-efficacy (e.g. that one has the knowledge and skills to achieve a fulfilled sexuality in midlife and older age), and (7) discussing time management and stress management (e.g. how stress can affect erectile functions and what solutions are there, how to prioritize a fulfilling sexuality in a busy schedule, etc.).

Studies point out that the number of people who enter midlife or old age as singles for various reasons (e.g. widowhood, never been married, divorced, single by choice, etc.) has increased (Watson & Stelle, 2021). Thus, it is interesting to explore what are their perceptions of dating and how they go about to form new intimate relationships. Since *online dating* has gained in popularity over the last decades, some platforms adapted to include also middle-aged and older individuals as a target population (e.g. mature dating sites). For instance, one study looked at how older adults were described on homepage advertisements of dating sites (Ayalon & Gewirtz-Meydan, 2017). Findings showed that older adults were portrayed either in positive-neutral terms (e.g. older adults being described as knowing what they want, being at the prime of their lives) or negative terms (e.g. references to sugar daddies and hot nannies) and sites promoted either long-term relations, marriage, companionship, or flirting (Ayalon & Gewirtz-Meydan, 2017). Middle-aged and older adults may benefit from using Internet sites since, with ageing, it is difficult to meet someone to date in other settings (e.g. at the workplace, when one is retired, etc.).

Reduced physical mobility or health issues may make the Internet a relevant venue for social contacts in general (Cotten et al., 2013). Thus, it comes as no surprise that an increase in popularity of online dating sites for older adults was reported (Alterovitz & Mendelsohn, 2013). Nevertheless, it is important that such dating sites for older adults advertise information that is adapted to their needs (e.g. what they are looking for in a partner may be different from what younger people desire) (Alterovitz & Mendelsohn, 2013). For example, one study showed that older individuals displayed fears of the future, caregiving issues, and inheritance issues when it came to forming a new romantic partnership (Funk & Kobayashi, 2014). The way that online dating sites for older adults use language to advertise their services is relevant because they generate images of how dating should be in older age and shape dating behaviour (Ayalon & Gewirtz-Meydan, 2017). The downside of such sites is that they may indirectly reinforce negative stereotypes (Levy et al., 2014). Other studies explored the perspectives of the older individuals who used online dating sites (Field, 2018) and self-presentation of older adults on online dating ads (Watson & Stelle, 2021). Older individuals mentioned they felt they could state better what they want from a partner and express their "true self" online (Field, 2018). Also, they expressed interest in relationships and were very selective in choosing their partners, talked about health issues and were willing to travel longer distances for a date as compared to younger people who use dating sites (Field, 2018). A gender difference was visible in the sense that men were interested in youth and attraction when it came to dating, while women were more interested in communication (Field, 2018). The study on self-presentation of older adults on online dating platforms pointed out that the aspects that were mostly exhibited were one's status, being fun-loving and enjoying activities, being kind and compassionate, and being friendly and family-oriented (Watson & Stelle, 2021). Women looked for partners to share activities with and valued honesty as a trait in potential partners, while men searched for attractive women who would provide emotional support (Watson & Stelle, 2021). Although online dating has become increasingly popular among older adults, more research is needed regarding how older individuals themselves perceive the experience of online dating and how this is linked to their sexuality.

Why Intervene: Sexuality and Development

Sexuality represents a relevant field where one can discuss issues of emotional and personality development in addition to physical gains and losses. Sexuality also represents a means to express love and care for another individual. Sexual interest and activity in midlife and older age can even have a therapeutic function for the people involved (Willert & Semans, 2000). Thus, a fulfilled sexuality is linked with well-being and experiencing pleasure in everyday life until old age.

Apart from being considered a component of successful ageing (Marshall, 2011), a fulfilled sexuality is linked with development in different domains. For example, in case of cognitive development, neurogenesis is stimulated by sexual activity (see

cognitive development chapter in thbook). Being cognitively fit in older age can only improve talking about sexuality with one's partner, thinking and expressing needs and desires concerning emotional intimacy. Physical development is clearly connected to sexuality, but as we have seen above, it is only necessary but not sufficient for a fulfilled sexuality. Emotional development (e.g. being capable of emotional intimacy and communication) or personality development (e.g. becoming more open about one's wishes, willing to learn new skills) can also help improve a person's sexual life in midlife and older age. In the following section, I will discuss each developmental domain and how it is connected to sexuality among middle-aged and older people.

Concerning *physical development*, as expected, individuals who are in better health report more interest in sex and satisfying sexual experiences in midlife and older age (Estill et al., 2017). The other way around, fulfilled sexual relations in midlife and older age were linked with longevity and health behaviours (Cohen & Janicki-Deverts, 2009). Being interested in sex and having satisfied sexual relations was associated with health in middle-aged and older adults (Lindau & Gavrilova, 2010). Among the health benefits of sexual activity in older years, cardiovascular health, enhanced relaxation, and reduced pain sensitivity are improved (Brody, 2010; Jannini et al., 2009). Several pathways were described to explain how sexual activity in older age may increase longevity (Beerepoot et al., 2022). First, sexuality and intimacy represent a source of social support in midlife and older age that, in turn, can protect against morbidity and mortality (Beerepoot et al., 2022). Second, sexual satisfaction may act as a buffer against the negative effects of stress on health (Ein-Dor & Hirschberger, 2012) and consequently reduce the mortality risk (Beerepoot et al., 2022). Third, the benefits of intimate relations for health cannot be replaced by those of friendships or other social networks (Liu et al., 2016). The effect of enjoyment of sexual activity in older age on longevity depends also on the perceived importance of sexuality (Beerepoot et al., 2022). Therefore, individuals who perceive sexuality as important in older age but not enjoyable (e.g. they do not have the right partner, they feel pain, they experience sexual dysfunctions, etc.) constitute a specific target group for health interventions to promote a fulfilled sexuality and indirectly stimulate longevity (Beerepoot et al., 2022).

Erection constitutes an important topic for male sexuality in older age as several health issues like cancer or urological problems can cause erectile difficulties in middle-aged and older men (Chapple et al., 2014; Gilbert et al., 2013). Erectile dysfunctions affect self-esteem, intimate relationships, and relations prospects in midlife and older age (Gilbert et al., 2013) and stimulate ideas about loss of masculinity (Low et al., 2006). Nevertheless, how the erectile dysfunctions affect middle-aged and older men and their sexuality depends on how they interpret these. Findings from one study showed that the quality of the relationship as well as individual coping with erectile dysfunctions (e.g. accepting these as part of ageing, actively looking for alternatives for sexual pleasure) influenced how men reacted to this issue (Hinchliff & Gott, 2004). As mentioned also earlier in this chapter, sometimes erectile dysfunctions can have positive consequences, such as an increase in intimacy and seeking alternative sexual practices with one's partner to obtain mutual

sexual pleasure (Sandberg, 2013; Potts et al., 2006). This can improve the quality of the relationship and contribute to the couples' development (e.g. intimacy, communication) as well as enhance individual growth. In case of women, these reported an increase in sexual desire after menopause (de Araújo et al., 2013). However, they reported needing knowledge and experience and sometimes a change in social norms to enact their desires (Lagana & Maciel, 2010). Similar to older persons with cancer, patients with diabetes or those who suffered a myocardial infarct (MI) reported that sexual activity is not part of their daily lives anymore (Abramsohn et al., 2013; Chapple et al., 2014). Nevertheless, for example, some women reported that despite lack of interest in sex, they experienced more pleasure from non-sexual contact (Abramsohn et al., 2013).

Sexually transmitted diseases (STIs) and sexual risk behaviour are not just characteristic for adolescents and young people but occur in older age as well and can affect physical development. Statistics illustrate that STIs among middle-aged and older individuals are on the rise (Lyons et al., 2017; Minichiello et al., 2012). For instance, one study showed that 17% of the new cases of HIV infections were reported among adults older than 50 years old (CDC, 2010). Older adults may not consider safe sexual practices such as condom use, especially older women who do not perceive a risk of pregnancy anymore (Stark, 2007; Haupt, 2010). In case of older men, the use of sexual enhancement medication (e.g. sildenafil, tadalafil) increases sexual function and thus creates more opportunities for sexual action and different sex partners (Heiman et al., 2007; Hillman, 2008). One study conducted in Australia showed that stigma, lack of knowledge and culture of safe sex practices as well as erectile dysfunctions influenced sexual risk behaviour among older individuals (Fileborn et al., 2017). To reduce the occurrence of sexual risk activities in older age, one can apply the information motivation behavioural mode (IMB, Fisher et al., 2002). This postulates that one needs to inform (e.g. that middle-aged and older adults are susceptible to SITs), motivate (e.g. display the benefits of safe sex) and teach skills concerning safe sexual practices (e.g. how to negotiate condom use with partners). Additionally, one can enhance self-efficacy (Bandura, 1986) for specific safe sexual practices among middle-aged and older adults, since many know these, but they do not believe that they can apply them in practice.

Although sexual dysfunctions may be part of age-related changes that can occur in both men (e.g. erectile dysfunctions, premature climax) and women (e.g. problems with lubrication, difficulties in reaching orgasm, painful penetration), these can be addressed in counselling to increase sexual satisfaction and well-being among middle-aged and older adults (Syme, 2014). Stimulating sexual relations and emotional intimacy in older age can improve the health of older couples (Syme, 2014) and, thus, these constitute important aims for health and psychological interventions.

In terms of *cognitive development*, certain specific cognitions play an important role for sexuality in midlife and older age. For instance, the subjective age (i.e. how old a person feels she or he is) and views on ageing were shown to play a part in engagement in sexual activity in midlife and older age (Estill et al., 2017). For example, middle-aged and older people who had negative views on ageing (e.g. old

age is associated with illness and decline) reported less interest in sexual activity and a less satisfying sexual life (Estill et al., 2017). In contrast, individuals who had positive views on ageing (e.g. ageing is associated with flourishing, with feeling good as an ageing person) reported being more interested and satisfied with sexual experiences in old age (Estill et al., 2017). Cognitive functioning can influence sexual decision-making (e.g. sexual consent) in older age (Syme, 2014). In what concerns cognitive functioning, studies show that sexual activity can increase levels of general cognitive functioning among older men (Padoani et al., 2000; Lindau et al., 2007; Wright & Jenks, 2016) or memory function especially in case of older women (Wright & Jenks, 2016). Also, another study found that sexual activity may prevent cognitive decline among older men (Smith et al., 2019a). It is suggested that the link between sexual activity and superior cognitive performance might be explained by changes in neurotransmission such as the enhancing effects of dopamine (Furth et al., 2013) or heightened oxytocin release (Guastella et al., 2010). Another explanation is that sexual activity is good for the circulatory system (Ebrahim et al., 2002) and thus indirectly prevents cognitive decline which is known to be stimulated by circulatory problems (Deary et al., 2009). Nevertheless, the link between cognitive performance and sexual activity in midlife and older age needs to be further explained to gain a better understanding of the causes (Smith et al., 2019a; Wright & Jenks, 2016).

Intimate relationships are an important source of social support in a person's life and continue to be so in older age (Syme, 2014). Thus, the quality of the intimate relations can influence *social development* in midlife and older age. As already stated, social norms and stereotypes play an important part in influencing sexuality in midlife and older age (Lagana & Maciel, 2010; Fileborn et al., 2015a, b). How middle-aged and older individuals deal with these norms can influence their sexuality and consequently their *social development*. Sexual activity in midlife and older age also depends on the availability of a partner (Lagana & Maciel, 2010) or the social skills a person possesses in order to find one. Moreover, having several other social roles (e.g. parent, grandparent, work roles, caregiver) can influence sexual activity in midlife and older age (Fileborn et al., 2015a, b). Having a partner or spouse is an important determinant of sexual interest and activity in older age (De Lamater, 2012). In this sense, there is a gender gap as men are more likely to be in relationships in older age. Explanations for this phenomenon include the fact that more women than men are widowed in older age. Also, on average, women tend to live longer and older men tend to marry younger women (Syme, 2014). Thus, in terms of social development and finding a partner in older age, specific attention needs to be given to older women when designing interventions since they may represent a larger group of older singles.

Sexual expression in midlife and older age influences not only health, cognitive functioning, and the pool of social resources but also well-being and the emotional quality of romantic relationships (Waite & Das, 2010; Syme, 2014). For instance, it was shown that the quality of intimate relationships, amount of received emotional support and a history of abusive relations can influence the sexuality of older women (Lagana & Maciel, 2010). On a more positive note, sexual activity in midlife and

older age was associated with decreased levels of depression, increased self-esteem, and better emotional relationships (Davison et al., 2009; Heiman et al., 2011). In addition, it represents an essential source of well-being (Fisher, 2010; Waite et al., 2009). *Emotional development* implies that middle-aged and older people can improve their romantic relations and know how to negotiate a healthy sexuality as part of these. As stated above, forming a new couple in midlife or older age (e.g. following divorce or death of a partner) can have positive consequences for one's sexuality (Koren, 2011, 2014). Older people report feeling free and more open to explore their sexuality in couples formed in later life stages (Rowntree, 2015). However, finding a new partner still represents a problem for middle-aged and older individuals because of several social obstacles (e.g. ageing or gender stereotypes). For instance, one study showed that women often preferred to stay single because they did not want to lose their independence (Fileborn et al., 2015a, b). Also, women complained that older men often preferred younger women and that online dating was also ageist as far as older women are concerned (Fileborn et al., 2015a, b). Regarding the disadvantages that women experience, these often take on the caregiver role for their partners. This may enhance emotional intimacy but diminishes sexual desire and activity (Drummond et al., 2013). Nevertheless, other studies reported that emotional intimacy also suffered because of the caregiving roles (Harris et al., 2011). As mentioned above, physical health impacts sexual desire and activity. For instance, in case of men with cancer, the illness and treatment can result in erectile dysfunctions (Gilbert et al., 2013). However, if men perceived that their partners were supportive and did not apply sexual pressure, then the intimacy in the relationship was not affected (Gilbert et al., 2013). Fears concerning the relationship or blaming the partner, on the contrary, contributed to worsening of the relationship's quality (Gilbert et al., 2013). Similar to any life stage, depression, and anxiety negatively affect the quality of sexual relations (De Lamater, 2012). Nevertheless, older men and women who report to be sexually active also present greater well-being (Smith et al., 2019b).

Personality represents an important ingredient of sexual attractivity. Thus, *personality development* can enhance the chances that one finds or maintains a sexual partner in midlife and older age. One study looking at links between personality and sexuality in older adults highlighted the relevance of personality for sexual functioning and activity among this age group (Allen & Desille, 2017). Personality was assessed with the Big Five Personality Inventory (see also chapter on personality development in this book). The Big Five personality model (McCrae & Costa, 2008) includes five traits, namely, openness (i.e. tendency to seek out exciting new experiences), conscientiousness (i.e. tendency to be organized and display goal-directed actions), extraversion (i.e. being sociable and friendly), agreeableness (i.e. interested in cooperation and harmony), and neuroticism (i.e. tendency towards emotional instability). Results showed that high levels of openness and low levels of agreeableness were associated with more liberal attitudes towards sex, numerous sexual partners, increased sex drive, reduced levels of sexual dysfunction and more frequent sexual activity (Allen & Desille, 2017). High levels of conscientiousness were linked with more conservative attitudes towards sex. For those older

participants who were sexually active, high extraversion and low neuroticism were connected to better sexual satisfaction (Allen & Desille, 2017).

How to Intervene: Developing a Fulfilling Sexuality in Midlife and Older Age

In the first part of this chapter, I discussed the combination of physiological, psychological, and social factors that influence a potential decrease in sexual interest and activity among older individuals. From a positive psychology viewpoint, it is relevant to shift the perspective from the paradigm of asexual older adults or sexuality for the sake of reproduction (Hillman, 2012; Traen et al., 2016, 2017) and consider how to achieve a fulfilled sexuality in older age. This means that we would try to identify some strengths that need to be enhanced to increase the probability of a positive sexual life in older years. Also, we may need to keep in mind that the frequency of sexual intercourse or number of sexual partners may not be the best criteria to assess a fulfilled sexuality in midlife or older age. Other standards such as perceived satisfaction or intimacy within a sexual relationship may be more helpful in this sense. According to the World Health Organization, the *sexual health triad* entails three elements that are relevant for enjoying sexual health in midlife and older age (Henry & McNab, 2003). These three elements include (1) being free of negative emotions (e.g. shame, fear, guilt), false beliefs and other psychological factors that impair sexual expression; (2) being free from organic disorders, disease, or disability that may hinder sexual activity; and (3) having the capacity to enjoy and control sexual behaviour in accordance with personal and social ethics (Henry & McNab, 2003). This triad is at the origin of some health promotion aims proposed for sexuality among older adults. For instance, sexual health promotion for middle-aged and older individuals would include providing accurate information about sexuality in midlife and old age, teaching how to communicate openly about one's sexuality, decreasing negative emotions concerning sex in late life, fostering positive intimate relations, and integrating sexuality into the daily lives of middle-aged and older adults (Henry & McNab, 2003).

Sex positivity was introduced as a concept to define openness, freedom, non-judgemental attitudes, or sex-negative attitudes (Donaghue, 2015). Sex positivity can also be used as a framework for counselling in case of intimate relations in midlife and older age (Cruz et al., 2017). A sex positive approach regards sexuality as a universal human experience and a relevant component of well-being, quality of life, and relationship satisfaction (Cruz et al., 2017; Bancroft, 2009). As discussed above in this chapter, sexuality continues to play an important role in older peoples' lives and to be perceived as an essential component of well-being (Waite & Das, 2010; Syme, 2014; Smith et al., 2019b). Nevertheless, negative ageing stereotypes (e.g. feeling too old or unattractive for sexual activity) can lead to negative feelings concerning sexuality in midlife and older age (e.g. shame, guilt, anxiety), negative body image (e.g. believing one is not attractive anymore), negative attitudes towards

sex in midlife and older age (e.g. sex is for young people) and reluctance to talk about this subject (e.g. avoiding the subject within the couple, medical encounters, etc.). In contrast, positive ageing stereotypes or views on ageing (e.g. associating age with growth and with new potential for experience), positive body images (e.g. being comfortable with one's body), positive attitudes towards sexuality in midlife and older age (e.g. sexuality is a normal part of life and can be enjoyed by older people), and open communication (e.g. talking about one's pleasure, one's preferences, one's fears, etc.) can stimulate positive sexual experiences and a fulfilled sexuality among middle-aged and older individuals. For instance, one study on the sexual experiences of older individuals in the USA showed that these were predicted by a person's subjective age and their *views on ageing* (Estill et al., 2017). Those who felt younger and had more positive views on ageing also reported more positive sexual experiences in older age. Good health also constitutes a developmental asset and predicts interest in sex and better sexual experiences in midlife and older age (Estill et al., 2017). Thus, from a positive psychology and developmental perspective, one can promote positive strengths (e.g. self-efficacy, positive body image, positive views on ageing, positive attitudes towards sexuality) and developmental assets (e.g. encouraging health behaviour, promoting mental and physical health, enhancing emotional regulation, improving social support networks, increasing communication skills concerning sexuality, fostering optimism and openness to new experiences) in order to ensure a fulfilled sexuality in midlife and older age.

A sex-positive approach to counselling recognizes the existence of multiple sexual identities, sexual expressions, and practices (Williams et al., 2013). This can easily include the expressions of sexuality in older age. The triad training model (Pedersen, 2000) of awareness, knowledge and skills is recommended as a framework for counselling from a sex-positive approach (Cruz et al., 2017). This represents a frame that can help counsellors to be more effective in talking about sexual issues with their clients. The five steps include (1) exploring the beliefs and personal attitudes concerning sexuality (e.g. sometimes counsellors are not aware that they themselves hold negative stereotypes about ageing and these may reflect in their work with older clients on topics such as sexuality and relationships), (2) developing sex-positive knowledge and comfort about sexuality (e.g. learning to be comfortable with using sexual language in counselling sessions), (3) integrating multiculturalism and sexual justice into practice (e.g. be aware of different cultural norms concerning sexuality, variety of sexual expression and sexual interests, etc.), (4) proactively raising the topic of sexuality in counselling (e.g. integrate sex and sexuality when assessing the clients' issues, provide information materials, etc.), and (5) being aware of the limits of introducing sexuality in counselling (e.g. sexuality is a multicomponent and complex topic and one cannot discuss all its aspects, one needs to decide what represents a priority and needs to be addressed in order to increase the clients' sexual well-being) (Cruz et al., 2017). Other researchers put together a series of principles that health practitioners can follow when they address the topic of sexuality with their older clients (Henry & McNab, 2003). These are useful since, often, health professionals may be embarrassed themselves or do not know how to talk about such themes with middle-aged and older adults. Health

professionals are advised to be proactive and provide information on sexuality to their middle-aged and older clients as well as transmit the information that sexuality is part of ageing and well-being. Also, potential negative ageing stereotypes can be discussed with the middle-aged and older clients in this context. It is advisable that health professionals first learn about the beliefs and values regarding sexuality from their clients in order to establish rapport and trust. This will set the stage for having an open communication with older clients on the topics of sexual activity and sexuality in midlife and older age. Health professionals are also advised to provide information on sexuality and benefits for relationships, as well as ways to obtain sexual pleasure without intercourse (e.g. the benefits of sensuality, cuddling, masturbation, fantasy, etc.) and ways to enhance pleasure during intercourse (e.g. use of sexual aids such as lubricants, Viagra, etc.) (Henry & McNab, 2003).

Some of the abovementioned principles could also be applied in case of counselling middle-aged and older individuals in matters of sexuality. First, one should explore *beliefs and personal attitudes* concerning sexuality among middle-aged and older people (Cruz et al., 2017). Unfortunately, sometimes negative ageing stereotypes may be internalized, and older individuals do not realize they hold these. Nevertheless, the reluctance to talk about sexuality or body image issues can show that a person has negative stereotypes or attitudes concerning sexuality in midlife or older age (Gott & Hinchliff, 2003; Vares, 2009). In case of women, body image issues are present (e.g. they consider their old body unattractive) and behaviours may include trying to use cosmetic surgery to make themselves attractive (Vares, 2009), while in case of older men, sexual performance is an issue and, thus, they use medicine to enhance it (Gledhill & Schweitzer, 2014). Thus, exploring views on ageing, body image, and attitudes concerning sexuality in old age can be part of the awareness process. In order to build awareness about values, beliefs, and attitudes concerning sex and sexuality, one can give middle-aged and older individuals a series of questions to reflect upon (e.g. either during counselling or as a homework of keeping a diary on these issues). For instance, one can ask what are the initial reactions that one has when talking or trying to talk about sex? What is the education one has received concerning sexuality? What were the values and actions displayed in one's family concerning sexual issues? Who are your sexual role models, and are these more positive or more negative models?

Negative perspectives on sexuality usually frame sexuality as being something risky (e.g. risk behaviours associated with sexuality, STIs), difficult to manage or problematic (Williams et al., 2015). This is unfortunately true for older age as sexuality of older adults is often presented in terms of deficits, what they cannot do anymore (e.g. because of health issues and attractivity issues), what is risky (e.g. sexuality being risky for patients with cardiovascular diseases), problematic (e.g. pain hinders the enjoyment of sexual activity), or where they lack control (e.g. depending on the availability of the partner and health and mood of the partner). In this context, it is not surprising that findings from a qualitative study on themes that appear in sexual counselling with older adults included partner unavailability, physical changes, family problems, sexual dysfunctions, worries concerning hygiene, fear of abuse or STIs (von Humboldt et al., 2021). In contrast, a positive sexuality framework emphasizes

freedom, diversity, and the importance of sexual pleasure while also acknowledging the risks it involves (Williams et al., 2015). This can fit better with the situation of older people and sexuality. While admitting there are risks and drawbacks, one can focus on the benefits of sexuality in older age and on the strengths and developmental assets one needs to foster to promote sexual well-being among older adults. The framework proposed by Williams et al. (2015) entails several points: (1) positive sexuality refers to strengths, happiness, and well-being, (2) emphasize the uniqueness and complexity of sexuality (e.g. not just behaviours but roles, orientations, identities, desires, fantasies, etc.), (3) positive sexuality encompasses multiple ways of knowing (e.g. use of different methods and theories), (4) positive sexuality reflects professional ethics (e.g. use of an ethics code in practice to prevent discrimination), (5) promotion of open, honest communication, (6) use of language that humanizes and values individual sexuality (e.g. avoiding using sexual terms that reinforce stereotypes), (7) encourage peace-making, namely, understanding the perspective and pain of others and (e.g. use of inclusive language that celebrates diversity in terms of sexuality), and (8) explore sexuality at a micro (i.e. individual), meso (e.g. family, school) and macro (e.g. society, community, neighbourhood) levels.

Older women and men need contexts where they can talk about taboo topics such as sexuality. Thus, health professionals need to be trained in this sense (Mc Sharry et al., 2016). For example, research has shown that allowing older women to talk about sexuality proved to be empowering for them (Hyde, 2001). Older women reported that they were often disappointed that health practitioners addressed sexuality only in terms of decline and dysfunction. For instance, they talked about how menopausal symptoms may interfere with sexual desire or enjoyment (Wood et al., 2007). Alternatively, health practitioners could discuss sexual issues in more positive, holistic ways, by addressing other factors that contribute to a fulfilled sexuality. Health providers work with both older women and men and thus could act as mediators of communication on sexual topics. Wood et al. (2007) suggest that when working with older men with erectile dysfunctions, health professionals can teach them about the effects these may have on their partners and make suggestions about how to communicate about sexuality (e.g. that sexuality is not reduced to penetration and find together other temporary pleasant alternatives until sexual dysfunction issues are resolved). Also, one needs to transmit the message that not wanting sex can be perfectly normal and does not automatically represent a problem connected to ageing (e.g. young people also do not desire sex all the time). As discussed above, there are many reasons why a person may not want to have sexual relations, and they do not automatically involve lack of desire or decreased capability due to old age. An older individual may experience stress caused by other life factors (e.g. retirement, financial issues, family problems), be in the wrong relationship or be inhibited in one's sexual expression by cultural stereotypes. All these other factors need to be evaluated before one makes a judgement about an older person's sexuality or lack of it. The right to choose one's sexual partner and engage in the kind of sexual activity that one finds pleasurable should be part of a fulfilled sexuality in older age. This will become even more an issue as researchers manifest a growing interest in the LGBTQ+ community and their sexuality in older years.

One study applied the Behaviour Change Wheel and COM-B model (Michie et al., 2011; Michie & Johnston, 2012) to design and implement an intervention concerning sexuality among cardiovascular patients (Mc Sharry et al., 2016). The CHARMS (Cardiac Health and Relationship Management and Sexuality) intervention targeted the implementation of sexuality counselling guidelines for cardiovascular patients in Ireland (Mc Sharry et al., 2016). The aims of the intervention comprised to improve sexuality-associated outcomes at the patient level, raise the provision of sexual counselling at the provider level and develop a sustainable pathway for the delivery of sexual counselling at the system level (Mc Sharry et al., 2016). The COM-B model (Michie et al., 2011) describes behavioural adoption as being influenced by capabilities (e.g. physical, psychological), opportunities and motivation to engage in a particular behaviour, in this case sexual counselling (Mc Sharry et al., 2016). The Behaviour Change Wheel links the COM-B components to nine intervention methods, namely, coercion, education, enablement, environmental restructuring, incentivization, modelling, persuasion, restriction, and training (Michie et al., 2014). The Behaviour Change Wheel provides a step-by-step method for how to change behaviours. First one needs to understand the behaviour and all its determining factors. Second, one should identify the intervention options. Third, one would design the content of the intervention (Michie et al., 2014). In case of the CHARM intervention, the authors identified several reasons why health professionals did not provide sexual counselling to cardiac patients. Based on these findings, they decided to include psychological capability (e.g. perceived lack of skill), social opportunity (e.g. concerns regarding differences in culture and religion among patients and how they would react to sexual counselling), reflective (e.g. perceived low efficacy for delivering sexual counselling) and automatic motivation (e.g. perceived difficulties in discussing sexual aspects, such as negative emotional reactions from patients) in the intervention design (Mc Sharry et al., 2016). Education and training were used to teach health professionals concrete skills on how to deliver sexual counselling (e.g. provide information on improved quality of life associated with sexuality, improved health consequences related to sexuality, discuss best practice examples from health professionals who deliver sexual education for patients). In terms of training, checklists were provided (e.g. what points to address in counselling), videos of "how to" were shown to model counselling actions, and role-play exercises were organized so that health professionals could apply their newly acquired skills. Problem-solving (e.g. identify concrete issues that occur in practice), demonstration of behaviour (e.g. video of "how to"), framing and reframing (e.g. reframe the difficulties encountered in practice as challenges), and verbal persuasion (e.g. provide positive feedback concerning the implementation of skills in real practice situations) were used to teach health professionals how to address sexual issues with more vulnerable patients such as, for example, women who were not used to address sexuality with their doctors (Mc Sharry et al., 2016). Modelling (e.g. demonstration of behaviour), education (e.g. information on positive emotional impact of sexual counselling), and persuasion (e.g. information on other's approval as, for example, the gratefulness of patients for receiving such information, existing guidelines for sexual counselling that are already put in practice,

social comparison in terms of showing how it is implemented in other hospitals) were used to increase motivation in health professionals (Mc Sharry et al., 2016). The authors found the Behaviour Change Wheel to be a useful tool for conducting exploratory research in the domain of sexuality and health services (Mc Sharry et al., 2016). Thus, the Behaviour Change Wheel and the COM-B model (Michie et al., 2011, 2014) could be applied also in other health settings for helping professionals to deliver sexuality counselling to older adults.

All in all, intervention aims from a *positive psychology approach* can include, on a general level, attempts to increase sexual well-being and sexual quality of life among older adults. More specifically, one can boost individual strengths, provide information on what a fulfilled sexuality means in midlife and older age and teach skills that would foster it. In terms of positive personal strengths, one could aim (1) to promote a positive body image (e.g. learn to enjoy one's body, learn to feel comfortable with one's body in terms of sexuality, think and talk about one's body in terms of pleasure and not of pain), (2) promote positive attitudes concerning sexuality in midlife and older age (e.g. sexual activity and desire are part of ageing, sexuality can be enjoyed in older age, etc.), (3) increase sexual self-esteem (e.g. one can still be sexually active and achieve pleasure in midlife and older age and inform on the positive consequences of sexuality in older age on mental and physical health), (4) promote positive views on ageing (e.g. perceive old age as a time of growth and of learning new skills, explain the relation between views on ageing and sexuality), and (5) increase skills concerning sexuality in midlife and old age and raise self-efficacy for implementing them. Apart from psychological strengths, one can boost the developmental assets of middle-aged and older adults that may have an impact on their sexuality. For instance, one can help them improve their social skills and consolidate their social networks for support (i.e. social development), improve their communication and emotion regulation abilities (i.e. emotional development), train their cognitive competences (i.e. cognitive development), encourage health behaviours and mobility (i.e. physical development) and foster optimism and openness to new experiences (i.e. personality development).

Conclusions

Sexuality remains an important component for well-being in midlife and older age even if the ways that sexual activity is perceived and enacted may change over the years. With ageing, middle-aged and older adults may find other aspects of their sexuality important as compared to when they were younger. For instance, they may place an emphasis on pleasure-inducing behaviours such as cuddling, hugging, touching, and kissing and prioritize emotional intimacy over intercourse (Metz & McCarthy, 2007; Waite & Das, 2010; Taylor & Gosney, 2011). According to Syme (2014), redefining sexual activity is a characteristic of midlife and older age, namely, shifting the focus from physical aspects of sexual activity to emotional intimacy. Because of demographic changes, people tend to live longer lives and thus also want

to enjoy sexual well-being (e.g. pleasurable sexual activity, affection, intimacy) in their midlife as well as older age (von Humboldt et al., 2022). Contrary to assumptions that older people are asexual, findings from several studies point out that older individuals consider sexuality as relevant in their lives (Gott & Hinchliff, 2003) and a component of their general well-being (De Lamater, 2012; Robinson & Molzahn, 2007) and enjoyment in life (Smith et al., 2019b). Furthermore, sexuality represents an important component of fulfilled, long-lasting romantic relationships (see also chapter on love in this book) and an ingredient for successful ageing (Marshall, 2011). The role of sexuality for positive ageing can be explained by analysing the relation between development and sexual activity in older age. A fulfilled sexuality in midlife and older years can contribute to better development on a physical (e.g. health, mobility), emotional (e.g. positive emotions, increased intimate relation quality), social (e.g. social and communication skills), cognitive (e.g. increased cognitive capacity), and personality (e.g. high level of openness, extraversion) levels. The other way around, developmental assets in all domains (e.g. being in good health, being cognitively fit, having an intimate communication with an emotionally significant partner, receiving social support from a partner, being open to new experiences and optimistic) can help achieve a fulfilled sexuality in midlife and older age. Positive psychology interventions that aim to foster a fulfilling sexuality in older age can focus on building positive strengths (e.g. positive body image, positive attitude towards sexuality, self-efficacy, positive views on ageing), teach skills concerning sexuality in older age (e.g. how to communicate openly about sex with a partner, discuss alternatives to penetrative sex) and boost developmental assets (e.g. cognitive and physical fitness, optimism and openness to new experiences, social skills and support networks, emotional regulation competences). This chapter focused on the experience of middle-aged and older women and men and their perceptions of sexuality with its drawbacks and benefits. Nevertheless, there are several groups that need specific interventions such as people who suffer from chronic illnesses (e.g. cardiovascular disease, cancer) and cognitive impairment (e.g., dementia) or who belong to groups that are often stigmatized and are more at risk to be so in older age (e.g. the LGBTQ+ community). Addressing all these specific issues was however beyond the scope of this chapter. Nevertheless, the chapter outlines some ideas and principles that can be adapted in order to help specific groups of older people to achieve a fulfilled sexuality in older age as well as guide health professionals on how to address sexual counselling with vulnerable individuals.

Reflection Questions

1. Have your views concerning sexual activity in old age changed after reading this chapter? If yes, in what way?
2. How would you explain to a middle-aged or an older person (e.g. your parents or grandparents) what is a fulfilled sexuality in older age?

3. Explain in your own words the relationship between sexuality and development in midlife and older age.
4. In your opinion, how can older adults benefit from online dating? What are the drawbacks?
5. Using a positive psychology approach, name three objectives and three strategies to promote sexual well-being among older women.
6. Using a positive psychology approach, name three aims and three strategies that you would include in an intervention to promote sexual well-being for older men.
7. How would you adapt the abovementioned aims and strategies to develop a sexual well-being intervention for a particular vulnerable group of middle-aged or older individuals?

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Chapter 13
The Quest for Happiness: Applying Positive Psychology Principles to Foster Happiness in Midlife and Older Age

Introduction

With a growing ageing population across the globe, and a generation of baby boomers who is more concerned and demanding in terms of their personal rights, the happiness of older people has become the focus of numerous studies and interventions. It is well-known that the pursuit of happiness constitutes a lifelong project and most likely every human being desires to be happy across the entire lifespan. But can we still foster happiness in old age, despite an increase in negative experiences? When it comes to ageing, some life stages such as youth are more easily represented as generating happiness. Nevertheless, according to a positive approach to ageing, one is never too old to be happy. Furthermore, in this sense what makes us happy may also differ at each life stage. We have seen in previous chapters that peoples' goals tend to change with age, as with a limited time perspective individuals come to favour emotional comfort over knowledge acquisition (see chapter on emotional development, chapter on social development in this book). The definition of happiness may also differ in older age, for distinct generations and even for the same person at various life stages (e.g. defining happiness in one's fifties as compared to one's seventies). Some things may remain the same, in terms of the little pleasures of life that make us happy such as the smile of a loved one, having an ice cream on a hot summer day, or riding a bike into the sunset. The number of loved ones that make us smile may increase or change with age, or the amount of biking we can do may decrease, but the experienced happiness remains.

We also learned from previous chapters that old age is not automatically associated with depression and loneliness (e.g., Chapter on depression, chapter on loneliness in this book). Happiness can characterize old age, and positive psychology paradigms allow aging to be defined in terms of happiness, gains, and developmental growth instead of just decline, depression, and illness (see Chaps. 1, 2, 3, and 4 in this book). Thus, it is not surprising that there is a growing literature on coaching

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for a better life, and older individuals represent an expanding target group for such books. Just as our personality may change across the lifespan (see chapter on personality in this book), so does our predisposition to be happy or the way we define happiness. The pursuit of happiness is essential for our development because it makes us reflect on who we are, what we want, and how to achieve it as well as learn new ways to be happy at every stage in our lives. Self-reflection in this sense may be particularly important since it also protects individuals from "becoming obsessed" with reaching some unrealistic happiness standards. As in the case of successful ageing models, society may prescribe some criteria that one needs to reach in order to be happy at a certain life stage (e.g. be successful, be in good health, have lots of friends, be married or have children, etc.). One should be weary of such imposed standards since they can lead to a pressure to be happy at all costs and induce anxiety or guilt when feeling one is not happy enough. Old age can bring about situations when we may be unhappy (e.g. illness, death of a loved one, retirement), and we need to accept potential negative emotions and give ourselves time to recover and adapt to the new circumstances. In such instances, reflecting on personal goals and finding a balance between positive and negative emotions may be helpful. Also, we should not forget that happiness lies in "little things", in our everyday activities or routines, and that, with age, people tend to experience more positive low intensity emotions (e.g. calmness, satisfaction) compared to high-intensity feelings (see chapter on emotional development in this book).

In this chapter, I will explore the factors that may contribute to happiness in midlife and older age and how this can be measured among middle-aged and older adults. In this sense, I will examine how middle-aged and older individuals themselves describe happiness and what triggers it. Furthermore, I will explore the existing links between happiness and personal growth in all life domains (i.e. cognitive, emotional, social, personality, physical). Starting from the existing evidence-base and theoretical models concerning happiness in midlife and older age, I will then go on to examine how can positive psychology principles and developmental assets be applied to design interventions intended to promote happiness among middle-aged and older adults.

Explaining Happiness in Midlife and Older Age

Exploring happiness from a positive psychology perspective comes somehow more naturally than in the case of depression, anxiety, or loneliness (see chapters on anxiety, depression, loneliness in this book). Nevertheless, defining what happiness means and what factors influence it does not necessarily represent an easy task. Because happiness has fascinated researchers for decades, there are numerous definitions that were formulated to explain it. What these definitions have in common is the tendency to experience positive emotions (Baumgardner & Crothers, 2009; Lyubomirsky et al., 2005). Sometimes, researchers even prefer terms such as "positive psychological functioning" or "subjective well-being" when referring to happiness studies (Steptoe,

2019a, b). Considering a lifetime perspective, the definition provided by Lyubomirsky et al. (2005) describes happiness as a long-term predisposition to frequently experience positive emotions. Happiness as a concept is closely related and sometimes used interchangeably with concepts such as well-being, quality of life, life satisfaction, or flow (Diener, 2000; Csikszentmihalyi, 1999; Steptoe, 2019a).

Another question that preoccupied researchers was whether happiness depends on individual or, rather, on situational factors. From a psychological point of view, happiness is regarded as a subjective experience, depending more on individual aspects. Like the proverbial phrase "If life gives you lemons, make lemonade" (The idioms, 2022), this may explain why some individuals manage to be happy even when living in challenging times or circumstances. In this sense, happiness was defined as an experience of joy, satisfaction, and well-being, combined with the feeling that life is good and meaningful (Lyubomirsky, 2008). This, however, does not mean that happy people never feel anger, sadness, or fear and that they do not feel lonely or even sometimes experience anxiety or depression. Happiness only implies that, on average, happy people tend to experience more positive feelings.

Regarding how to conceptualize happiness, two distinctive types were described in the literature, namely, hedonic and eudaemonic (Ratti & Sharma, 2021). The first refers to the goal in life being to achieve happiness and pleasure (Baumgardner & Crothers, 2009). *Hedonic* well-being implies feelings such as joy, pleasure, and vitality (Steptoe, 2019a). One can say that the concept of hedonistic happiness evolved from physical pleasures to self-interest (Ryan & Deci, 2001). The *eudaemonic* conceptualization goes beyond the pleasure principle for seeking happiness (Ratti & Sharma, 2021). Happiness in this sense is triggered by developing one's potential (Seligman, 2002) and achieving individual, self-relevant goals (Waterman et al., 2010). Eudaemonic happiness implies feelings such as having a sense of purpose and a sense of meaning or experiencing fulfilment in life (Steptoe, 2019a). A third type of happiness is coined as evaluative well-being, namely, how satisfying people appraise their life to be or how they judge their quality of life (Steptoe, 2019a). More recently, some researchers combined all the elements of happiness described above and proposed concepts such as *flourishing* that encompasses life satisfaction, meaning in life, a sense of purpose, virtue, and close social relations (Van der Weele, 2017). Similarly, Seligman (2012) proposed the PERMA model that encompasses positive emotions, engagement, relationships, meaning, and achievement. Yet other authors argue that happiness has an affective component (i.e. emotions), a cognitive one (i.e. the evaluation behind the emotion), and a social one (i.e. need for social integration) (Cuadra & Florenzano, 2003). These conceptualizations can prove very useful when designing interventions to improve happiness.

Meaning in life was also proposed to be an important concept that constitutes a component of eudaemonic happiness. Furthermore, meaning is life is associated with hedonic happiness and implies feelings of joy and pleasure (Heintzelman & King, 2014) and the feeling of life satisfaction (Steptoe & Fancourt, 2019). Having a meaning in life indicates that life is comprehensible and coherent and has a purpose and significance (Steptoe & Fancourt, 2019). Engaging in significant, purposeful activities is characteristic of a meaningful life and is associated with being

mentally and physically healthier (e.g. experiencing fewer depressive symptoms, less disability, or chronic pain), adopting healthier lifestyles (e.g. exercise, healthy diet), stronger personal relations, more social engagement, and less loneliness (Steptoe & Fancourt, 2019). Thus, encouraging people to find purposeful activities to engage in could contribute to their happiness and well-being and indirectly to improving their mental and physical health.

In an attempt to answer the question about the *determinants of happiness*, both individual (e.g. personality) and external factors (e.g. life events) were found to influence happiness (Ratti & Sharma, 2021). Among the determinants of happiness, genetic factors are considered to account for 50% and life circumstances for 10%, while aspects that are under our own control explain 40% (Lyubomirsky, 2008; Lyubomirsky et al., 2005). Likewise, Seligman (2005) considers happiness as depending on genetics, circumstances, and willingness control. Thus, individual factors that one can manage are considered to have quite an important impact on happiness. For example, compassion for others, forgiveness, and a sense of perspective were cited as relevant for achieving happiness (Orsega-Smith et al., 2019). In the specific case of older adults, these may experience some form of decline (e.g. in mental functioning or health). However, positive strengths (e.g. optimism, self-efficacy, gratitude, communication abilities, etc.) resulting from life experience and developmental assets (e.g. social support, emotional regulation, decision skills, health, openness to new experiences) can protect against mental issues and ensure well-being. Studies identified *social support*, namely, the size and quality of social networks and having a sense of purpose and meaning in life, as relevant for happiness and well-being in older age (Charles & Carstensen, 2009). *Mindfulness* (e.g. the feeling of being in the moment, having a non-judgemental attitude) was shown to decrease anxiety and depression (Foulk et al., 2014), lessen pain experiences (Morone et al., 2008), and improve sleep quality (Morone et al., 2008) among older adults. Among the positive strengths, *forgiveness* was identified as important since it influences having strong, good relationships with other people and thus contributes to having fewer regrets and achieving happiness in older age (Orsega-Smith et al., 2019). Forgiveness is also associated with having better social relations and being able to move on or to restore relations (Orsega-Smith et al., 2019).

When it comes to what is under individual control and can influence happiness, activities also play an important part. One study showed that enjoyable daily activities can enhance the well-being of older adults (Jarosz, 2021). This is in line with the activity theory of ageing (Havighurst, 1961) that emphasizes the importance of staying active in older age but recognizes that the activities we enjoy may change with age (Jopp et al., 2008). Being active makes it more probable that older people are socially embedded and that they find new social roles after retirement (Jarosz, 2021). Activities can provide a sense of meaning (Steptoe & Fancourt, 2019), and accumulated positive and meaningful experiences from daily activities can lead to a feeling of general well-being (Newman et al., 2014). We need to differentiate between active (e.g. socializing with friends at a terrace, engaging in sports) and passive leisure time (e.g. watching a film, reading) activities (Adams et al., 2011). Both can trigger well-being, depending on the interests of the older person. It

appears that a daily balance between relaxing (e.g. watch a film) and effortful activities (e.g. physical exercise, intellectually stimulating actions) can trigger happiness among older adults (Oerlemans et al., 2011). The key element for ensuring well-being or happiness is that the activity is considered meaningful, either for the short term (e.g. relaxation, pleasure) or long term (e.g. achieving goals, part of a personal project) (Maruta et al., 2020; Lawton et al., 2002). One asset in the case of older adults is that they know which activities are meaningful to them and are worth engaging in Reichstadt et al. (2010). Nevertheless, some activities such as caregiving, although meaningful, may be very stressful for older individuals (Bevans & Sternberg, 2012).

Defining happiness is relevant also for measuring it and finding answers to questions such as "Are older people happier than they have been at other life stages?" or "Are older persons happier than younger individuals?" Some researchers argue that happiness across the lifespan is U-shaped, meaning that it is lowest in middle age and then rises as we grow older (Graham & Pozuelo, 2017; Ratti & Sharma, 2021). For instance, research pointed out that happiness is said to be lowest among 30-year-olds (Clark & Oswald, 2012; Frey & Stutzer, 2002) and among individuals aged between 30 and 50 years old (Blanchflower & Oswald, 2004, 2008) and then rises among older age groups. Other studies also concluded that older adults in general are happier than younger ones (Mroczek & Kolarz, 1998; Carstensen et al., 2000). One study concerning happiness among older Indian individuals found that these had a higher orientation to meaning and this explained their well-being in older age (Ratti & Sharma, 2021).

But how can one measure such a complex concept as happiness among middle-aged and older individuals? In terms of measuring happiness, several scales were proposed by different authors. Table 13.1. comprises some examples of scales that were used to measure happiness, life satisfaction, or well-being in older age.

Table 13.1 Scales that can be used to measure happiness in older age

Name	Description
The Orientation to Happiness Scale	Peterson et al. (2005), 18 items, 5-point Likert scale from 1 "not at all like me" to 5 "very much like me". Measures the orientation to happiness, includes three dimensions (meaning in life, pleasure, engagement)
The Questionnaire for Eudaimonic Well-being	Waterman et al. (2010), 21 items, measured on a 5-point Likert scale, with 0 meaning strongly disagree and 4 strongly agree. Six characteristics of eudaemonic well-being are measured: self-discovery, perceived development of one's best potentials, sense of purpose and meaning in life, intense participation in activities, investment of significant effort, and enjoyment of activities as personally expressive
Diener Satisfaction with Life Scale	Diener et al. (1985), 5 items, measured on a 7-point Likert scale
Subjective Happiness Scale	Lyubomirsky and Lepper (1999), 4 items on a 7-point Likert scale
The Oxford Happiness Scale	Hills and Argyle (2002) 29 items, measured on a 6-point Likert scale

Although questionnaires can be used to measure happiness in midlife and older age and compare it to other age groups, in order to fully understand what triggers well-being among middle-aged and older adults, we should examine their beliefs and experiences with happiness. In the following, I will summarize findings from qualitative studies that refer to how middle-aged and older adults perceive happiness, as well as its causes and consequences in midlife and older age.

The Experience of Happiness in Midlife and Older Age

Understanding what middle-aged and older individuals need and desire in order to be happy is of crucial relevance for designing appropriate interventions. Several qualitative studies have explored what quality of life means to older individuals, how do they define and experience happiness, and what are the sources of well-being in older age (Jitdorn et al., 2021; van Leeuwen et al., 2019; Russo-Netzer & Littman-Ovadia, 2019). For example, one review of several qualitative studies on the meaning of quality of life among older adults classified nine domains of quality of life, namely: autonomy, role and activity, health perceptions, relationships, attitude and adaptation, emotional comfort, spirituality, home and neighbourhood, and financial security (van Leeuwen et al., 2019). The authors argue that quality of life in older adults should be regarded as a dynamic web of interlinked domains, meaning that changes in one domain affect the others (van Leeuwen et al., 2019). Health perceptions referred to the fact that, in order to enjoy quality of life in older age, one needs to feel healthy compared to other peers to be able to carry out different activities and not feel limited by one's health (van Leeuwen et al., 2019). Autonomy implied that one does not feel like a burden to others, is able to manage by oneself, and can retain one's dignity (van Leeuwen et al., 2019). Role and activity referred to spending time performing activities that are meaningful, bring joy and engagement, stay mentally active, and help one to feel useful (van Leeuwen et al., 2019). Relationships were also considered very important for quality of life, staying connected, giving support to others, and enjoying support from them in return (van Leeuwen et al., 2019). Attitude and adaptation referred to looking at the bright side of life, namely, being positive and making the best of what life has to offer, and accepting what one cannot influence, but also being able to change one's habits when needed (van Leeuwen et al., 2019). Emotional comfort meant feeling at peace and not feeling lonely or troubled by past events (van Leeuwen et al., 2019). Spirituality could also mean different things, for instance, having faith in God or being part of a religious community, but also being on a spiritual quest for meaning, self-awareness, and development (van Leeuwen et al., 2019). The category concerning home and neighbourhood referred to feeling safe in one's living environment as well as enjoying the surroundings that are accessible with public transport (van Leeuwen et al., 2019). Last but not least, financial security meant that one was not restricted by one's financial state and has the financial freedom to enjoy life (van Leeuwen et al., 2019). As discussed also above, daily activities can be a source of

happiness in older age (Heo et al., 2010; Oerlemans et al., 2011; Jarosz, 2021). For instance, a study conducted with Polish older adults examined enjoyable pursuits from their perspective and found that these included spiritual activities, socializing, and childcare, while physical and leisure activities were rated as moderately enjoyable (Jarosz, 2021). Caregiving for adults, medical appointments, shopping, travel, and housework were all considered stressful by older adults (Jarosz, 2021).

Concerning the *resources* that older individuals can use to enjoy well-being, a qualitative study looked specifically at how older people cope with everyday challenges and how they experience ageing (Russo-Netzer & Littman-Ovadia, 2019). This study with older adults from Israel (i.e. over 65 years old), showed that their concerns included fear of death and a feeling of having limited time left to fulfil all desires, fear of losing control (e.g. losing important roles in the family, not being active as before), and fear of "missing out" and not doing enough with their time. Nevertheless, participants also described a series of coping strategies they used to cope with these concerns, namely, establishing active routines (i.e. having a clear, active schedule, maintaining an active lifestyle) and making a contribution to others and the world around them (i.e. engage in activities where they can help, care for others) (Russo-Netzer & Littman-Ovadia, 2019). The interviewed older individuals also named a series of resources that they used to cope with ageing, namely, connection and belonging, openness and savouring experiences (e.g. learn new things and expand their horizons), and adopting a positive attitude and moderation (Russo-Netzer & Littman-Ovadia, 2019). Personal strengths included a love of learning, curiosity, maintaining close relations, savouring the beauty of the world (e.g. the wonders of nature), making a conscious decision to appreciate life instead of complaining, and practicing wisdom and moderation (Russo-Netzer & Littman-Ovadia, 2019). All in all, the study participants emphasized that, for being happy in older age, one needs to transcend everyday life experiences. This can be accomplished by accepting the past, living fully in the present, and contributing something for next generations (Russo-Netzer & Littman-Ovadia, 2019). Some of the character strengths named by participants correspond to a certain extent to those that were identified in the VIA positive psychology models of positive strengths (Peterson & Seligman, 2004), namely, the humanity cluster (e.g. kindness), the knowledge cluster (e.g. wisdom), or temperance cluster (e.g. prudence, forgiveness).

Similarly, a review of qualitative studies on well-being and happiness among older adults showed that they talked about concerns in old age, coping strategies, and resources for a fulfilled life in older age (Jitdorn et al., 2021). Concerns voiced by older adults comprised the issue of autonomy, fear of wasting their leisure time, fear of being left out, and concerns about having a good death (Jitdorn et al., 2021). Coping strategies for living a life of meaning included engaging in regular daily activities, boosting self-esteem and life satisfaction, setting life goals, being optimistic, and being religious (Jitdorn et al., 2021). Older adults also talked about the resources that helped them to cope with ageing and reach their life goals. These included family support, social support, and religious support (Jitdorn et al., 2021). The definition of well-being in older age included psychological, physical, social, and spiritual dimensions. For instance, participants mentioned the importance of

having meaning in life, communicating with others, keeping dignity, sustaining independence, and being able to contribute to society (Jitdorn et al., 2021). The definition of happiness given by older adults included having good memories, being in good health, experiencing good moments daily, having good relations with others, experiencing positive feelings, and self-acceptance (Jitdorn et al., 2021).

Although the studies mentioned above included mostly older participants, findings can be used to understand the perspective of middle-aged individuals on happiness. When summarizing all the abovementioned findings about the experiences and meaning of happiness from the older adults' perspective, one notices that developmental assets from all domains are included, for example, health and being active (i.e. physical development), social integration and social support (i.e. social development), experiencing positive emotions, (i.e. emotional development), self-acceptance and optimism (i.e. personality development), and being mentally fit and autonomous (i.e. cognitive development). In the following, I will explore the potential links between happiness and development with the aim to show why encouraging development in all domains of life can improve well-being, while being happy can boost development in midlife and older age.

Why Intervene: Happiness and Development in Midlife and Older Age

As stated in the chapters on negative emotions (see chapter on depression, anxiety, loneliness in this book), these are mainly detrimental for health and longevity. For instance, depression is associated with suicide risk, morbidity, and mortality as well as a decline in cognitive, emotional, and social functioning (Blazer, 2003). In contrast, happiness has positive effects on the personal development of individuals in several life domains. Happiness itself can be regarded as an outcome of *emotional development* in older age. Practicing positive activities (e.g. exercising generosity, being kind to others) as an expression of happiness was shown to be a protective factor and promote well-being (Layous et al., 2014). Positive activities enhance positive emotions, thoughts, and behaviours and need gratification and thus promote well-being (Lyubomirsky & Layous, 2013). Positive activities can lessen loneliness and rumination, which represent risk factors for mental health (Layous et al., 2014). Also, they can counteract environmental triggers of loneliness and rumination (Layous et al., 2014). Happy individuals were shown to cope better with stress and use coping strategies such as humour or positive reframing (Lyubomirsky et al., 2005). In addition, happy persons are more likely to report positive growth following a traumatic event (Fredrickson et al., 2003).

Happiness can contribute to *cognitive development*. For instance, the positive emotions that are experienced during social interactions contribute to better cognitive functioning (Blanchard-Fields et al., 2004). People who are dissatisfied with their social networks report greater cognitive decline in time. In contrast, social activities are associated with lower cognitive decline (Kim et al., 2017) and with

well-being (Talmage et al., 2020). Effortful cognitive activities can increase self-efficacy (Bandura, 2010) and thus also contribute to enhancing well-being among older adults. Engaging in intellectually challenging activities (e.g. crosswords) was shown to promote well-being among older individuals (Oerlemans et al., 2011). In contrast, lower subjective well-being was associated with risk for cognitive decline and dementia (Sutin et al., 2018; Boyle et al., 2010). Happy people were also shown to be less likely to engage in rumination (e.g. having obsessive thoughts about failure etc.) (Lyubomirsky et al., 2011a), which leads to increased probability of experiencing positive emotions instead of depression or anxiety. Positive emotions tend to broaden peoples' way of thinking, making them more creative in terms of problem-solving (Layous et al., 2014; Fredrickson, 2001). Happy people tend to score higher on creativity, flexibility, and originality, but also on complex mental tasks such as decision-making (Lyubomirsky et al., 2005).

In terms of *personality development*, personality traits (e.g. neuroticism, extraversion) were shown to have an impact on peoples' happiness (Magnus & Diener, 1991). In this sense, it is tempting to ask if personality predicts happiness, and if so, does this also happen in later years in life? Several studies have examined the links between personality and happiness or well-being, with an interest in answering the question why some people are constantly happier than others, regardless of the external circumstances (Pishva et al., 2011). From the Big Five Model of Personality (see also chapter on personality development, part II in this book), emotional stability, conscientiousness, extroversion, and agreeableness, as well as openness to new experiences, were said to predispose people to being happier (Chung et al., 2019; Oerlemans et al., 2011; Chamorro-Premuzic et al., 2007). Emotional stability and extraversion provide the biological basis of happiness, while the agreeableness trait is relevant for the social aspects of well-being and conscientiousness for the achievements that can trigger happiness (Pishva et al., 2011). The link between extroversion and happiness is explained by assertive behaviour, social skills, and sociability (Pishva et al., 2011). Extroverts tend to be warm, outgoing, friendly, assertive, energetic, and affiliative (Lucas, 2001). Because extroverts tend to have more social skills, they also choose to attend more social events, and this enhances their chances for positive experiences and, thus, for happiness (Sheldon & Lyubomirsky, 2006). This may also mean that social skills could be learned as a developmental strength to increase the chances for happiness. Neuroticism is associated with negative affect and thus with lower happiness and well-being (Pishva et al., 2011; Chung et al., 2019). Overall, personality can influence an engagement in activities, one's choice of activity, as well as the happiness one derives from activities in general (Oerlemans et al., 2011).

Negative emotions, such as depression, anxiety, or loneliness (see the chapters on depression, anxiety, loneliness prevention and intervention in this book), are associated with worse health in older individuals (Power et al., 2016; Lenze & Wetherell, 2011; Byrne, 2016; Courtin & Knapp, 2015). In contrast, happiness can have a *protective effect* on health and thus on *physical development* in older age. Happiness is associated with better health and reduced mortality (Steptoe, 2019b). For example, happiness was reported to enhance heart rate (Steptoe et al., 2005),

augment the immune system (Cohen et al., 2003), ease pain (Zautra et al., 2005), decrease morbidity (Ostir et al., 2001), and increase longevity (Danner et al., 2001; Martin-Maria et al., 2017). Increased subjective well-being was shown to predict lower risk for cardiovascular illness (Boehm & Kubzansky, 2012) and disability in older age (Steptoe et al., 2014). A greater sense of purpose, a component of eudaemonic happiness, was associated with better health, less pain and disability (Steptoe & Fancourt, 2019), and use of preventive services such as vaccinations and screenings (Kim et al., 2014). In terms of engagement in health behaviour, physical activity relates to experiencing well-being in older age (Lampinen et al., 2006; Orsega-Smith et al., 2007; Mullen et al., 2011). The other way around, people who experience higher subjective well-being are also more likely to have a healthier lifestyle. For example, they tend to exercise regularly, eat healthy diets, and enjoy a good sleep quality (Steptoe & Fancourt, 2019).

Happiness impacts *social development*. With age, it becomes more important that relationships are positive and emotionally meaningful. Having several relevant relations with other people constitutes an indicator of happiness (Leung et al., 2013). Socializing (Talmage et al., 2020), social activities such as caring for grandchildren (Drew & Silverstein, 2007), and engaging in leisure time activities (Heo et al., 2010) were linked with well-being among older adults. Especially receiving social support and engaging in activities were highlighted as important for well-being in older age (Sposito et al., 2010; Anaby et al., 2011; Bowling, 2011). Socializing and doing activities with other people, irrespective of the activity type, can increase well-being among older adults (Jarosz, 2021). In contrast, loneliness can contribute to lower well-being and even cause depression or anxiety (Courtin & Knapp, 2015; Luo et al., 2012; Lee, 2014; Van Orden et al., 2013; Marshall, 2011) (see chapter on loneliness in the present book). Social relations can contribute to a sense of meaning in life (Hupkens et al., 2018) and, thus, to happiness in older age. Happiness in turn can enhance social relations in terms of numbers and quality (Steptoe & Fancourt, 2019). Happy people tend to have better interpersonal relations and are less likely to get divorced (Steptoe & Fancourt, 2019). Also, happier individuals tend to socialize more, belong to clubs and organization, volunteer, and participate in cultural activities (Steptoe & Fancourt, 2019). In general, happy people were shown to evaluate their friends, family, and acquaintances in a more positive manner (Lyubomirsky et al., 2005), which facilitates good social relations and maintenance of larger social support networks. Also, happiness is associated with prosocial behaviour and a tendency to help others and resolve conflicts better (Lucas, 2001; Lyubomirsky et al., 2005).

All in all, in terms of positive psychology, happiness or well-being is needed for personal growth (Seligman, 2012). In general, happiness is associated with being successful in several life areas (Lyubomirsky et al., 2005; Orsega-Smith et al., 2019). This is explained through the fact that happy people have a tendency to be more enthusiastic and thus more motivated to engage in several activities that increase their chances of success (Lyubomirsky et al., 2005, 2011a). Also, while experiencing positive emotions, people tend to learn new skills, which, in turn, increase their chances of achieving success in life (Lyubomirsky et al., 2005).

Positive emotions can help individuals prepare themselves for future challenges (Fredrickson, 2001) because they encourage individuals to approach these rather than avoid them (Lyubomirsky et al., 2005). According to the Broaden and Build theory (Fredrickson, 2001), positive emotions have an impact on our cognitions and actions and motivate us to be curious and learn new things, become more creative, expand our perspective on life, and build up resources (Lyubomirsky et al., 2005). Happy people will invest time to expand their networks, build their resources, and relax to rebuild their energy when they need it (Lyubomirsky et al., 2005). Also, positive affect enables people to engage in goal-directed actions (Lyubomirsky, 2001), as well as seek out novel goals which can facilitate success in several domains. In this sense, happiness can be beneficial for development, since it can motivate middle-aged and older individuals to engage in goal-directed behaviour to boost their developmental assets (e.g. increase social support, enlarge social networks, train cognitive and physical abilities, foster openness to new experiences). These developmental resources can be especially important in older age when individuals may face different physical (e.g. illness), cognitive (e.g. cognitive decline), emotional (e.g. loss of loved ones), and social challenges (e.g. retirement). When looking at happiness from a positive psychology perspective, this is associated with a series of positive strengths, such as confidence, self-efficacy, optimism, sociability, prosocial behaviour, physical health and immunity, effective coping with stress, originality, and flexibility (Lyubomirsky et al., 2005). Taking the importance of happiness for development into account, in the following, I will discuss how to intervene in order to foster happiness in midlife and older age.

How to Intervene: Happiness in Midlife and Old Age as Personal or Social Responsibility

Happiness and well-being have an important impact on development in all life domains (i.e. physical, cognitive, social, emotional, personality) in older age and thus make a good case for designing interventions that target the enhancement of well-being among older adults. This, however, prompts the question whether happiness can be enhanced in older age or not. The good news is that happiness is not a static phenomenon and thus can be improved at any life stage. Nevertheless, interventions are mostly targeted at young people or middle-aged individuals with the aim to increase their well-being, while programmes targeting older people are considered challenging (Steptoe, 2019a). In this sense, it is important to address potential negative ageing stereotypes that older people cannot learn new skills (see chapter on ageism in this book). Moreover, one can transmit the message that the experience that older individuals accumulated over the lifespan can represent an asset for happiness and well-being in older age (Lyubomirsky et al., 2005). All the accumulated happy memories, the positive social relations, or the coping skills one developed over the years can serve as resources for happiness in later years.

Interventions addressing mental health among older adults usually focus on those who experience extreme negative emotions (e.g. severely depressed, anxious) because, usually, these are the ones who get to be referred to therapy by health professionals or social services (Orsega-Smith et al., 2019). A study from the USA, named evidence-based mental health programmes, targeted older adults who were home-bound or clinically depressed (Orsega-Smith et al., 2019). These programmes included "Healthy IDEAS" (i.e. Identifying Depression, Empowering Activities for Seniors), PEARLS (i.e. Program to Encourage Active, Rewarding Lives), and IMPACT (Improving Mood-Promoting Access to Collaborative Treatment). While such interventions aim to enhance well-being, which is in accordance with positive psychology principles, their focus is mostly on negative emotions and problematic actions (e.g. reduce depression, decrease substance abuse).

However, designing and implementing preventive programmes to increase happiness among middle-aged and older individuals could have beneficial effects for this particular target group. For example, enhancing well-being reduces negative emotions, behaviours, and thoughts that may lead to mental health issues and physical health problems (Layous et al., 2014). Increasing well-being reduces the probability of experiencing anxiety or depression and their negative health effects (Fredrickson et al., 2000), stimulates people to engage in approach actions (Fredrickson, 2001), and reduces the chances that people engage in rumination (Lyubomirsky et al., 2011b). Increasing happiness among older adults can also act as a buffer in the case of negative life events such as losing a significant other, being diagnosed with a chronic illness, or losing social roles after retirement. In a similar way, in the case of middle-aged individuals, increasing levels of happiness can help them deal with stressful life events such as divorce, parenting teenage children, caring for ageing parents, and so on. As discussed also above, according to the *broaden and build theory* (Fredrickson, 2001), experiencing positive emotions expands peoples' way of thinking, broadens their attention span, stimulates creative solutions to problems, and pushes them to approach challenges and explore novel situations (Layous et al., 2014). When people feel good, they will act and reinforce their resources (e.g. social resources by going out and meeting new people or consolidating their existing social support networks). In contrast, when people feel depressed, they are more likely to disengage and reduce their coping resources (e.g. they do not go out, they isolate themselves etc.), which only leads to feeling more stressed. Additionally, as discussed in other chapters (see chapter on depression, anxiety in this book), it is more challenging to work with older individuals who are already depressed and risk suicide or who suffer from an anxiety disorder. In contrast, interventions that foster emotional development and outcomes like happiness and well-being could be already targeted at middle-aged individuals to prevent intense negative emotions and their detrimental effects in older age. Doing this, however, often requires a change of mindset from focusing on reducing negative emotions to concentrating on how to increase well-being in midlife and older age. Nowadays there are two types of interventions that target the increase of happiness in older people (Steptoe, 2019a). The first aims to increase subjective well-being specifically (e.g. mindfulness training, gratitude interventions), while the latter does so more

indirectly (e.g. physical activity interventions, stimulating social engagement) (Windle et al., 2010; Bolier et al., 2013; Ronzi et al., 2018).

Positive psychology intervention principles (PPI) and developmental assets can be integrated in interventions to promote well-being among older individuals. Positive psychology encompasses the study of positive emotions and positive individual traits (Duckworth et al., 2005). One of the important assumptions of positive psychology is that human strengths and virtues can act as buffers against the negative effect of stressors on individual mental health (Duckworth et al., 2005). Thus, by enhancing strengths and virtues, one can promote mental health and well-being. When designing interventions from a positive psychology perspective to improve happiness and well-being, it does not mean that we aim for people to be happy all the time. As Cuadra and Florenzano (2003) argue, happiness should be about enjoying the process, facing pain, and transforming negative experiences into something good and meaningful. Giving meaning to difficult or challenging experiences associated with ageing (e.g. deteriorating health, death of significant others, retirement) can also help individuals develop in older age.

Positive psychology interventions are evidence-based, purposeful activities that are designed to enhance positive emotions, as well as promote actions and thoughts that facilitate flourishing (Parks & Biswas-Diener, 2014; Sin & Lyubomirsky, 2009). There is a growing evidence-base that positive psychology interventions have an impact on older adults' well-being (Sutipan et al., 2017). Several interventions targeting older individuals used a positive psychology frame and well-being as an outcome. Well-being as a construct is operationalized by making use of five measurable concepts: (1) positive emotion, (2) engagement, (3) meaning, (4) positive relationships, and (5) accomplishments (PERMA). For instance, "The Art of Happiness" represents an intervention that was designed based on these PERMA principles to promote happiness and well-being among older adults. The programme was designed for 8 weeks, to include weekly 90-minute sessions on different topics such as the definition of happiness, reflecting on happiness (e.g. identify individual sources of happiness, make a distinction between happiness and pleasure), compassion and human connection (e.g. discuss the importance of human connection, intimacy, sharing), learning stress management (e.g. understand causes of stress and learn ways to cope), forgiveness (e.g. understand the link between forgiving and happiness), transforming suffering (e.g. dealing with guilt, learning how our suffering can make us develop), learning mindfulness (e.g. understand how living in the present can improve happiness), and practicing humour (e.g. understand how humour can foster happiness) (Lyubomirsky, 2008). Each session included teaching, didactic materials, interactive activities, and homework (e.g. assignments and reading material). Assignments included accomplishing three acts of kindness for three different people (i.e. compassion, kindness) or writing down each day, three things for which one is grateful (i.e., gratefulness), writing a letter of apology to someone whom you offended and writing a letter of apology to oneself for something you regret doing in the past (i.e., forgiveness), reflecting on a negative experience and how one has dealt with it in the past (i.e. transforming suffering) (Lyubomirsky, 2008; Orsega-Smith et al., 2019). Findings from the study testing the

"Art of Happiness" intervention showed promising results in the sense that it had an impact on older individuals' well-being and psychological health. Results also lend support to the idea that older people can still learn new skills in general and specifically concerning how to be happy (Orsega-Smith et al., 2019). Thus, this structure and type of exercises (Lyubomirsky, 2008; Orsega-Smith et al., 2019) can be integrated in other programmes that aim to promote happiness and well-being among middle-aged or older adults.

Concerning the factors that one can integrate in interventions to promote happiness in older age, a balance between effortful and relaxing activities was found to be relevant (Oerlemans et al., 2011). Studies have shown that engagement in social (e.g. interacting with friends, family, grandchildren), physical (e.g. walking, doing sports, biking), and cognitive activities (e.g. solving puzzles, reading) predicts happiness in older age (Oerlemans et al., 2011; Wang et al., 2006; McAuley et al., 2007). Happiness can be experienced during daily activities (Oerlemans et al., 2011), and these can easily be incorporated in interventions that promote happiness among older adults. Activities are also included among the happiness increasing strategies that serve as protective factors for physical and mental health (Layous et al., 2014; Lyubomirsky et al., 2011a). As noted above, engagement in positive activities (i.e. triggering positive emotions) decreases the impact of risk factors and reduces the frequency of the processes that can stimulate risk factors (Layous et al., 2014).

Thus, when designing interventions to increase happiness among middle-aged and older adults, one could aim to (1) stimulate having *a sense of purpose* and *meaning in life*, (2) *cultivate positive strengths* (e.g. optimism, self-efficacy), and (3) boost *developmental assets* in all life domains (i.e. personality, social, emotional, cognitive, and physical). All these aims could be achieved by engaging in positive activities because these are purposeful, have a meaning, and foster strengths and developmental assets. By engaging in activities, older individuals can effectively increase their happiness (Lyubomirsky et al., 2005, 2011a; Lyubomirsky, 2008; Sin & Lyubomirsky, 2009). Such activities may include thinking optimistically about one's future (Scheier & Carver, 1993), counting one's blessings (McCullough et al., 2002), savouring positive experiences (Jose et al., 2012), or engaging in acts of kindness (Krueger et al., 2001). Concrete examples of exercises designed to express gratitude that can be included in interventions are writing letters of gratitude to someone who has helped them in one way or another (Lyubomirsky et al., 2011a; Boehm et al., 2011) and listing "five blessings" or "three things one is grateful for" once a week (Chancellor et al., 2018; Lyubomirsky et al., 2005). These activities help people focus on positive aspects of their lives instead of negative ones and make a habit out of looking on the bright side. Another exercise older people can practice for enhancing optimism is spending 15 minutes per week to write about the best possible future self and to visualize living life in consistency with this model (Lyubomirsky et al., 2011a). Nevertheless, this exercise of the "best possible self" was designed for younger people (King, 2001) and, thus, in the case of older individuals could be combined with discussing potential negative ageing stereotypes (e.g. thoughts about not being able to change oneself in older age) and

providing evidence that positive change can happen in older age (e.g. personality, cognitive, emotional, social, physical). Older individuals may prefer to focus on a positive past as compared to a long-term positive future (Lyubomirsky & Layous, 2013). Potential exercises include performing acts of kindness, using one's strengths in novel ways, affirming one's most important values, and meditating on positive feelings towards oneself and others (Layous et al., 2014; Seligman et al., 2005; Fredrickson et al., 2008). For instance, the "loving-kindness" meditation (Fredrickson et al., 2008) means that people learn to cultivate loving, compassionate feelings towards themselves and others, and this was shown to increase positive emotions and consequently developmental resources, such as social relations and health and an increase in life satisfaction (Fredrickson et al., 2008; Layous et al., 2014).

According to the *positive activity model* (Layous and Lyubomirsky 2014), positive actions promote well-being through several mechanisms, namely, they boost positive emotions, thoughts, and behaviours and satisfy psychological needs (Layous et al., 2014). Positive activities can be both behavioural (e.g. performing acts of kindness, savouring positive experiences) and cognitive (e.g. imaging one's best possible self, identifying one's most important values or strengths) and should not be difficult to implement with older individuals. Participating in gratitude and optimism exercises was shown to increase the frequency of positive thoughts and positive evaluations of life situations (Layous et al., 2014). This can prove useful when life events are not necessarily positive (Dickerhoof, 2007) and especially in the case of older individuals who need to deal with various negative events (e.g. loss of health, changes in social roles or social status, diminished social networks, etc.). In this sense, rumination represents a negative type of cognition where individuals are focused on themselves and their problems without taking concrete action to solve these. While rumination can be associated with a series of mental disorders (Nolen-Hoeksema & Watkins, 2011), positive activities, such as engaging in acts of kindness, can help individuals to shift focus from themselves and their issues and thus reduce the frequency of rumination (Layous et al., 2014). Acting in a prosocial manner also stimulates a positive identity (e.g. I am a nice, caring person) and improves social relations (e.g. social networks as developmental assets). Gratitude exercises can help ruminators broaden their perspective and see that not only bad things happen to them daily or that there are people with bigger problems out there (Fredrickson, 2004). Affirming one's most important values (e.g. seeing oneself as competent) can help people improve their view of themselves and build self-efficacy (Sherman & Cohen, 2006). Additionally, it was shown that positive activities can reinforce each other and determine an upward spiral (Fredrickson & Joiner, 2002). For instance, people who counted their blessings were reported to exercise more than individuals who were told to count their daily stressors (Emmons & McCullough, 2003). Engaging in positive activities was also reported to satisfy psychological needs such as connectedness, competence, autonomy, and control (Layous et al., 2014), which are all relevant for positive ageing.

Happiness and well-being in older age are closely related to concepts such as successful ageing, positive ageing, or active ageing, since being happy in later life represents an aim of such models and policies (Baltes & Baltes, 1990; Rowe &

Kahn, 1997; WHO, 2002; Ryff, 2018). There are studies that show happiness can lead to more success in life (Lyubomirsky et al., 2005). Thus, we can assume that it can also help with facilitating positive ageing. If individuals are happier, they are more likely to improve their positive strengths and boost their developmental assets and thus build resources for experiencing well-being in older age. Thus, intervening at individual level to promote happiness and well-being can serve preventive purposes (e.g. preventing negative emotions, such as depression or anxiety, cognitive decline, or loneliness among older adults). Additionally, happiness interventions may be helpful for middle-aged or older individuals who feel lonely or who frequently ruminate. Engaging in positive activities can help such individuals experience positive emotions and build up their social resources. Nevertheless, despite the success of such individual or group interventions in enhancing happiness, targeting only individuals may not be enough. Interventions at the community level, where one would create opportunities for older individuals to flourish, are necessary. In order for individuals to practice their skills and build their developmental assets, interventions in the environment are also needed (e.g. safe parks where older adults can walk, meet, exercise, and play with their grandchildren, leisure centres providing activities for older adults, available public transport, volunteer or work opportunities for older adults, accessible health check-ups, opportunities to interact with the younger generation, etc.). Social exclusion was shown to imply several disadvantages (e.g. low socioeconomic status, ageism, poor urbanization, lack of health services) that constitute barriers to happiness in older age (Fokkema et al., 2012; Walsh et al., 2017). Poor socioeconomic status increases poverty in older age and limits opportunities to travel and thus reduces chances for social interaction and participation as well as for engaging in positive activities (Burholt et al., 2020). Ageism was shown to lessen the social integration of older individuals in the neighbourhood community (Vitman et al., 2014). Furthermore, statistics point out, for instance, that there are still social inequalities between western and eastern European countries in what well-being among older adults is concerned (Lee, 2020). Thus, policy interventions are needed to reduce social exclusion of older adults and increase opportunities for enhancing well-being. Several social exclusion domains were outlined that could serve as target for interventions to improve the lives of older adults. These are material and financial resources (e.g. finances, opportunities to work), civic activities (e.g. political decision-making, volunteering in the community), social relations (e.g. providing social interaction opportunities), basic services (e.g. health, social services, access to information), and neighbourhood cohesion (safe and nice housing areas) (Scharf & Keating, 2012).

Similar to positive ageing critics (Minkler & Holstein, 2008; Liang & Luo, 2012), happiness can also become a burden in the sense that middle-aged or older people may feel compelled to be happy all the time. Moreover, they may feel overwhelmed by the responsibility to be happy and feel they have failed to meet the standards of activity, productivity, or happiness in older age (Minkler & Holstein, 2008). Happiness can be regarded as reaching a balance between positive and negative emotions, similar to the harmonious ageing model (Liang & Luo, 2012). In this sense, it is interesting to reflect whether happiness constitutes an individual or a

societal task and whether it represents an individual or a political responsibility. Critics of the successful ageing model claim that ageing is political in the sense that policies shape expectations and opportunities concerning old age (Lassen & Moreira, 2014). Similarly, happiness may also be politicized. Setting rigid standards for happiness in old age may create too big a pressure to be happy and should be replaced with guidelines that can help older people select their own path to a happy old age. On the one hand, having a toolbox of positive activities and a pool of developmental assets can provide an individual with flexible choices for making the best out of one's life circumstances. On the other hand, societal resources are needed in order that middle-aged and older adults can boost their developmental assets. In this sense, the responsibility at a societal level is to facilitate development rather than dictate happiness standards.

Conclusions

One important question concerning happiness is to what extent one can influence it. Researchers working from a positive psychology perspective argue that happiness is not determined by genetic factors or circumstances, but by an interplay of both, as well as a series of actions that are fortunately under personal control (Layous et al., 2014; Lyubomirsky, 2008; Lyubomirsky et al., 2005, 2011a). Thus, one's level of happiness can be influenced by engaging in positive activities (Lyubomirsky et al., 2005; Oerlemans et al., 2011; Layous et al., 2014) and cultivating ones' strengths (e.g. optimism, self-efficacy, self-esteem, gratitude, etc.) (Peterson & Seligman, 2004; Seligman et al., 2005; Peterson et al., 2005). Another relevant question is whether people can still be happy in older age or improve their well-being level. Fortunately, studies show this is the case (Layous et al., 2014; Sutipan et al., 2017; Orsega-Smith et al., 2019). Happiness and well-being can be promoted along the lifespan, and one can start early to build up developmental resources for older age. Promoting well-being and happiness instead of just focusing on decreasing negative emotions can stimulate development in older age across all life domains (e.g. ensure better health, better cognitive functioning, larger social support networks, openness to new experiences, better emotional regulation). According to the positive activity model (Lyubomirsky & Layous, 2013), engaging in positive activities can increase happiness by stimulating positive emotions, behaviours, and thoughts, as well as satisfying psychological needs, such as the need for autonomy or connectedness (Layous et al., 2014). Engaging in behavioural (e.g. performing acts of kindness, writing a gratitude letter) or cognitive (e.g. identifying one's values and strengths, counting one's blessings) positive activities can help foster positive strengths (e.g. optimism, gratitude) and developmental assets (e.g. social networks, social support, openness to new experiences etc.), as well as provide life with meaning.

Another important question is whether happiness is solely an individual responsibility or a societal one. Middle-aged and older individuals can work on cultivating their personal strengths and developmental assets. However, policies and

community interventions are needed to provide opportunities to engage in positive activities in midlife and older age. Also, policies should not just dictate standards for happiness in midlife and older age, but facilitate the improvement of strengths and developmental resources among middle-aged and older individuals to promote their well-being and quality of life.

Reflection Questions

1. How would you define happiness for yourself? What are the resources for your happiness?
2. What resources do you think you can develop in order to experience happiness in older age?
3. How would you explain the relationship between personality and happiness?
4. Why is happiness important for development? Explain briefly and provide three examples.
5. Give three examples of aims and three examples of strategies you would use for a happiness intervention targeted at older adults, based on a positive psychology framework.
6. From your perspective is happiness an individual responsibility or a social one? Explain your answer.

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Chapter 14
Addressing Loneliness in Midlife and Older Age: Increasing Social Skills and Connectedness

Introduction

Loneliness can have negative consequences at any life stage, but in midlife and older age, it may come on top of other problems (e.g., health issues, depression, divorce, retirement, grown-up children leaving home, and moving to another city) and have a negative impact on the quality of life of middle-aged and older individuals as well as their overall development. Therefore, it is interesting to address loneliness from a positive psychology viewpoint and reflect on its relationship with development in midlife and older age. Like several other topics in this part of the book (see chapter on death, chapter on suicide, chapter on depression, chapter on anxiety), at first glance, it is hard to imagine that the topic of loneliness can be addressed from a positive psychology perspective. However, applying positive psychology principles to understand how people cope with loneliness, what strengths they need to develop to prevent being lonely in older age, and how to intervene to reduce loneliness among affected middle-aged and older individuals can help design more effective interventions.

Loneliness is often considered part of normal ageing, reflecting the existence of a negative ageing stereotype. Although, it is true that there are older adults who feel lonely in their old age, this does not imply that loneliness is a characteristic of growing older. People can feel lonely at any stage of their lives. Nevertheless, similar to other negative experiences (e.g., see chapter on depression, anxiety, and suicide prevention in this book), the negative effects of loneliness can accumulate over the lifespan, and people who feel lonely when they are young are more at risk of feeling lonely in their midlife and old age. Furthermore, there is evidence that loneliness scores form a U-shape across the lifespan, meaning that the highest loneliness is reported among under 25-year-old and among over 65-year-old individuals (Victor & Yang, 2012).

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Statistics from Western countries show that 20–40% of the older adults report feeling lonely (Savikko et al., 2005; Theeke, 2009; Stickley et al., 2013) and that one third of the elderly will experience some degree of loneliness in old age (Ayalon & Shiovitz-Ezra, 2011). Feeling lonely seems to be particularly the case for the older old, as among those aged over 80 years old, the reported frequency of loneliness was of 50% (Pinquart & Sörensen, 2003). If we regard these results from a positive psychology point of view, it means that there are still a lot of old individuals who do not feel lonely. Thus, one important step for prevention and intervention design is to change the idea that it is normal that older people should feel lonely in old age. Middle-aged individuals may feel lonely in different ways as compared to older adults. For example, they may feel not understood at work (e.g., they feel they do not belong to the work community), feel they do not communicate with their teenage children, are ignored and misunderstood by their life partners, or have lost their parents which can leave them with a feeling of being abandoned even if they are adults in their 40s and 50s. Addressing loneliness from a positive psychology perspective can change the way one formulates intervention objectives, focusing not just on reducing negative emotions (e.g., anxiety, depression, feelings of not belonging) but on increasing strengths (e.g., resilience, hopefulness, optimism) and developmental resources (e.g., social skills, emotional regulation abilities, mobility, cognitive flexibility, openness to new experiences).

Older people are often thought to be lonelier than younger people or compared to how they were in their youth. Some authors suggest that old age itself provides the setting for feeling lonelier than during earlier stages of life (Bandari et al., 2019; Cohen-Mansfield et al., 2016). For example, there are several loneliness risk factors that are associated with old age, such as widowhood, retirement, chronic illness, or the situation of living alone (Savage et al., 2021). Older women seem to be particularly at risk of feeling lonely because they are more often widows, take on a caregiver role, have lower incomes, and tend to acknowledge feeling alone (Cohen-Mansfield et al., 2016; Bott et al., 2017; Savage et al., 2021). Loneliness was described as a public health problem, as there is a whole evidence-base pointing out its negative consequences for physical and mental health in old age (Bosma et al., 2015; Larsson et al., 2019; Armitage & Nellums, 2020; Savage et al., 2021). Knowing the negative impact of loneliness on mental and physical health, we wonder how we may approach this issue from a positive psychology point of view. Could loneliness under certain circumstances also have positive consequences? Additionally, it is interesting to ask what influence does loneliness have on the development of middle-aged and older adults? Furthermore, for those middle-aged or older adults who do feel lonely, what interventions would work best to reduce the occurrence of negative emotions?

In this chapter, I will apply a positive psychology perspective to explore the experience of loneliness in midlife and older age. First, I will examine how loneliness was defined, how it can be measured, and what factors contribute to its occurrence in midlife and older age. Next, I will analyse the potential effects of loneliness on different areas of development (i.e., cognitive, emotional, social, physical, personality). Finally, I will examine how positive psychology principles as well as

developmental assets can be applied to prevent or reduce the occurrence of loneliness in midlife and older age.

The Experience of Loneliness in Midlife and Older Age

Loneliness has been defined as a "negative feeling resulting from a perceived deficit in companionship, quantity or quality of one's relationships with either an attachment figure or the community" (O'Rourke et al., 2018). Loneliness was also explained as a perception of inconsistency between the expected strength of social networks and the experienced reality of the quality of such social relations (Bandari et al., 2019). Another conceptualization explains loneliness to be the reflection of a discrepancy between our desired social relations and our actual social relationships in terms of emotional support, level of intimacy, connectedness, or closeness (Hawkley & Cacioppo, 2010). It is important to note that loneliness represents a subjective feeling. This means one can feel alone even when one has a spouse, lives with other people, or is integrated within a social group that does not meet the needs of the person (e.g., an older person who does not get along with the family, is in an old people's home). In contrast, one can live alone or be alone for longer periods of time without feeling lonely. Feeling lonely is not synonymous with feeling alone or with social isolation or solitude, namely, the objective separation from other people (Larsson et al., 2019). Sometimes, short periods of social isolation can even be beneficial because they are useful for self-reflection (Cacioppo et al., 2014) and thus for personal development (e.g., analysing what we like or do not like about ourselves, reflecting on our social relations, etc.). It is even argued by some authors that loneliness can represent an evolutionary mechanism and that the extent of suffering from the pain caused by isolation or lack of communication varies from individual to individual (Cacioppo et al., 2014). Those who are less sensitive to this pain may be more inclined to discover new environments and be more adventurous (Cacioppo et al., 2014). In contrast, individuals who are more sensitive to the pain of isolation will tend to be more vigilant and prudent (Cacioppo et al., 2014).

Loneliness implies feeling disconnected, isolated, or a constant feeling that one does not belong (Hughes et al., 2004). This has also been formulated in the cognitive discrepancy model, which suggests that there is an indirect link between the objective size of the social network and feeling alone. Also, this link is mediated by the cognitive processes of perception and evaluation (De Jong Gierveld, 1998). The perception of the discrepancy itself does not automatically mean that a person feels alone. Rather, the evaluation processes, such as causal attributions (e.g., I am alone because I am old and people do not want to spend time with me), social comparison (e.g., other people are much more popular and surrounded by friends), and personal control (e.g., I cannot influence my social life), can make one feel lonely. Past events and the experience of other people also play a role in this evaluation process.

Some researchers argue that loneliness is often discussed from an objective point of view and the voices and stories of older individuals are ignored (Ågren &

Cedersund, 2018). Loneliness was found to be a subjective experience that does not depend on age (Mund et al., 2020). Therefore, findings from qualitative studies can help identify the risk factors for loneliness as well as understand the loneliness experience from the perspectives of middle-aged and older individuals themselves. For example, one qualitative study illustrated the idea that older people can feel lonely despite having an active social life (Larsson et al., 2019). Interviewed older individuals reported how they did numerous activities (e.g., pursued hobbies, volunteered), but missed having close friends to talk to. Also, results confirmed that losses (e.g., death of loved ones, loss of status when retiring) and moving to a new place constituted risk factors for feeling lonely (Larsson et al., 2019). Some older adults recounted how they moved to be closer to their children and grandchildren; however, these were busy with their lives, and they missed having people to talk to and spend time with. For some older individuals, it was difficult to go somewhere by themselves (e.g., go to a concert, go to the cinema, have a walk), or they found it difficult to make new friends since they felt they did not want to "be too pushy" with others (Larsson et al., 2019). The interviewed older individuals also associated loneliness with certain times such as weekends, dinnertime, and summertime. Summer was mentioned because it used to be a time for holidays and travelling and socializing for them (Larsson et al., 2019). Older people who reported not feeling lonely attributed this to having several friends and especially having significant people in their lives to talk to (Larsson et al., 2019).

The COVID-19 pandemic unfortunately provided a social context where older people were increasingly at risk of feeling lonelier (e.g., social distancing rules, lockdowns, stay at home directives, etc.). At the beginning of the pandemic, health ministries in most countries instructed older adults to stay at home, have medication and groceries delivered, and avoid seeing family and friends (Armitage & Nellums, 2020). This was done to protect the elderly from getting infected with the virus, but such policies ignored the negative effects that social isolation may have on older individuals (Armitage & Nellums, 2020). The loneliness that older people felt before the pandemic was augmented by fears of getting infected, the fear of dying alone, coexisting chronic illnesses, loosing significant others, and feeling helpless (Briguglio et al., 2020). Several qualitative studies investigated the experience of loneliness among older people during the pandemic. For example, one study showed that older individuals were scared to go out and socialize because they were told that older people represent a high-risk group for getting infected with COVID-19 (Naeim et al., 2021). One older man reported how during lockdown he felt useless and impatient and at times also depressed because he had no one to talk to (Naeim et al., 2021). Another interviewed older man recounted how the fear of getting infected with COVID-19 controlled his life, especially after he heard about other older people dying alone at home (Naeim et al., 2021). Another qualitative study described how older individuals considered themselves somehow trapped between their fear of getting the illness and the feeling of being isolated (Falvo et al., 2021). The interviewed older individuals mentioned feeling both protected and stigmatized during the lockdowns and how the latter increased their feelings of loneliness associates with the risk of social exclusion (Falvo et al., 2021).

The abovementioned examples mostly serve to illustrate how older adults may experience loneliness and its negative consequences. In contrast, middle-aged individuals have different reasons for feeling lonely. For example, they can feel lonely within the couple or because of being "still single" or being childless in midlife. Furthermore, middle-aged people may feel lonely at work in a community where they do not feel they belong and do not feel heard or represented (e.g., in a company that values young employees and youthful values and does not show understanding for issues such as parenthood or having to take care of ageing parents). In the case of the COVID-19 pandemic, some authors argued that this represented a personal experience of loneliness, influenced by objective factors (e.g., lockdown regulations) and subjective factors (e.g., individual attitudes, coping strategies, emotional reactions, etc.) (Strizhitskaya et al., 2021). One study focusing on loneliness in middle-aged individuals points out that different social role demands (e.g., caring for ageing parents, parenting, work stress) concerning this age group have led to social isolation (Wister et al., 2022). Additionally, the experience of loneliness in midlife can be enhanced by multimorbidity (Wister et al., 2022). Earlier studies already illustrated the higher stress level experienced by the "sandwich generation", burdened by parenthood, caregiving, and stressful employment (Chassin et al., 2010; Smith-Osborne & Felderhoff, 2014). These demands are considered to have increased with recent demographic trends such as delaying childbearing, an increasing need for caregiving within the family, and demographic changes, such as the rise in the ageing population (Burke, 2017; Mitchell, 2021). In the following I will explore the theoretical models that seek to explain loneliness in midlife and older age, focusing on both risk and protective factors that may play a role for experiencing loneliness.

Explaining Loneliness in Midlife and Older Age

We have already seen above that older age is associated with loneliness. But does old age constitute a risk factor for loneliness? Actually, studies show that not age itself but several health or contextual age-related factors can lead to the experience of loneliness in older age (Bandari et al., 2019; O'Rourke et al., 2018). For instance, health can be a reason for feeling lonely because an illness or functional disability limits the possibilities of going out and socializing with other people (Rico-Uribe et al., 2016; Cohen-Mansfield & Parpura-Gill, 2007). Contextual factors include the absence of a social network, lack of community activities for middle-aged or older individuals where they can socialize or meet new people, or health regulations like the ones formulated during the pandemic (e.g., lockdowns when people were not allowed to meet in person, social distancing). Often in older age, loneliness can be triggered by losing significant others, such as the death of the life partner or close friends (Valtorta & Hanratty, 2012). Particularly, older women were found to be more at risk for experiencing loneliness in old age, as well as older people with low socioeconomic status or those living in a nursing home (Pinquart & Sörensen, 2001;

Savage et al., 2021). Ageism, defined as prejudice and discrimination against older people, can also constitute a factor that determines loneliness among the older people (Shiovitz-Ezra et al., 2018). Social rejection may result in older adults withdrawing from social life and consequently feeling alone (Shiovitz-Ezra et al., 2018).

Another pathway that can lead to older adults feeling alone can be explained by the stereotype embodiment theory (Levy, 2009, see also Chaps. 1, 2, 3, and 4 in this book). For instance, Pikhartova et al. (2016) found that beliefs about loneliness in midlife or old age can become self-fulfilling prophecies, just as suggested in the stereotype embodiment theory. Additionally, social exclusion can often cause feelings of loneliness in old age. If negative stereotypes on ageing become institutionalized forms of discrimination, these can act as barriers towards the participation of older individuals in social life (Shiovitz-Ezra et al., 2018). Some examples of such institutionalized forms of discrimination entail mandatory retirement, prejudice within the healthcare system, and the organization of the social environment itself (Shiovitz-Ezra et al., 2018). Concerning the latter, inaccessibility of activities due to long-distance or unavailable transport, lack of resting areas, lack of elevators or escalators, or insufficient lightning can constitute barriers towards older people attending events or socializing. Nevertheless, sometimes, older people may feel alone even if they are socially active and engaged in several hobbies or voluntary work (Larsson et al., 2019). In this situation, feelings of loneliness may emerge because people feel they do not really connect to others and lack having close friends to talk to about important emotional experiences.

Loneliness represents a complex concept that has both a social and an emotional dimension (Weiss, 1973). *Social loneliness* refers to lack of social networks, absence of friendships, or the feeling of not belonging to the community or society. *Emotional loneliness* implies the feeling that one does not have people to turn to when one needs to talk about relevant emotional experiences. In this sense, several authors defined loneliness as lack of social and emotional relations (Dahlberg et al., 2015; Fernandes et al., 2014). Loneliness represents an unpleasant subjective experience that is not the same with the objective situation of physically being alone (Nicolaisen & Thorsen, 2014). How one explains loneliness has implications for evaluating it. When can we say that people are lonely? Do we rely on objective or subjective information when assessing loneliness among middle-aged or older individuals? In the following, I will describe some measurement instruments we may use when evaluating loneliness in midlife and older age, as well as what risk and protective factors we could assess to design interventions for reducing loneliness.

Measuring Loneliness in Midlife and Older Age

The measurement of loneliness represents an important issue when we want to design interventions and test their effectiveness in reducing feelings of aloneness among middle-aged and older individuals. How can we say that someone is lonely and not just likes to spend time by himself or herself such as an introvert would

happily do, for example? Since the number of social contacts is not relevant as a criterion, we could measure, for instance, the perceived quality of the social relations in a person's life. In this sense, researchers point out that we can learn a lot from qualitative studies on loneliness. Giving middle-aged and older individuals a voice to talk about their feelings and experiences can help understand loneliness from their perspective and design prevention and intervention programmes that are adapted to their needs. Many studies with older adults focused on the number of social contacts, frequency of contact, and communication content with social contacts (e.g., information, advice seeking etc.) but not on whether older people consider themselves socially isolated (Berkman & Glass, 2000; Seeman, 2000).

Hughes et al. (2004) developed the *Three Items Loneliness Scale* that can be applied to measure this feeling easily in various settings (e.g., telephone survey, self-administration). The three items are "how often do you feel you lack companionship?", "how often do you feel left out?", and "how often do you feel isolated from others?". Responses range from 1 (hardly ever), 2 (sometimes), and 3 (often). These items were adapted from the revised version of the *UCLA Loneliness Scale* (R-UCLA, Russell et al., 1980), which comprises 20 items and is therefore considered a bit too long for being applied in some settings with older adults. Nevertheless, the *UCLA scale* has been applied in research studies for several decades and is considered useful for identifying loneliness (Penning et al., 2013; Hawkley et al., 2005, 2008, 2010). The scale was criticized for only measuring the social component of loneliness (e.g., not feeling integrated in social networks of friends, neighbours, community) and ignoring the emotional dimension of the concept referring to intimate relationships (Penning et al., 2013). Considering the distinction between emotional and social loneliness, another instrument was developed, namely, the *Jong Gierveld Loneliness Scale* and the corresponding revised version of the scale (*dJG*, de Jong Gierveld & Kamphuis, 1985; de Jong Gierveld & Van Tilburg, 1999). This scale can be used to measure loneliness or just evaluate the social or emotional component separately (de Jong Gierveld & Van Tilburg, 2006). It has been suggested that the dJG Scale can be utilized more reliably in cross-sectional and longitudinal studies, especially those with middle-aged and older adults (Penning et al., 2013).

Other instruments focus on specific aspects of loneliness such as the *family emotional loneliness* scale (Strizhitskaya et al., 2020) with 7 items assessing loneliness related to family interactions. In contrast, the *non-family emotional loneliness scale* (Strizhitskaya et al., 2020) has 6 items that measure loneliness experienced in relationships with other individuals who are not relatives, such as with friends. The *loneliness in romantic relationships scale* (Strizhitskaya et al., 2020) comprises 3 items that measure the presence or absence of a romantic relationship. Another scale, the *romantic emotional loneliness* scale, has 3 items that evaluate loneliness within the couple relation (Strizhitskaya et al., 2020). *The general experience of loneliness scale* (Strizhitskaya et al., 2020) includes 8 items that assess the experience of loneliness that is not related to a specific situation. The *dependence on communication scale* (Strizhitskaya et al., 2021) has 8 items that measure the negative attitudes concerning the idea of being alone, seeking communication, and relations

at any cost in order to avoid being alone (Strizhitskaya et al., 2021). The *positive loneliness scale* (Strizhitskaya et al., 2021) comprises 8 items that focus on the ability to see loneliness as an opportunity for self-reflection and self-development. This last scale is relevant when designing interventions that focus on the positive aspects of being alone to reflect on oneself and one's self-development in several life domains.

As discussed above, *risk factors* for loneliness include a series of losses such as health decline, disability, widowhood, death of relatives and friends, or retirement (Smith, 2012). Emotional loneliness emerges when intimate relationships are lacking, while social loneliness appears when social networks are absent (Eloranta et al., 2015). Thus, when assessing risk factors, one can evaluate the perceptions of older persons concerning the quality and quantity of their social relations. Not having close, reliable friends to talk to about intimate issues or not having a strong social network can both represent risk factors for loneliness in midlife and older age. In this context, we could also evaluate the social skills of older individuals as well as their cognitions concerning making friends (e.g., if they believe it is easy or difficult to make new friends and why). Negative ageing stereotypes (e.g., "one does not make friends in older age", "who would want to befriend me at my age?") can constitute barriers towards making friends or enlarging one's social network. Evaluating such potentially negative, ageing stereotypes can prove useful for designing loneliness prevention and intervention programmes.

From a positive psychology point of view, it is relevant to consider the strengths that people can use to prevent or reduce loneliness in midlife and older age. Table 14.1 includes a series of character strengths and developmental assets that

Table 14.1 Instruments to measure protective factors for preventing and reducing loneliness

Protective factor	Evaluation instrument
Sense of coherence	Sense of coherence scale (SOC-13) (Eriksson & Lindström, 2005), a shorter version of the SOC-19 (Antonovsky, 1987)
Social network size	Social network index (SNI, Cohen et al., 1997) measures 12 types of social relations
Social support	Duke social support index, short version, 11 items (DSSI, Koenig et al., 1993), social interaction and subjective support scale
Self-efficacy	The General Self-Efficacy Scale (GSE, Schwarzer & Jerusalem, 1995) 10 items
Hope	The Hope Scale (Snyder et al., 1991) 8 items
Optimism	Life Orientation Test (LOT, Scheier & Carver 1985), LOT-Revised (LOT-R, Scheier et al., 1994) 10 items
Gratitude	The Gratitude Questionnaire (GQ-6, McCullough et al., 2002) 6 items
Grit	The Perseverance and Passion for Long-term Goals scale (Duckworth et al., 2007) 12 items
Resilience	The Resilience Scale (RS, Wagnild & Young, 1993) 10 items
Character strengths	Values in Action Inventory of Strengths (VIA-IS Peterson et al., 2005) 24 strengths

may constitute protective factors for preventing or reducing loneliness among middle-aged and older people. Such protective factors can include a series of character strengths like optimism, grit, gratitude, hope, and self-efficacy (Allenden et al., 2016). These character strengths can be measured, for instance, with the *Values in Action (*VIA*)* classification of strengths (Park et al., 2004). The VIA includes 24-character strengths that are organized around six virtues, namely, wisdom and knowledge, courage, humanity, justice, temperance, and transcendence (Allenden et al., 2016).

For example, resilience represents a developmental resource (i.e., personality development), and it is associated with higher perceived quality of life and reduced negative affect like depression or anxiety (Gerino et al., 2017). Resilience reflects how people deal with adverse life conditions and stress. It is defined as a successful adaptation to threatening or traumatic experiences or the ability to bounce back after experiencing stress (APA, 2011). Old age unfortunately implies several stressful conditions such as loss, illness, or disability. Midlife also comprises a series of stressful situations such as relationship issues, parenting, care for older parents, and work stress, to name just a few. Resilience constitutes a part of successful ageing (Wild et al., 2013) and represents a key element in depression prevention (O'Dwyer et al., 2016) or reduction (Connor & Zhang, 2006). Building resilience as well as self-efficacy in older individuals can help reduce the mental distress associated with loneliness and loneliness dissatisfaction (Gerino et al., 2017).

Why Intervene: Loneliness and Development

Once we have established how loneliness can be measured, it is relevant to think about its impact on development and why it is important to intervene and prevent or decrease loneliness in midlife and older age. Several literature reviews pointed out numerous negative effects of loneliness for older adults, on various dimensions with a direct or indirect impact on development (O'Rourke et al., 2018; Gardiner et al., 2016). Loneliness was shown to have a negative influence on health and well-being in old age (Luanaigh & Lawlor, 2008) as well as *cognitive development*. Specifically, loneliness was associated with the risk for cognitive impairment (Wilson et al., 2015) and cognitive decline (Courtin & Knapp, 2015; Tilvis et al., 2004, 2000) or poor cognitive functioning, for example, for memory performance (Shankar et al., 2013). This means that feeling lonely can affect cognitive development in older age.

On an *emotional level*, loneliness was associated with depression and low satisfaction with life (Courtin & Knapp, 2015). Loneliness often triggers feelings of abandonment or depressive symptoms (Tilvis et al., 2011; Cacioppo et al., 2006; Tiikkainen & Heikkinen, 2005) or even thoughts of committing suicide (Luo et al., 2012). In fact, there is a whole body of evidence for the association between loneliness in older age and feeling stressed or depressed (Cacioppo et al., 2006). Other studies pointed out that lonely people are at risk of low self-esteem, diminished feelings of hope, high negative emotions, and in general lower levels of life

satisfaction (Lee, 2014; Van Orden et al., 2013; Marshall, 2011). Through its effect on cognition and emotion, loneliness may also indirectly impact *personality development*. For example, frequent experiences of loneliness may determine people to become more neurotic and less open or extrovert.

In what concerns the *physical dimension*, loneliness was associated with risk for cardiovascular disease, negative general health, and even mortality (Courtin & Knapp, 2015). Physical development is affected by loneliness since it is associated with increased morbidity (Hawkley et al., 2006, 2010; Hawkley & Cacioppo, 2007; Lauder et al., 2006; Tomaka et al., 2006; Thurston & Kubzansky, 2009) and indirectly because negative emotions such as depressive symptoms can make older people more vulnerable to getting ill. In terms of health and risk behaviours, lonely people were shown to exercise less and smoke more (Theeke, 2010) which can lead to worse health and well-being in midlife and older age.

The mechanisms through which loneliness has an impact on development in several domains are not entirely known and still subject to research. Some authors suggest that loneliness has an indirect impact on health through factors such as health behaviours or sleep problems (Courtin & Knapp, 2015). The losses associated with old age, such as decreasing energy levels and health, can lead to older people being less socially active and consequently, to feeling more lonely. Additionally, the decrease in social networks (e.g., death of spouse, people from the close friends' circle) can also contribute to the social isolation of older individuals since they sometimes also lack opportunities to meet new people and build novel support groups. In this sense, physical and social development can influence the perceived loneliness of older individuals. Unfortunately, without intervention, this can turn into a vicious circle in which loss of significant others, like a spouse or best friend, leads to feeling alone, which in turn determines the worsening of health or increase in depression level. Because of feeling ill or depressed, older people may lack the energy to go out and expose themselves to new situations and social experiences. As a consequence, their feelings of loneliness will increase as their social networks will continue to decrease.

How to Intervene to Prevent and Manage Loneliness in Older Age

Social and ageing policy campaigns have acknowledged the importance of loneliness prevention among middle-aged and older adults. For example, in the UK, a whole national campaign under the ambitious title of "The Campaign to End Loneliness" had been launched in 2011. It comprises several national and local organizations working for the same aim of reducing loneliness levels among the elderly. As we know from previous chapters (see Chaps. 1, 2, 3, and 4, in this book), prevention programmes can aim to avert the problem of occurring in the first place (primary prevention), reduce the symptoms (secondary prevention), and increase well-being despite the problem (tertiary prevention). Primary prevention should

start early in life because after the age of 65 years old the prevalence of loneliness is usually already accentuated. Thus, starting programmes when the older adults reach retirement age and the negative consequences of loneliness are already present may prove to be a bit late. Initiating campaigns and actions that are addressed to middle-aged individuals in order to build strong social networks and intergenerational relations and improve the quality of existing relations can help prevent loneliness in old age. This is especially relevant in times of social insecurity (e.g., economic crisis, pandemics, wars) when social relations suffer because of the social circumstances.

In the first part of this chapter, I described the consequences of loneliness and old age for health, development, and well-being of middle-aged and older individuals. The existing evidence-base on the consequences of loneliness for health and well-being (O'Rourke et al., 2018; Gardiner et al., 2016) makes it clear how important it is to intervene and reduce loneliness or prevent its occurrence to foster development in older age. I also summarized some of the main causes of loneliness, such as contextual (e.g., lack of opportunities for socializing, loss of partner or friends) and individual factors (e.g., state of health, cognitive decline, beliefs about poor social skills). Prevention programmes should tackle both types of factors in order to be effective. For example, in the case of *individual factors*, one should address modifiable aspects such as cognitions, emotions, or behaviours. First, we should identify what are the emotions, cognitions, and behaviours that the person associates with loneliness. One example of typical beliefs would be negative views on ageing that consider loneliness a "normal" part of old age. Such negative views can be replaced with positive views like "I can still make friends in old age" or "I can find people who understand me". Sometimes, older people avoid contact with younger individuals because of negative beliefs such as "young people do not find me interesting" or "I cannot communicate with young people" and "true fiends are only those who have been with you a lifetime". These beliefs need to be challenged and replaced with the conviction that one can still befriend younger people and expand social networks in older age. In addition to changing *negative beliefs about ageing*, one can formulate *social goals* and discuss barriers towards expanding one's social network and ways to address these barriers. The intervention on cognitions should be supplemented with behavioural interventions or teaching and exercising *social skills*. Enhancing *self-efficacy* towards expanding the social networks in older age can also help implement novel social abilities. A third component of such individual interventions can address the emotional dimension. As I have discussed above, negative emotions such as depression and anxiety often accompany the feeling of loneliness and can constitute barriers towards being more sociable and outgoing.

As discussed also in the chapter on social development (see social development chapter in this book), social relations need time and effort to be initiated or maintained. Often, middle-aged or older people lack the time or energy and health to do so. Thus, in accordance with the socioemotional selectivity theory (Carstensen et al., 1999, see also chapter on social development) and the selection, optimization, and compensation model (see chapter, SOC, Baltes & Baltes, 1990), in older age we need to carefully select the social goals, optimize the social skills (e.g. practice

communication with young people), and compensate where resources are lacking (e.g. communicate online through novel social media channels if they cannot travel the distance to see their families or loved ones). Interventions focusing on contextual factors need to create opportunities in the environment so that older people find it easy to go out and socialize. For example, the provision of activities for older individuals that are free of charge or for an affordable sum can encourage older people to take part in the life of the community. Stimulating intergenerational activities and social encounters can also prevent loneliness among older individuals.

For the sake of designing interventions, it is important to clearly operationalize the loneliness concept, as well as differentiate it from other concepts. The operationalization of the concept helps to formulate specific objectives for intervention. For instance, *loneliness* is regarded as the subjective state of feeling alone, disconnected from others. It is conceptualized as the discrepancy between a desired social contact and the reality of the existing social relations and networks (Ernst & Cacioppo, 1999). *Social isolation* refers to the objective small number of social contacts within a social network (Gardner et al., 1999). Thus, goals would be formulated to reduce loneliness by tackling the emotional component (e.g., the feeling of lacking connection, of not belonging) or the cognitive one (e.g., beliefs that are associated with loneliness such as reduced self-efficacy in what concerns social interactions). Objectives to reduce social isolation would address the number of social connections and the quality of interaction and focus on behavioural goals, such as increasing social skills (e.g., learn how to interact with novel connections, use Internet apps to expand social networks) or contextual dimensions like identifying social opportunities for expanding the social network (e.g., join hobby groups, volunteering, sports, etc. where to meet new people).

In order to intervene and reduce the loneliness of older persons, we need to also know what to increase (e.g., positive strengths and developmental resources). *Social connectedness* was described as the opposite of loneliness, as a feeling of belonging or being in meaningful relationships. Social connectedness represents a basic human need, and it was associated with health and well-being in midlife and older age. Social connectedness represents a positive subjective evaluation of social relationships, in the sense that one feels one has constructive, meaningful, close relationships with other individuals, groups, or with society on the whole (Townsend & McWhirter, 2005). Indicators of social connectedness in the case of relations with other individuals are feeling loved, being cared for, perceiving a sense of companionship, and sharing affection. Indicators for relations with groups or the community are, for example, the feeling that one belongs to a certain group (e.g., group of friends, sport team, book club) or community (e.g., feeling integrated and belonging to the academic community, being affiliated to a sports club, feeling one belongs to a certain culture).

There are several reviews on the effectiveness of loneliness reduction interventions (Cattan et al., 2005; Dickens et al., 2011; Hagan et al., 2014; Cohen-Mansfield & Perach, 2015; Gardiner et al., 2016; O'Rourke et al., 2018). Findings point out the intervention types, what kind of interventions function, and in some cases also why these are effective. Loneliness reduction interventions were categorized in different

ways depending on the main components as described in the programme aims or mode of delivery. For instance, Dickens et al. (2011) present the following components of interventions: (1) activities like social or physical programmes, (2) support in the form of discussions, counselling, and education, (3) Internet programmes, and (4) home visits and service provisions. Other researchers categorized interventions depending on how these are delivered, either as a one-to-one intervention (e.g., telephone to offer information, support, home visits) or group interventions (e.g., social support groups). Another more recent review identified several types of interventions based on their purpose, mechanism of action, as well as intended outcomes (Gardiner et al., 2016). Findings from the review pointed out there are social facilitation interventions, psychological therapies, health and social care provision, animal interventions, befriending interventions, and leisure and skill development interventions (Gardiner et al., 2016). *Social facilitation interventions* aim to enable social contact with other people, including other lonely individuals. Such programmes often comprise group-based activities (e.g., a community centre for volunteering), shared interest groups (e.g., walking club, book club), day care centres, and friendship enrichment programmes (Martina & Stevens, 2006; Stevens et al., 2006; Alaviani et al., 2015). Some of these interventions include technology solutions to make communication easier (Ballantyne et al., 2010; Tsai et al., 2010). This can prove very useful when physical contact is difficult due to health issues or physical distance. *Befriending interventions* are a form of social facilitation activities, performed with the aim of forming new friendships. These are usually designed as a one-to-one format and involve volunteers. The difference with social facilitation is that they do not strive for a mutual benefit, but the goal is to help the lonely individual. Some examples are "Senior Companion Program" (Butler, 2006) and "Call in time" (Cattan et al., 2011; Kime et al., 2012). Such projects are effective because they generate a sense of meaning and a sense of belonging. *Leisure and skill development interventions* include a series of activities where older people can spend their leisure time and learn new skills such as gardening (Brown et al., 2004; Tse, 2010), computer use (Fokkema & Knipscheer, 2007; Blazun et al., 2012), and volunteer work. An important aspect is that activities should imply a form of learning or interacting (e.g., reading, finding new hobbies) and not just passive activities (e.g., watching TV).

Psychological interventions are delivered by trained therapists or trained health professionals. These include humour therapy, group reminiscence therapy, and cognitive and social support interventions (Tse et al., 2010; Liu et al., 2007). These kinds of therapies were proven to be effective in reducing loneliness and increasing feelings of life satisfaction. *Health and care provision interventions* referred to health and social care professionals providing support to older individuals. This was usually done either in the community setting or by enrolling in a formal care programme. For example, the CARELINK programme included a partnership with the university, where nursing students visited older individuals on a regular basis to aid socialization (Nicholson & Shellman, 2013). *Animal interventions* (Stanley et al., 2014) imply animal-assisted therapy, usually with dogs or cats. Pet attachment can alleviate loneliness by acting as a coping mechanism, potentially providing social support and companionship.

In another review O'Rourke et al. (2018) identified nine *types of strategies* that work in the case of loneliness reduction: personal contact (i.e., scheduled contact with another person); activity and discussion groups; contact with an animal (i.e., scheduled contact with an animal); skills course (e.g., courses to develop personal skills); non-specific, multifaceted programmes that work on several dimensions; implementation of a new care philosophy; reminiscence interventions (i.e., where people discuss memories, experiences); support groups (e.g., for social or emotional support); and media exposure (e.g., listening to a generation-specific radio programme, podcasts targeted at older individuals).

Compared to other reviews, Gardiner et al. (2016) also looked at what mechanisms make interventions work. Findings point out that the factors that contribute to the effectiveness of loneliness reduction interventions are adaptability, productive engagement, and a community development approach (Gardiner et al., 2016). *Adaptability* refers to the extent that one intervention is adjustable to a specific context. This is particularly relevant when intervention programmes are planned by a national organization (Hemingway & Jack, 2013; Kime et al., 2012) but need to answer to the local needs of the elderly. *Productive engagement* implies activities that have a meaning and provide a sense of purpose. It was shown that interventions featuring productive engagement activities were more effective than those including passive activities or actions with no specific goal (Howat et al., 2004; Pettigrew & Roberts, 2008; Toepoel, 2013). The *community development* component implies that the target population is involved in the service design, as well as intervention implementation process (Bartlett et al., 2013; Hemingway & Jack, 2013).

Conclusion

In this chapter, I discussed the experience of loneliness in midlife and older age, its influence on development, and how one can intervene to prevent or reduce its occurrence in older years. First, it is important to take home the message that feeling lonely is not the same as being physically alone, for instance, by choice (e.g., one goes alone on holiday to reflect about one's life and personal development). One can be physically alone, but can still feel connected with others, be part of a community, and not feel emotionally alone. In contrast, one can live with a spouse, have a family, and engage in social activities but still feel alone. This fact has implications for the assessment of loneliness as well as the risk and protective factors that are associated with it.

Another important point to make is that loneliness is not a normal part of growing older. People can be lonely at any stage of their lives, but with ageing, risk factors can accumulate and determine stronger feelings of aloneness among middle-aged and older people. Nevertheless, not all older people are lonely, and studies should also explore the protective factors that help some individuals avoid feeling lonely in their old age. Risk factors refer mostly to losses connected to old age (e.g., retirement, widowhood, death of significant others, chronic illness, financial issues etc.),

and they may make older age seem like a lonelier stage in life. Losses in all developmental domains can be risk factors for loneliness, such as deficits in the cognitive (e.g., mental impairment), physical (e.g., illness), emotional (e.g., depression), or social (e.g., loss of life partner) realms. However, the elderly can possess developmental resources such as social skills (i.e., social development), emotional regulation abilities (i.e., emotional development), openness to new experiences and resilience (i.e., personality development), cognitive flexibility (i.e., cognitive development), health, and mobility (i.e., physical development) that constitute protective factors concerning loneliness in older age. Building developmental resources can help prevent or reduce loneliness among middle-aged and older individuals.

Loneliness in midlife and older age has a negative impact on health, well-being, and development in older age and can lead to suicidal ideations and even death. Specifically, in case of development across life domains, loneliness can constitute a barrier towards growth on all levels (i.e., cognitive, social, emotional, personality, physical) because of its negative consequences on physical and mental health. Nevertheless, interventions for preventing or reducing loneliness in old age can foster development among the middle-aged and older adults. In this sense, positive psychology interventions may be particularly useful because they aim to increase strengths (e.g., self-efficacy, resilience) and resources (e.g., social skills, emotional regulation) to effectively deal with loneliness in older age. Interventions can target both the emotional component of loneliness (e.g., decrease depression, decrease anxiety, increase happiness, increase feelings of social connectedness) and the social component (e.g., increase social skills, increase social networks). In case of loneliness reduction, interventions should have components focusing on the individual level (e.g., improving social skills, increasing self-efficacy for use of social skills, changing negative beliefs about loneliness being normal in old age), but also make changes at the community level (e.g., providing opportunities for older people to socialize with peers and younger individuals, facilitating the participation in activities by helping with public transport and gratuity for events, etc.). Increasing community participation and productive engagement of older adults can help prevent and reduce loneliness across midlife and older age, as well as stimulate development across all domains.

Reflection Questions

1. Would you describe your grandparents as being lonely? Provide arguments for your answer.
2. Reflect on how many older friends you have. Describe your older friends and what makes your friendship important to you. In case you have no older individuals in your friends group, reflect on the reasons and how you could befriend older adults.
3. Explain in your own words how loneliness is connected to development in older age.

4. Name three risk factors and three protective factors for loneliness in older age.
5. Name three risk factors and three protective factors for loneliness in midlife.
6. Using a positive psychology framework, formulate three objectives and three strategies to implement these in case of an intervention to prevent loneliness among older adults.
7. Using a positive psychology framework, formulate three objectives and three strategies to implement these in case of an intervention to reduce loneliness among older adults.

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Chapter 15
Grandparent Roles: Potentials and Pitfalls for Development

Introduction

One of the most significant social roles associated with older age is that of being a grandparent. Statistics point out that approximately one billion individuals in the world are grandparents (Moore & Rosenthal, 2017), which reflects the high prevalence of this social role. In terms of novelty and changes that come with older age, becoming a grandparent represents one of the new social roles that may be embraced during late midlife and older adulthood. The role of grandparent is associated with a variety of expectations, meanings, emotions, and behaviours that have both an impact on the development of the older individual and that of their children and grandchildren. From a positive psychology perspective, it is interesting to reflect on the potential of the grandparenting role for development in older age. Furthermore, being a grandparent means one plays an important part for the development of the younger generation. This is especially the case for grandfamilies, namely, families where grandparents have the primary responsibility of raising their grandchildren (Littlewood, 2014).

The grandparents' roles have evolved during the history, and each generation defines grandparenthood in different ways (e.g. how to behave when it comes to interacting with one's grandchildren, what are the role expectations, what meanings are attributed to being a grandparent, how often does one see his/her grandchildren, and how much say one has in their education). The *demographics of grandparenthood*, such as the prevalence, age patterns, duration of the exercitation of the grandparent role, and number of grandchildren (Margolis & Verdery, 2019), have undergone different transitions over the last years. There are several demographic tendencies that can be discussed in relation to defining grandparents' roles. For instance, one tendency is that of becoming a grandparent at a very old age (e.g. when one is over 80). Because nowadays many people tend to postpone parenthood and have fewer children, the age at which the older generation enters

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grandparenthood is getting higher. As a result, the time duration for them exercising the role of grandparents has become shorter. Additionally, some people may not have the health and energy to be very involved grandparents in their very old age. Another tendency concerning the evolution of grandparenting in this sense is the feminization of grandparenthood. Because women are likely to have children at a younger age than men, they also tend to experience grandparenthood earlier and for a longer time period compared to men (Margolis & Verdery, 2019). This may have an impact on gender differences in terms of how grandparenthood is lived and its effects on the development of both grandparents and their grandchildren. For example, it may place more pressure on the grandmothers in terms of multiple caregiver responsibilities. Nevertheless, the positive aspect is that grandparenthood may provide a way to cope with being an ageing widow. A third tendency related to demographic changes is that because of the higher longevity in several countries, some grandparents may live to see their grandchildren turn into adults (Silverstein & Marenco, 2001). This can have positive implications in the sense that they get to be grandparents for an extended period and potentially have an important role within the family structure for longer. However, it may mean that they become grandparents during their midlife when they are still fully engaged in their work (Szinovacz, 1998) or other activities (e.g. sports, hobbies, volunteering) with little time to spend with their grandchildren. This situation could lead to role conflicts and stress. As the retirement age has increased, it may come to the situation that many grandparents will be still working and will have less time or energy to spend with their grandchildren. Such circumstances can generate role conflicts (e.g. between the work role and the grandparent role, being a spouse, or other caregiver roles) and trigger stress and negative emotions or conflicts within the family. Addressing such issues from a positive psychology perspective can help to increase the strengths to deal with the challenges of grandparenthood and foster personal development among grandparents.

In this chapter, I will explore the meanings of the grandparent roles and examine the diversity of experiences of being a grandparent as well as how grandparenthood may affect development in older age. Because family members often influence each other concerning development (see chapter on social development and chapter on love in this book), I will explore how grandparents can influence the development of their grandchildren and, in turn, how grandchildren can make an impact on the development of their grandparents. Since grandparenthood can have both benefits and drawbacks for development, I will analyse how one can apply positive psychology principles to foster the developmental potential of grandparenthood.

Defining and Explaining Grandparenthood

Grandparents can be described as the parents of a person's mother (i.e. maternal grandparents) and father (i.e. paternal grandparents), which means they are second-degree relatives who share 25% of the genetic heritage with their grandchildren. Grandparenthood can be further defined at different levels, such as societal (e.g.

social norms, respect shown to grandparents, etc.), family (e.g. what roles are attributed to grandparents inside a family, support relations between generations), and individual (e.g. how a person defines himself or herself as a grandparent, how a person behaves in the grandparent role).

At a *societal level*, grandparenthood reflects social norms about kinship and family structures (e.g. cultural norms about respect offered to grandparents, norms concerning the importance of paternal versus maternal grandparents, etc.). With the diversification of family structures (e.g. divorce, adoption, artificial insemination, etc.), one may become a step grandparent, a grandparent of adopted grandchildren, or a primary caregiver taking on the responsibilities of the parents. Social representations of grandparents are part of the more general representations of older individuals. Often positive ageing stereotypes comprise images of grandparents playing with their grandchildren or transmitting their wisdom (Crăciun & Făgărăşan, 2020). The way grandparents are depicted in the media (e.g. films, series, children's books) influences stereotypes of ageing in a specific social context (Crăciun & Făgărăşan, 2020). Representations of passive or ill grandparents can fuel negative ageing stereotypes, while depictions of active and wise grandparents can foster more positive ageing stereotypes.

At a *family level*, the way grandparenting is defined depends on family relations, structure, and norms. For instance, parents mediate the relationship between grandparents and their grandchildren, especially before the latter reach adolescence. Thus, the frequency of interaction and the closeness of the relation between grandparents and grandchildren is often affected by the family dynamics (e.g. are the parents close to the grandparents or not, do the parents want to share educational responsibilities with the grandparents, etc.). Grandparents seem to be important in the family structure, as a study in European countries points out that 52% of the older participants provided grandparenting care for at least one grandchild during the last year (Arpino et al., 2018). Such findings were explained through the fact that formal childcare services were missing or expensive and mothers were working full-time (Di Gessa et al. 2016b). Family structure can also provide grandparents with a more important role in their grandchildren's life. For example, single mothers or fathers and full-time working parents will need the help and support of grandparents in raising the grandchildren. Also, in situations of divorce, grandparents are sometimes in the position to mediate conflicts within the family and take on educational responsibilities. In some cases, grandparents become surrogate parents (e.g. the parents work in another city or country, parents are ill or deceased, parents are disabled, parents are in jail, parents are drug addicts, etc.). Within the family system, grandparents may take on different roles such as socializing (e.g. doing fun activities, transmitting values, modelling rules of social conduct), support (e.g. babysitting, help with schoolwork, provide financial help), and information providers (e.g. reminiscing about family history, teaching language skills, etc.).

At an *individual level*, grandparenthood can be defined as a function of personal expectations, beliefs, and meanings that one gives to the grandparent role, as well as the behaviours associated with grandparenting (e.g. playing, teaching skills, cooking, helping with homework, etc.). Contact frequency between grandparents and

grandchildren depends on physical proximity (e.g. distance between their houses), emotional closeness to the children's parents, number of grandchildren and their age (e.g. when there are more grandchildren, energy and time needs to be divided among several grandchildren, and the younger ones are usually a priority), and health of the grandparents (e.g. how fit they are to take care of grandchildren) but also their beliefs concerning grandparenthood (e.g. how much time they want to spend with grandchildren, what activities they consider important, what stories they want to share). A survey from the USA showed that from the grandparents included in the study, 80% considered the grandparent role to be very important in their lives, and more than three quarters reported they engaged in common activities and talked about significant concerns with their grandchildren (Silverstein & Marenco, 2001).

Grandparenthood can be studied from numerous perspectives. One way to understand grandparenting is to look at the demography of grandparenthood, namely, the prevalence, age patterns, number of grandchildren, and duration of the grandparenting role (Margolis & Verdery, 2019). From this perspective, grandparenthood is regarded as an important *demographic concept* that can be applied to understand family interactions and dynamics as well as intergenerational transfer (Margolis & Verdery, 2019). From a gerontological viewpoint, one would be interested in the characteristics of the persons who become grandparents. From a developmental psychology perspective, one would study the potential for development across domains in people who are grandparents as well as the relationship between grandparents and grandchildren and its effect on their reciprocal development. For evolutionary demographers it is interesting to look at who does not get to become a grandparent (e.g. because of early death, not having children, etc.) and does not get to transmit their genetic and cultural heritage. Family sociologists would be interested in social inequalities in terms of duration and timing of grandparenthood (Margolis & Verdery, 2019). Cohort measures can depict social changes in meaning of grandparenthood and its timing by exploring the proportion of grandparents in a certain population, the age of transition to grandparenthood, length of grandparenthood, and number of grandchildren (Margolis & Verdery, 2019). For example, a decrease in fertility during a certain historical and socioeconomic context is reflected in the average number of grandchildren one has. The last decades have marked a decrease in fertility and consequently in the average number of grandchildren (Downs, 2003). The positive implication is that one would theoretically have more opportunity to spend quality time (e.g. do activities, share skills, etc.) with 3 or 4 grandchildren as compared to 10.

Becoming a grandparent is not a choice one makes directly but depends on factors such as whether one has children or not, timing of fertility, if one's children have children, their fertility timing, and mortality (Margolis & Verdery, 2019). The choice of becoming a grandparent (i.e. biologically sharing a genetic background with one's grandchildren) is different from deciding to actively be a grandparent (i.e. actively getting involved in the education of grandchildren, spending time with grandchildren, etc.). Also, if one has more than one grandchild, this means that one will also have different grandparenting relationships with several grandchildren at the same time. Grandchildren will differ in age and personality or degree to which

they resemble the grandparents, and all these circumstances will influence the grandparent-grandchild relationship. The way older people perceive their role can influence their satisfaction with grandparenting (Ben Shlomo, 2013). According to the *role strain theory*, multiple roles induce stress and lower health (Goode, 1960). In contrast, *role enhancement theory* (Sieber, 1974) proposes that role accumulation can lead to increases in self-esteem and personality development. Therefore, it is interesting to examine what influences satisfaction with grandparenting.

When looking at how satisfied people are with their role as grandparents, several factors play a role such as age, health status, education, or gender (Silverstein & Marenco, 2001). Other researchers examined internal factors such as the identity meanings of grandparenthood and self-esteem or relational factors such as frequency of contact (Reitzes & Mutran, 2004). In their study, Reitzes and Mutran (2004) found that self-factors such as the centrality that is attributed to the grandparent role and a positive grandparent identity influence the relationship that people have with their grandchildren. According to the study findings, both grandmothers and grandfathers who considered grandparenting to be central to their lives and attributed positive meanings to their grandparenting role experienced more role satisfaction (Reitzes & Mutran, 2004). *Role satisfaction* was measured with a single item asking "Are you satisfied with your grandparent role?" with answers ranging from "very satisfied" (4) to "very dissatisfied" (1), and frequency of interaction was measured with an item asking "Typically how often do you see the grandchildren you see most frequently?", with response categories ranging from "daily" (6) to "once a year" (1) (Reitzes & Mutran, 2004). The study was based on the *symbolic interaction theory* that postulates that grandparent centrality, a meaningful grandparent identity, and self-esteem constitute the intrinsic motives that increase role satisfaction (Stryker & Burke, 2000; Reitzes & Mutran, 2004). The *symbolic interaction theory* (Stryker & Burke, 2000) assumes that individuals learn social roles (e.g. how to be a grandparent, what are the responsibilities of grandparenthood, what are the rights of grandparents in terms of educating the grandchildren) but also create identities and define meanings for themselves in their roles (e.g. how do I want to be as a grandparent). Individuals would initiate actions and use social interactions to confirm positive meanings about themselves. For instance, according to Gecas and Burke (1995), people engage in role-appropriate behaviour in order to maintain their self-esteem (i.e. positive evaluation of oneself and sense of self-worth). In this context, grandparents would engage in role-appropriate behaviour to maintain their self-esteem and increase their role satisfaction (Reitzes & Mutran, 2004). The desire to maintain self-esteem motivates grandparents to succeed and find satisfaction in the grandparent role (Reitzes & Mutran, 2004). Thus, it is important to understand what constitutes role-appropriate behaviour concerning good or successful grandparenting and how do grandparents create satisfying roles for themselves.

Research acknowledges the complexity of the grandparent role, and several researchers proposed typologies to describe grandparenting. For example, Neugarten and Weinstein (1964) suggested five types of grandparents, namely, formal, fun-seeking, surrogate, reservoir of family wisdom, and distant. Another study on

Australian grandparents (Goodfellow & Laverty, 2003) identified four types of carers, namely, avid (i.e. fully committed to their grandchildren), flexible, selective, and hesitant (i.e. needed balance in their lives and were only partially committed). The continuum of care depended on the autonomy of the grandparents (Goodfellow & Laverty, 2003). However, such studies were criticised for the classification approach since these kinds of categories may not be mutually exclusive. One person can adopt several grandparenting styles at different moments in time or dependent on the context. Such traits or grandparenting styles can be present in the same person at the same time but to different degrees (Mueller & Elder, 2003). One important aspect is how grandparents and grandchildren perceive the role of grandparents, what are their role expectations, and how congruent are these expectations concerning grandparenting from both grandparents' and grandchildren's points of view? Studies on grandparent-grandchild dyads were carried out to assess the perceptions of the grandparent-grandchild relation (GP-GD) from both parties involved (Triadó et al., 2005; Mansson, 2013a; Soliz, 2008). In the following, I will explore the experiences of being a grandparent from the point of view of older individuals as well as their grandchildren.

The Experience of Being a Grandparent

One study on how middle-aged individuals perceive the role of grandparents showed that this was rated among the most important social roles by both men and women (Reitzes & Mutran, 2002). Centrality of the grandparent role predicts higher satisfaction with grandparenting (Reitzes & Mutran, 2004). Studies also point out that nowadays, grandparents play a more important role in their grandchildren's' lives because of increased life expectancy, diversifying families, rising number of working parents, and higher rates of divorce (Griggs et al., 2010). But what exactly does the grandparent role imply, or what does it mean to be a grandparent from the perspectives of the grandparents themselves?

Experiences of grandparenthood may differ depending on the timing one becomes a grandparent (e.g. in one's fifties or in one's seventies or eighties) and social, economic, or cultural background. Regarding the latter, in family-oriented cultures, such as Asian ones, it is not uncommon for grandparents to become active caregivers for their grandchildren (Chen et al., 2011). Numerous studies illustrate the positive aspects of becoming a grandparent, since relationships between grandparents and their grandchildren contribute to the psychological well-being and life satisfaction of older adults (Mansson, 2013a; Hughes et al., 2007; Powdthavee, 2011). Benefits associated with the grandparent role can include provision of stability, providing goals, source of enjoyment, providing a sense of achievement, and opportunities to help (Fung et al., 2005). One study specifically explored what grandparents find rewarding about their relations with grandchildren (Mansson, 2016). Findings pointed out that older individuals enjoyed the sharing of mutual affection (e.g. they received affection tokens from their grandchildren and could

show affection in return). Spending time together and doing activities was another positive aspect mentioned by the interviewed grandparents. Enjoying their grandchildren's success and feeling proud about what the grandchildren were doing was also mentioned as a source of satisfaction. In connection to this, observing how their grandchildren grow and develop also triggered positive feelings among the interviewed grandparents. Another important theme was that of teaching and learning activities that grandparents did with their grandchildren. Learning happened both ways since grandparents taught their grandchildren (e.g. practical things such as tying shoelaces, more abstract concepts such as morals and beliefs, or learning strategies) but also learned from children about the present realities (e.g. technology). The study also showed that a higher interaction frequency meant that grandchildren and grandparents shared more activities and increased the closeness of the relationship (Mansson, 2016).

Nevertheless, too much interaction and responsibility associated with the grandparent role can be detrimental for older individuals. As mentioned above, *grandfamilies* represent families where grandparents have the primary care responsibility for their grandchildren (Littlewood, 2014). Grandfamilies are formed because, for one reason or another, parents cannot take care of their children anymore (e.g. divorce, drug addiction, work in another city or country, mental issues, health issues, neglect, abuse, incarceration, death) (Kelley et al., 2013). Because of the traumatic events that often lead to the formation of a grandfamily, children often experience negative emotions (e.g. anxiety, depression), health problems, academic difficulties, or behavioural problems (Smith & Palmieri, 2007; Billing et al., 2002). Grandparents may feel overwhelmed by the challenge of being full-time parents again, dealing with legal and financial issues or conflicts with their grown-up children on top of health concerns and stress (Hadfield, 2014; Hughes et al., 2007; Sakai et al., 2011). Custodial grandparents face limitations in performing daily activities and often experience caregiver stress (Kelley et al., 2010), frequently feel tired, and have less time for their spouses or friends (Hayslip & Kaminski, 2005). Sometimes, custodial grandparents may experience intense grief or disappointment (Strom & Strom, 2011) because of the situation of their children, and this leads to higher distress levels. Additionally, because of stigma (e.g. if the parents are absent because of drug addiction, legal issues, etc.), custodial grandparents may be socially isolated, and also due to their caregiver responsibilities, they would isolate themselves from their peer group with whom they would have less things in common (Backhouse & Graham, 2012). All these risk factors were shown to affect the social and emotional state of custodial grandparents (Bundy-Fazioli et al., 2013). One qualitative study exploring the experiences of custodial grandparents showed that, in terms of parenting styles, these reported being more lenient with their grandchildren than they had been with their own children and that they found it difficult to face the challenges of parenthood (Sampson & Hertlein, 2015). The latter happened because of financial difficulties, lacking emotional and social support, and tense relations with the family (Sampson & Hertlein, 2015). They also reported feeling resentful because they had lost their freedom to enjoy retirement, felt guilty because they believed they could not care for their grandchildren properly, and felt tired and overwhelmed by

parental duties (Sampson & Hertlein, 2015). Nevertheless, there were also positive aspects concerning taking on the custodial grandparent role. One participant stressed that she felt thankful that she was able to take on the caregiver role and that she regarded it as an "opportunity to make a difference in the kid's life" (Sampson & Hertlein, 2015). This quote illustrates how the attitude towards grandparenting and how one defines grandparenting or the meaning one attributes to it shapes role satisfaction and coping. Other participants also reported that grandparenting kept them active and healthy and inspired them to want to make the best out of an unexpected situation (Sampson & Hertlein, 2015). These benefits can be highlighted in interventions to improve the quality of life of grandparents from a positive psychology perspective.

Another way to understand the experience of grandparenthood and the expectations concerning this role is to study it from the *perspective of grandchildren*. What do grandchildren expect from their GP-GD relations, and what do they enjoy or dislike? Sometimes the grandparent role is not as well defined within a family structure compared to that of the children or that or parents (Triadó et al., 2005). Thus, it is interesting to explore what grandchildren expect from their grandparents in terms of typical behaviour and whether these outlooks are congruent with what grandparents expect. Most studies were carried out from the perspective of grandparents, for example, what they expect from their role or what are the difficulties they encounter (Taubman et al., 2014; Sampson & Hertlein, 2015; Mansson, 2016). Several studies used a classification referring to the social roles (i.e. grandparents as social models of behaviour, transmitting values) and grandchildren's personal satisfaction (i.e. fun activities) (Triadó et al., 2005). According to this classification, there are apportioned grandparents (i.e. high scores on personal and social dimension), individualised (i.e. high scores on personal, low scores on social), symbolic (i.e. low in the personal dimension, high on the social dimension), and distant grandparents (i.e. low on both dimensions) (Triadó et al., 2005). The best ways to study the role expectations and relations from a double perspective is to include dyads of grandparents-grandchildren (GP-GD) in one's study (Triadó et al., 2005). Researching the similarities and discrepancies between their perceptions can shed light into what each party expects from the other members of the dyad, how they interpret the other's behaviour, and what importance they attach to the relationship. A questionnaire was developed to measure grandparents' roles (41 items, 5-point Liker scale) (Triadó & Villar, 2000). Results of a study by Triadó et al. (2005), using this questionnaire, pointed out that both grandparents and grandchildren enjoyed their relation and spending time together. Grandchildren tended to see grandparents as representatives of the past, of the family history. However, the relation was not characterised by high levels of intimacy, trust, and understanding (Triadó et al., 2005). Children emphasised that grandparents play the role of mediator between them and their parents. Grandparents perceived their role as counsellors as important, but this was not regarded as such by their grandchildren (Triadó et al., 2005). Both grandparents and grandchildren saw their relation as fun-seeking and linking to the past, but less in terms of mutual trust. Grandparents saw relations with spouses or their children in terms of trust, while adolescent grandchildren regarded relations

with their peers as a source of trust. The study also points out that the quality of the GP-GD relation changes in time, as children turn into adolescence and desire to spend more time with their peers and develop trusting relations with them (Triadó et al., 2005). In another study concerning the GP-GD relationship, Mansson (2013a) tested the *affection exchange theory* (AET Floyd, 2006). The AET theory postulates that receivers of affectionate communication are likely to become more affectionate themselves and this constitutes a resource to attract romantic partners in the future. The theory also assumes that the use of affectionate communication is beneficial for both givers and receivers. Grandparents are known to use different types of affectionate communication actions such as esteem (e.g. statements of love, relationship importance, compliments), caring (e.g. show concern, ask questions about the grandchildren's lives, are good listeners), memories and humour (e.g. telling jokes or stories about their lives), and celebratory (e.g. offering gifts, organising something for special occasions) (Mansson, 2013b). Grandchildren that had affectionate communication from their grandparents were shown to be socially active, enjoy closeness, and reported being satisfied with their relationship with the grandparents (Mansson, 2013b). In the study on ACT and GP-GD relationships, findings pointed out that the affection received from grandparents was positively associated with grandchildren's GP-GD relationship characteristics, namely, trust, commitment, and control mutuality (Mansson, 2013a). Results also support the notion that GP-GD relations are close and affectionate and that the quality of the relationship is associated with the communicative actions (Mansson, 2013a; Bengtson et al., 2002; Dindia, 2003). Such studies that take both the perspective of grandparents and grandchildren into consideration help understand the GP-GD relations and design interventions to optimize these (e.g. communication patterns, the way that affection is shown to foster development).

Why Intervene: Grandparenthood and Development

As we have seen above, being a grandparent can have *advantages* for older individuals, and these may reflect on their development across domains. In the case of *social development*, the grandparent role is associated with several benefits such as receiving social and emotional support from grandchildren (Silverstein & Long, 1998; Duflos et al., 2020; Mhaka-Mutepfa et al., 2016), a second chance in life, an opportunity to nurture family relations, and a way to transmit one's family history (Langosch, 2012). Social development in case of grandparenthood is closely connected with *emotional development* of older adults as studies point out that grandparents tend to experience higher emotional well-being (Arpino et al., 2018; Thiele & Whelan, 2008; Di Gessa et al., 2019), receive love and companionship (Langosch, 2012), have a chance to give love and support themselves (Dolbin-MacNab & Keiley, 2009), and perceive themselves as valuable caregivers (Strom & Strom, 2011). A study conducted in Germany showed that frequent contact with grandchildren and emotional closeness with them contributed to an increase in well-being

among older adults (Mahne & Huxhold, 2015). Other studies also pointed out that becoming a grandparent was associated with both increased quality of life and feelings of life satisfaction (Tanskanen et al., 2019; Powdthavee, 2011) and decreased depressive symptoms (Sheppard & Monden, 2019). Findings from a survey conducted in several European countries (SHARE, Survey of Health, Ageing and Retirement in Europe) pointed out that especially women experience a decline in depressive symptoms when they become grandmothers. This phenomenon was attributed to the gendered tasks and responsibilities concerning grandparenthood (Bordone & Arpino, 2019). Such results concerning emotional well-being can be explained through the fact that the role of grandparent can provide a person with a sense of meaning and give them an opportunity to manifest their generativity (Thiele & Whelan, 2008). Furthermore, altruistic behaviours and balanced intergenerational contact positively affect mental health (Hayslip & Kaminski, 2005). Entering grandparenthood was also associated with a sense of immortality and continuity (Powdthavee, 2011; Tanskanen et al., 2019), which explains the feeling of satisfaction with one's life. According to the *role enhancement theory*, being a grandparent can help people perceive a meaning in life as well as a sense of purpose (Park, 2018; Muller & Litwin, 2011). As mentioned above, grandparenthood can also have detrimental effects on development, for example, in case of custodial grandparents who experience higher levels of stress. For instance, for custodial grandparents, social development is negatively affected because they have less time for their social networks and significant others (Hayslip & Kaminski, 2005; Bundy-Fazioli et al., 2013). Emotional development is impacted in the sense that custodial grandparents often experience depression and emotional distress (Musil et al., 2011; Song & Yan, 2012). Also, for grandparents in general, sometimes grandparenthood can cause intergenerational conflict and stress and increase subjective age, namely, how old the grandparents feel (Condon et al., 2018).

In terms of *physical and cognitive development*, studies pointed out an improvement in health (Di Gessa et al. 2016a) as well as better cognitive functioning (Arpino & Bordone, 2014) for older adults who are grandparents. One potential explanation may be that grandparents engage in more health behaviour (Haglund, 2000; Harrington Meyer & Kandic, 2017), for instance, they are more physically active and initiate more self-care actions (Fruhauf & Bundy-Fazioli, 2013). It is believed that the expectations, meanings, and satisfaction associated with the grandparent role can affect health and even mortality (Ellwardt et al., 2019). There is evidence that grandparenthood can have short-term health effects (Ates, 2017; Sheppard & Monden, 2019). Negative effects of grandparenthood on physical health and development manifest themselves in case of custodial grandparents. For instance, these were shown to experience more physical symptoms (Musil et al., 2011) and multiple health issues (Hadfield, 2014), often feel tired (Hayslip & Kaminski, 2005), experience insomnia, and use health services less frequently (Song & Yan, 2012). Also, it was shown that grandmothers who live with a spouse, who are younger, and have a higher number of grandchildren are at a higher risk of mortality than non-grandmothers (Ellwardt et al., 2019). The gender difference was explained through the role strain associated with gendered role expectations and responsibilities (e.g.

grandmothers should be more involved in the care of grandchildren, overlapping roles such as grandmother, caregiver, and working woman) (Arpino et al., 2018; Horsfall & Dempsey, 2015; Neuberger & Haberkern, 2014).

In terms of *personality development*, grandparents can benefit for their personal growth through generativity, namely, by transmitting values, attitudes, and beliefs to the next generation. Generativity is known to foster personal growth (Villar, 2012) and well-being (Grossbaum & Bates, 2002). Engagement in generative acts is considered by grandparents to be a chance for individual development as well as an opportunity to enhance their role referring to wisdom and protection (Fuller-Thomson et al., 2014). Generativity in the case of grandparents also determines a sense of purpose in life, a feeling of individual growth and family identity (Villar et al., 2012). Transmitting abilities and knowledge values was shown to be associated with grandparents' individual development (Noriega et al., 2019). Grandparents are known to use different socializing styles to transmit values, for example, an authoritative style (i.e. high levels control, high level of support), an authoritarian style (i.e. high control, low support), and a permissive style (i.e. low control, high support). The authoritative style is known to render best educational results in children (Pinquart, 2016). In the case of grandparents, the authoritative style was associated with more activities shared with grandchildren (Viguer et al., 2010) and fewer conflicts with adult children (Noriega et al., 2017) as well as personal growth (Noriega et al., 2019). Different types of personality can reflect in how grandparents interact with grandchildren and contribute to their development as well as their personal growth. Grandparenthood can increase openness to new experiences through the exchange with the young generations. However, as grandparenting can also be associated with depression, intergenerational conflict, and stress (Musil et al., 2011; Song & Yan, 2012; Condon et al., 2018), it may also increase neuroticism. Nevertheless, in terms of cognitive and personality development, facing the stress of custodial grandparenting was shown to change people's attitudes and expectations, determining them to want to make the best of the unexpected circumstances (Sampson & Hertlein, 2015). Thus, even negative aspects of grandparenthood might increase cognitive flexibility in older age and openness to novel experiences.

Several studies looked at how grandparents can play *a role in the development of their grandchildren*. Findings point out that grandparents can play an important educational role for their grandchildren and help their children cope with the demands of work and parenthood (Margolis & Verdery, 2019). In this sense, grandparents can contribute to both the development of their children and grandchildren. Grandparents can play a part in the transmission of certain advantages or social mobility (e.g. financial assets or education) (Song, 2016; Mare, 2014; Zeng & Xie, 2014). Grandchildren can learn about the family history from their grandparents and develop a sense of identity. Also, they can take grandparents as role models that are different from their parents (Goodsell et al., 2011). Studies point out that grandparents have an important socialization function within the family, namely, transmitting values, beliefs, attitudes, and social norms (Grusec, 2002; Viguer et al., 2010). The types of values that grandparents transmit include *individual* and *interpersonal*

relations values, such as benevolence (e.g. need to preserve the group's positivity), conformity (e.g. need to prevent actions that can threaten the group's harmony), and tradition (e.g. keeping group solidarity), and *instrumental* values and *materialistic* values (Noriega et al., 2017). Grandfathers tend to emphasize instrumental values, while grandmothers focus more on interpersonal ones (Viguer et al., 2010; Pratt et al., 2008). One study showed that grandparents considered the endurance of traditional values in a changing society to be very important (Noriega et al., 2017). Additionally, grandparents were shown to have a positive effect on grandchildren's well-being, cognitive achievement, and personal development (Chan & Boliver, 2013; Silverstein & Ruiz, 2006). For example, in terms of emotional development, as also mentioned in the last section, studies pointed out that the affectionate communication between grandparents and grandchildren can influence how loving the latter are in their future relations (Mansson, 2013a). In this sense, grandchildren can also learn from their grandparents how to be affectionate, how to communicate their needs, and how to commit to relations and show care for others. The quality of the grandparent-grandchildren relations can affect the grandchildren's well-being and development (Ruiz & Silverstein, 2007). However, when grandparents become too much involved in raising their grandchildren, this can result in conflicts with their own children as sometimes educational methods and values may differ considerably. In some cases, grandparents can hinder the development of their grandchildren by spoiling them or overcriticizing them. In contrast, in case of custodial grandparents, some studies showed that children can benefit a lot from the GP-GD relation, as this offers a sense of support and security (Bailey et al., 2009).

Research has also examined to what extent *grandchildren can play a role in the development of their grandparents*. Results showed that grandchildren can constitute important emotional and social resources for older individuals (Mahne & Huxhold, 2015). Aspects such as engaging in common activities with their grandparents, sharing their accomplishments and affection with them, and showing openness to learn from and to teach their grandparents are among the most valued aspects of grandparenthood from the perspective of grandparents (Mansson, 2016). Thus, when grandparents engage in such behaviours, this can have a positive impact on their well-being and health (Mansson, 2016). There is a body of evidence that shared activities between grandchildren and grandparents contribute to the social, mental, and physical well-being of the latter, as well as their general life satisfaction (Mansson, 2014; Hughes et al., 2007; Powdthavee, 2011; Tanskanen et al., 2019). These positive emotions can foster the development of older adults across life domains. For example, they can practice their learning skills, verbal aptitudes, and memory (i.e. cognitive development), train their emotional regulation (i.e. emotional development), enhance their social skills in interacting with the young generation (i.e. social development), preserve their mobility (i.e. physical development), and exercise their openness to new experiences (i.e. personality development). Some studies suggest that grandparenting can contribute to improved cognitive performance (Sneed & Schulz, 2017; Burn et al., 2014; Arpino & Bordone, 2014). This can be explained through the *cognitive enrichment hypotheses* (Sneed & Schulz, 2017), namely, that engaging in social, physical, and intellectual activities, such as

those that one can do with grandchildren (e.g. playing games, helping with homework, reading, learning about technology, etc.), promote successful cognitive aging. Spending time with grandchildren can help to replace lost social ties and provide a new source of social support. Caregiving may involve more physical exercise (e.g. walking, going to the park to play, biking) that enhances physical activity among older people.

Above, I have mentioned research results concerning mostly the benefits of grandparenthood. Nevertheless, the grandparent role can also entail *disadvantages* for the well-being of older adults and reflect negatively on their personal development. This kind of situation was reported when grandparents become full-time caregivers for their grandchildren (Chen et al., 2011). This may happen, for example, when the parents are not able to take care of the children and custody is transferred to the grandparents. Such situations include neglect, abandonment, or abuse, when parents have an addiction problem, imprisonment of the parents, domestic violence, and parents working in another country to name just a few of the potential reasons why grandparents may be asked to take on the full care of their grandchildren. Nevertheless, being a regular caregiver for one's grandchildren can also have a negative impact on the health and well-being of older adults. For example, findings from a study conducted in Thailand show that providing regular care to a grandchild can result in lower levels of health and well-being (Komonpaisarn & Loichinger, 2019). Grandparents who experience caregiver stress can feel more stressed in general (Tang et al., 2016). Levels of depression were found to be higher in custodial grandmothers as compared to other women in their age group (Whitley et al., 2016). The sudden transition to grandparenthood is associated for some with a role conflict and can have a negative effect on their mental health (Bundy-Fazioli et al., 2013).

All in all, one can conclude that grandparenthood generally has a positive impact on development except for the situations when grandparents need to take on the full custody and responsibility for raising their grandchildren. Under normal circumstances grandparents would benefit, on a social, emotional, cognitive, physical, and personality level, from the interaction with their grandchildren. However, when the demands of this role surpass their resources, they may feel stressed, and this affects their health and well-being. Furthermore, full-time grandparents will have fewer resources (e.g. time, money, energy) to take care of their own personal development. In the following, I will analyse how one can apply positive psychology principles in order to foster the developmental potential of the grandparent role.

How to Intervene to Foster the Developmental Potential of Grandparenthood

According to the Healthy Ageing Framework (Beard et al., 2016), the social environment is very important for shaping a healthy and happy old age. Strong intergenerational relationships can contribute to an environment that fosters positive ageing. In this sense, grandparent-grandchildren relationships can constitute an opportunity

for older adults to build their strengths and developmental resources and experience a fulfilled older age. Significant social and emotional relations between grandparents and grandchildren provide the necessary support for older adults to experience well-being and higher satisfaction with life (Tanskanen et al., 2019; Powdthavee, 2011). Psychoeducational training programs could help older adults to be better grandparents, especially those who have lower education or socioeconomic status and may therefore be more affected by the challenges of grandparenthood (Lai et al., 2021).

Positive psychology interventions can be applied to promote flourishing families (Seligman & Csikszentmihalyi, 2000), including strong intergenerational relations, and satisfying grandparent roles. Such interventions would focus less on reducing family conflicts but would concentrate on boosting family resources and positive outcomes (e.g. well-being, positive emotions, love, happiness, family cooperation, etc.) (Kirby, 2016; Waters et al., 2019). While problem-focused family interventions can help to solve a current crisis, they are not beneficial in the long run because they do not teach skills and boost resources (Sheridan & Burt, 2009). Positive psychology intervention would focus on increasing positive emotions and not so much on reducing negative affect (e.g. depression, anxiety), building positive strengths (e.g. optimism, resilience, compassion, gratitude) and skills (e.g. communication abilities, relaxation techniques). There is an evidence-base concerning how skills can be taught in family interventions such as savouring (Ho et al., 2016), gratitude (Amaro, 2017), self-compassion (Psychogiou et al., 2016), or mindfulness (Bogels et al., 2014). As discussed in this chapter, grandparents' roles are part of a family system (e.g. negotiated directly with the parents or in some cases indirectly, like the custodial grandparents when one needs to assume the roles of the absent parents). From a positive psychology perspective, families are defined as relational systems that have a purpose, elements such as routines and resources, and regular interaction patterns (Kern et al., 2019). Family strengths can include a positive outlook, flexibility, family member accord, communication, time spent together, mutual interests, routines, and rituals (Black & Lobo, 2008). When assets are built into the system, this creates growth for the entire family unit (Sheridan et al., 2004). Thus, in case of interventions targeted at grandparents, when these boost grandparenting skills, they indirectly also promote the growth and assets of the entire family relational system.

From a positive psychology perspective, an outcome of grandparenting interventions could be to foster psychological well-being (Ryff, 1991). According to Ryff (1991), the components of psychological well-being are autonomy (i.e. self-acceptance despite one's limitations), positive relations (i.e. having stable and trusting relations), self-determination (i.e. demonstrating independence), environmental mastery (i.e. having the individual skills to create or choose advantageous contexts), purpose in life (i.e. aims that increase self-fulfilment), and personal growth (i.e. wish to continue growing and reach the greatest extent of one's abilities). Although ageing implies certain losses (e.g. status, health, etc.), it also involves novel roles such as grandparenting (Villar, 2012) that can compensate for these deficiencies (e.g. loss of status through retirement can be compensated by gaining status within the family by taking on an active grandparenting role; being a grandparent can make

one more physically active and happy despite suffering from a chronic illness). Grandparenthood can offer new purposes in life, the occasion to practice environmental mastery, negotiate one's autonomy, and a context for personal growth and experiencing well-being. Interventions, linking grandparenthood and development, should focus on building positive strengths and developmental resources through a toolbox of positive psychology exercises (e.g. gratitude exercises, identifying and using one's strengths in different ways, etc.) and developmental skills training (e.g. examples of games that grandparents can play with grandchildren to train memory, verbal skills, attention, and physical traits).

When designing interventions for grandparents, one needs to first decide on the target population (e.g. custodial or non-custodial grandparents), as well as what strengths one wants to build. As a general aim, from a developmental perspective, one would aim to promote development across life domains (i.e. cognitive, social, emotional, personality, and physical) among the target population of grandparents. From a positive psychology perspective, one would aim to improve grandparents' strengths and foster their desire for personal growth. For example, one could enhance the generativity component of the grandparent-grandchildren relation in order to improve personal growth and well-being among both grandparents and grandchildren. A supplementary benefit of such interventions is that, by helping grandparents become better at grandparenting, they promote development not just among older adults but also among their grandchildren.

Psychoeducational programs can target both non-custodial and custodial grandparents and offer resources to improve their communication with grandchildren and thus foster generativity and development. For example, grandparents can learn how to better transmit values, which values are connected to their own and the grandchildren's development, and which socializing style to use, namely, the authoritative style that was shown to have the most benefits for development (Noriega et al., 2019; Pinquart, 2016; Viguer et al., 2010). Programs can also facilitate better communication among family members (e.g. grandparents and adult children, grandparents and grandchildren, parents, and children) and encourage gratitude and appreciation between the different generations (Noriega et al., 2019). Discussions about what values to transmit and their benefits (Noriega et al., 2019) can also be integrated in such a psychoeducational program. In terms of positive strengths, grandparents can build optimism, gratitude, and resilience. Concerning developmental resources, several skills can be provided and exercised for each developmental domain. For example, grandparents can learn different games to enhance cognitive performance (e.g. memory, verbal skills, attention) and physical abilities that they can apply with their grandchildren. These will help foster cognitive and physical development. Emotional regulation and affective communication skills can be taught in order to facilitate communication with grandchildren and increase the mutual social support. Such activities can enhance social and emotional development for grandparents and grandchildren alike. All these activities and exercises enhance the grandparents' openness to new experiences and, thus, may have a positive impact on their personality development as well. Differential modules can be designed for future grandparents in order to help them with the transition to

grandparenthood and for people who are already grandparents and face various challenges associated with this role. For example, interventions for future grandparents can focus more on expectations and benefits for development, while interventions for current grandparents can address specific grandparenting skills and self-efficacy enhancement regarding their implementation.

A review of parenting interventions for grandparents highlights that experience with parenting does not equal expertise and that parenting skills that the grandparents applied with their own children may not prove useful in case of their grandchildren (Sherr et al., 2018). Thus, grandparents can benefit from learning new parenting skills or reflecting on how to adapt their competences to new contexts. An important idea to promote in this sense is that grandparents are not too old to learn novel parenting skills (Sherr et al., 2018). A particular risk group in terms of health and psychological outcomes are custodial grandparents. As discussed in this chapter, custodial grandparents were shown to report higher levels of depression compared to non-custodial grandparents (Hayslip & Kaminski, 2005; Hadfield, 2014). Some of the existing interventions usually target parenting skills in terms of discipline, dealing with negative emotions of the grandchild, building cooperation, school-related problems, risk behaviour in grandchildren (Hayslip & Hicks-Patrick, 2003; Kelley et al., 2001), health promotion (Bigbee et al., 2011), assessing family problems, and identifying solutions and stress management (Kelley et al., 2001; Kelley et al., 2010). In case of *positive psychology interventions for custodial grandparents*, these can have as an objective to provide a sense of control over unmanageable situations (Smilan, 2009) as well as build strengths (e.g. resilience, generativity) and developmental resources (e.g. openness to new experiences, social skills, emotional regulation techniques, relaxation abilities, cognitive skills). Strategies such as rewriting personal narratives, scrapbook techniques, and providing support (Smilan, 2009) can prove useful in providing a sense of control. Accommodative coping such as finding positive meaning in unexpected negative situations can be fostered in order to increase resilience (Vulpe & Dafinoiu, 2012). From a positive psychology viewpoint, a strength-based approach is recommended (Hayslip & Smith, 2013) to improve coping strategies and raise well-being among custodial grandparents. For example, one program provided 9 weeks of group meetings for a target population of grandparents who shared caregiving for grandchildren aged 2–9 years old (Kirby & Sanders, 2014). The program provided positive grandparenting skills, abilities to help grandchildren develop, tips on how to manage misbehaviour, how to build a positive parenting team, and how to plan ahead (Kirby & Sanders, 2014). Another program focused on building resourcefulness in grandmothers raising grandchildren. This intervention focused on individual meetings for providing personal self-help and social skills, expressive writing (i.e. journaling), and verbal disclosure (i.e. digital voice recording) (Zauszniewski et al., 2014). Resourcefulness represents a collection of cognitive and behavioural skills (e.g. self-help skills, social skills) that help promote health and well-being (Zauszniewski, 2012). Personal skills that were taught included organizing daily activities, using positive self-statements, positive reframing, exploring new ideas, and changing habitual responses to stress. Social skills comprised building social support, seeking expert help, and exchanging ideas

with others (Zauszniewski et al., 2014). After learning about the skills, grandmothers reflected on situations from their daily life where they could apply the resourcefulness skills. Also, grandmothers were instructed about expressive writing in a journal or verbal disclosure with digital recording. For 4 weeks, grandmothers wrote or recorded their experiences with applying the resourcefulness skills in their daily interactions with grandchildren. They also received weekly reminder calls from the intervention team. Both the expressive writing and verbal disclosure proved effective in reducing depressive symptoms and stress and improving quality of life among the participating grandmothers (Zauszniewski et al., 2014). Future interventions can integrate these strategies and focus more on the enhancement of positive emotions, stress management skills, and developmental resource promotion. For example, grandparents can write or record how they used different positive strengths or developmental skills in their daily interactions with grandchildren. One important point emerging from research on grandfamilies is to adapt the intervention to the needs of the target group (O'Hora & Dolbin-MacNab, 2015), for instance, to understand what are the skills that the targeted grandparents need to learn and making sure the program is accessible to all participants and is action-oriented (O'Hora & Dolbin-MacNab, 2015). Action-oriented strategies imply using techniques that help grandparents achieve their goals, such as setting realistic aims and identifying solutions that have worked in the past (O'Hora & Dolbin-MacNab, 2015). Using narrative therapeutic techniques where grandparents are empowered to create more resilient narratives of their life stories can also be effective in the context of such interventions (O'Hora & Dolbin-MacNab, 2015). Interventions targeting custodial grandparents need to be supplemented with community services that provide help for grandfamilies (e.g. support groups, free of charge activities for children and grandparents, support with schoolwork, etc.).

A third type of interventions are those targeted at *substitute or volunteer grandparents*, namely, older persons who are willing to take on the role of grandparent for children who are not directly related to them. This can happen, for example, in situations when the biological grandchildren live far away or when older individuals do not have any grandchildren themselves. Volunteering to be a grandparent can have many of the benefits of non-custodial grandparenting (e.g. promoting generativity, providing a purpose in older age, providing an opportunity for socializing, sharing affection, fostering cognitive development). In addition, it can provide an opportunity to exercise one's generativity with all the associated benefits (Villar et al., 2012; Noriega et al., 2019). For example, programs "granny au pair" or "granny nanny" is providing the opportunity to older women to offer grandparenting services for couples who live far away from their parents (i.e. the biological grandparents) or whose parents cannot act as grandparents (e.g. due to illness, disability, death). There are also programs that target grandmothers and grandfathers to the same extent, such as foster grandparents or volunteer grandparents for grandchildren who do not have grandparents or whose biological grandparents live far away or are too ill to take on grandparenting responsibilities. Volunteering among older adults is associated with better health, life satisfaction, sense of control, self-esteem, and lower depressive symptoms (Van Willigen, 2000; Musick & Wilson, 2003). Volunteering to be a

grandparent can thus offer benefits not just for children and parents but also for the volunteering grandparents themselves. Additionally, such programs can strengthen the community by promoting good intergenerational relations.

Conclusions

The grandparent role represents one of the novel tasks and social functions that can be adopted in older age and has relevant implications for the personal development of middle-aged or older individuals. Furthermore, grandparenting contributes not only to the development of older adults who assume this role but also the growth of their grandchildren and grown-up children. Sharing parenting responsibilities within the larger family can also add to the growth or the familial system and the well-being of all its members. Additionally, grandchildren can contribute to the development of their grandparents in terms of cognitive training (e.g. enhanced memory, verbal skills, attention capacity), physical health (e.g. mobility, increased physical activity), social development (e.g. social support, social skills needed in the contemporary world such as dealing with Internet and social media), emotional development (e.g. applying self-regulation skills), and personality development (e.g. increasing openness to new experiences, training resilience). Addressing the grandparenting role from a developmental and positive psychology perspective is relevant since one can reflect on the benefits of the role and how to design interventions that foster the developmental potential of grandparenthood.

Grandparenthood entails numerous benefits for older individuals. For example, grandparents were shown to experience well-being, a sense of purpose, enjoy more occasions to be physically active, receive affection, and feel socially integrated (Reitzes & Mutran, 2004; Fung et al., 2005; Mansson, 2016). Grandparenthood also provides older people with an opportunity to manifest generativity, namely, to transmit their knowledge and stories to the next generations (Noriega et al., 2019; Villar et al., 2012). The satisfaction with the grandparent role is much influenced by the centrality that one assigns to this role, as well as the meanings one provides to it (Reitzes & Mutran, 2004). Moreover, when the expectations of grandparents and grandchildren match, there is a chance of greater role satisfaction and well-being for both parties involved. Nevertheless, grandparenthood can imply a series of drawbacks, such as loss of independence or social networks, high distress, and depressive symptoms. However, these negative effects were mostly found in custodial grandparents and were attributed to role conflicts as well as situations where the situational demands outnumbered the resources of older individuals (Sampson & Hertlein, 2015; Yang, 2021). Nevertheless, even in their case, building positive strengths (e.g. resilience, gratitude, optimism) and boosting developmental resources (e.g. social support, social skills, emotional regulation abilities) can enhance their coping abilities and well-being.

Interventions targeting grandparenthood from a developmental and positive psychology perspective would focus on building resources and strengths among

grandparents and improving the communication with their grandchildren and grown-up children. Interventions can target different groups, such as future grandparents (e.g. aim to prepare older individuals for the transition to grandparenthood), current grandparents (e.g. focus on parenting skills and enhance self-efficacy concerning their implementation), custodial grandparents (e.g. help them deal with stress, cope with negative feelings, provide parenting skills and build strengths), and volunteer grandparents (e.g. how to use their expertise to foster generativity). Such interventions should focus on building positive strengths (e.g. optimism, resilience, mindfulness, gratitude) and foster developmental resources across life domains. A toolbox of exercises can be provided to encourage development in older adults and their grandchildren at the cognitive (e.g. games to stimulate memory, attention, verbal skills), physical (e.g. promote mobility and activities outdoors), personality (e.g. openness to new experiences, resilience), emotional (e.g. emotional regulation skills, positive reframing to foster positive feelings), and social (e.g. enhance social skills, train how to ask and to offer social support) levels. Outcomes of such programs should include not only the reduction of negative emotions (e.g. depression, anxiety) or actions (e.g. grandchildren's misconduct) but also positive results (e.g. increase in well-being, enhanced self-efficacy, increase in positive emotions, increased satisfaction with the role of grandparent, and quality of the grandparent-grandchildren relation). Psychoeducational programs can focus on both individual aspects (e.g. reflecting on the grandparent role, discussing beliefs about grandparenthood, addressing potential negative views on ageing, building strengths and developmental skills, etc.) and social aspects (e.g. enhancing parenting skills, practicing an authoritative style, learning how to show affection to determine developmental benefits, etc.). These psychoeducational interventions need to be supplemented by community programs and interventions (e.g. free and easy access to activities, safe playground areas, access to parks, family counselling services, etc.) to ensure their success. Intervening at micro (e.g. individual), meso (e.g. family, kindergarten, schools), and macro levels (e.g. community, policy) can trigger developmental benefits for grandparents, their families, and the community overall. Fostering positive intergenerational relationships (e.g. grandparents and their grandchildren, grandparents and their grown-up children, parents, and children) can help build stronger and healthier communities and improve the quality of life of its members.

Reflection Questions

1. How would you describe your relationship with your grandparents? What grandparenting style did they adopt?
2. Name three values, skills, or behaviours you learned from your grandparents.
3. Reflect on three things you can do to help your grandparents in their development.
4. How are your grandparents influencing your development now, and how did they affect your development as a child?

5. Formulate three objectives and three strategies for a psychoeducational program to foster development among older adults who are grandparents.
6. Formulate three objectives and three strategies for a program that targets the well-being of custodial grandparents.
7. What programs for volunteer grandparents are available in your community?

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Chapter 16
Coping with Pain: Potential for Development in Midlife and Older Age

Introduction

Pain represents a normal life experience that everybody has faced at some point or another, and, in many cases, it can be adaptive, keeping us away from physical and psychological dangers. Unfortunately, as people grow old, pain can become part of everyday life and become so overwhelming that it causes disturbed daily functioning and negative emotions (e.g. anxiety, depression, anger, etc.). While pain exists also in youth, few young people would accept it as part of their "normal" daily life, and they would do something to control it (e.g. go to a doctor, take painkillers, engage in a pain management programme, etc.). Negative stereotypes about ageing can hinder middle-aged and older individuals in their attempt to control their pain. For example, when they feel something is aching, older individuals would not talk about it with family or medical personnel because they may consider pain as normal for their age. Indeed, studies show that pain is highly prevalent in older age groups and that it is accepted as a fact of life by the suffering individuals as well as sometimes by the health personnel as well (Kumar & Allcock, 2008). Thus, many older persons suffer in silence and stoically accept their pain. This stoic attitude towards pain can have negative consequences for individual development in older age.

In the previous chapters on emotional development (see chapter on emotional development, part II of this book), I described how negative emotions are connected to pain, for example, how pain is linked to anxiety or depression and how this relationship can be reciprocal. Also, pain can make people feel lonelier since they believe that nobody understands their suffering or because they limit their activities and their social contacts and end up spending a lot of time alone. Pain can have a negative impact on health and development in older age, and negative consequences reflect also on the caregivers and significant others of the person who lives with pain. For instance, older people who often feel pain would be irritable and avoid contact with their loved ones or will be dependent on the help of family and friends

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for managing their daily life (e.g. go shopping, do the cleaning, get dressed). Significant others may often find it difficult to understand the pain experience of the elderly, especially if the older person does not look ill or tries to not complain too much, to avoid becoming a burden for others. Therefore, pain remains underassessed, underdiagnosed, and often undertreated or incorrectly treated among older persons (Gibson & Lussier, 2012).

Pain is not visible and can be recognized only from the person's behaviour (e.g. a limp, restricting activity) or testimonials. Daily situations such as picking up a grandchild, going for a walk, or climbing stairs can represent a challenge for older individuals who are in pain. Thus, for many older persons, everyday life becomes challenging and a source of suffering. Nevertheless, pain can also constitute an experience that contributes to our growth across the lifespan, just as in the case of other negative emotions and experiences (see chapters on depression and anxiety in this book). As in the case of negative emotions, not the experience that triggers them is important but how we interpret and deal with it. Learning effective coping mechanisms to deal with pain can help people develop in several domains of their lives (e.g. emotional, cognitive, physical, social, as well as at the level of personality development).

In this chapter, I will examine what pain is, how it is experienced by middle-aged and older individuals, what theoretical models explain the occurrence and persistence of pain in midlife and older age, and how one can measure pain. Furthermore, I will explore how pain may be connected to development in midlife and older age and apply a positive psychological perspective to reflect on what interventions can be designed to help middle-aged and older people prevent or manage their pain.

The Experience of Pain in Midlife and Older Age

The International Association of the Study of Pain (IASP) defines pain as an unpleasant sensation and emotional experience that is associated with actual or potential tissue damage or is described in terms of such damage (IASP, 1979). Usually, pain is classified in terms of the source, location, duration, and intensity. For instance, concerning its source, pain can be nociceptive, neuropathic, or mixed (Cavalieri, 2007). The first refers to pain that is somatic or visceral and is caused by the stimulation of pain receptors, such as in case of musculoskeletal pain or inflammation-related aches (Cavalieri, 2007). Neuropathic pain results from a pathophysiological disturbance of the peripheral or central nervous system such as diabetic neuropathy (Cavalieri, 2007). Concerning its intensity and duration, pain is classified as either acute or persistent (i.e. chronic pain). *Acute pain* implies a temporary unpleasant sensation that can have an adaptive function (e.g. protect us from hurting ourselves) as it can be interpreted as a warning signal for tissue damage. However, when very intense, acute pain can also have negative emotional consequences (Kumar & Allcock, 2008). If the cause of acute pain is correctly evaluated and appropriate treatment is provided, then the pain intensity can be successfully reduced (Harkins, 2002). In contrast, *persistent pain* can continue for several weeks,

months, or even longer (Kumar & Allcock, 2008; Molton & Terrill, 2014). According to IASP, persistent pain is continuing, recurrent, and lasts for at least 3 months (IASP, 1994). Persistent pain can be associated with a chronic condition (e.g. arthritis, osteoporosis, cancer) or have no objectively identifiable cause (e.g. psychosomatic pain). For example, in case of cancer patients, their pain can be the direct consequence of the diagnosed cancer form, or it may be associated with the treatment they receive for cancer delivery (Kumar & Allcock, 2008). In what concerns other types of persistent pain, osteoarthritic back pain (i.e. especially lower back and neck), musculoskeletal pain, and chronic joint pain are among the most frequently reported complaints expressed by older individuals (Denard et al., 2010).

In the case of *psychosomatic pain*, persistent pain is associated with stressful events (e.g. stomachache before an important exam, headache when feeling overwhelmed by the work-life balance, etc.). Sometimes this type of chronic psychosomatic pain can also determine negative consequences for physical health such as developing an ulcer or irritable bowel syndrome. At other times it can be experienced through physical symptoms without any identifiable bodily cause (e.g. migraine, lower backpain without an associated physical cause). It is important to note that persistent pain is multidimensional and has no adaptive function. Only in the case of psychosomatic pain, one can say that this helps to signal that there is a psychological cause that triggers the physical symptoms. However, having back pain or a headache only signals that we are stressed, but not what stresses us and how to manage it. In contrast, acute pain such as a headache caused by hitting our head during a bicycle accident signals us that we should be more careful when riding a bike and wear a helmet next time. Because of its complex nature, persistent pain is also more challenging to treat and needs to be approached from multiple angles (e.g. physical, psychological, social).

Pain is highly prevalent among middle-aged and especially older individuals and often causes disability (Patel et al., 2013). For example, in the UK, around 50% of people over 65 years old suffer from pain (Kumar & Allcock, 2008). Across Europe, it was reported that 30–60% of older adults experience chronic pain (Zimmer et al., 2020). Pain prevalence seems to increase with age, and the gender gap in pain experience also becomes more visible (Larsson et al., 2017; Zimmer et al., 2020). For instance, in the UK, for the population over 75 years old, it was reported that 56% of the men and 65% of the women suffered from pain (Kumar & Allcock, 2008). Other surveys focusing on chronic pain show that this increases with age and women tend to be more affected (Tsang et al., 2008).

The experience of pain has some particularities in older age. For example, it was suggested that the pain threshold increases with age (McCleane, 2006; Gibson et al., 2003). Pain perception in older adults was also shown to change with specific stimuli (Lautenbacher et al., 2005) and to have atypical manifestations. The latter means, for example, that older people report no pain when pain would be expected to be present (Kumar & Allcock, 2008). In this sense, when working with older people, one should pay attention also to instances of unreported pain when pain should be present (Gibson, 2005). Several physical aspects can influence the experience of pain in older age, such as modifications of the homeostatic mechanisms and organ system functions (Kaye et al., 2010). The organ systems most affected by

ageing include the central nervous system, the hepatic system, and the renal system (Kaye et al., 2010). Nevertheless, this chapter is focused more on the psychological factors (e.g. beliefs, emotions, behaviours) involved in the pain experience of older adults.

Qualitative testimonials of older adults concerning their pain experience offer insight into what feelings, thoughts, and behaviours they associate with pain. For example, the study conducted by Kumar and Allcock (2008) illustrated several attitudes towards pain, such as being stoic and not making "a fuss" about one's pain experience, fear of becoming a burden, and pain being a lonely experience since people cannot empathize if they haven't lived through something similar, but also positive attitudes such as pain not being part of normal ageing. The interviewed older individuals emphasized the fact that pain is exhausting and it makes one tired because it takes up so many resources to deal with it and also does not leave one time to relax (e.g. it hurts to sit down or lie down, one has trouble sleeping). Furthermore, pain restricts one's activities, as simple actions such as walking around the house, gardening, cleaning, or cooking become painful. One emotion associated with pain is being humiliated because other people can do things (e.g. walk fast, ride a bike, do the shopping), while being in pain means that one needs to make excuses not to take part in all sorts of events and activities (e.g. going to the supermarket, going hiking) that one used to enjoy. Furthermore, not engaging in social activities can make one feel lonely and isolated. Pain also can make one feel frustrated or be constantly in a bad mood because one cannot engage in life as one would wish to or cannot do things as before. A positive message transmitted by the interviewed older individuals is that one can learn to live with pain, by taking painkillers, engaging in physical exercise that helps to control the pain, and making changes in one's lifestyle to prevent or manage pain (e.g. what clothes to wear in order not to increase the pain, controlling one's weight so that one does not burden one's joints and increase pain). Another participant mentioned that she found support groups very helpful because she could share experiences and tips with other people who had similar pain experiences. One woman even mentioned that pain itself can be regarded as a friend that gives you advice, namely, to seek help and not tolerate pain (Kumar & Allcock, 2008).

Pain Assessment in Middle-Aged and Older Individuals

Pain represents a complex experience that encompasses subjective and objective aspects. Its complexity is reinforced by the fact that pain is influenced by several biological, psychological, and social factors. Thus, one should always consider pain on several levels, such as bodily and emotional suffering, spiritual struggle, social impediments, and practical issues involved. This complexity of the pain experience is reflected also in how pain should be assessed. For example, in addition to evaluating the sensorial pain (e.g. intensity, location), one should assess the expectations (e.g. "nobody will believe I am in pain", "pain is normal at my age"), fears (e.g. "I

will be labelled as hypochondriac"), and attitudes (e.g. "I should be strong and endure pain") that a person holds concerning his or her pain.

The measurement of pain is vital for effective treatment. However, evaluating pain can pose several challenges, especially in older years. In the absence of biomarkers, pain evaluation needs to rely on self-report (Cavalieri, 2007). Various tools were developed to assess the experience of pain (e.g. its intensity, frequency, location). Nevertheless, assessment depends on the readiness of the older individuals to talk and describe what hurts. As mentioned above, some older individuals are reluctant to report their pain because they do not want to become a burden, or they believe it is normal to be constantly in pain in older age (Kumar & Allcock, 2008; Kaye et al., 2010). Some older persons believe that tolerating pain makes them appear more resilient and autonomous, while others are afraid that admitting to being in pain will make them dependent on others. For example, in case of cancer patients, these often fear the disease progression and are in denial concerning their pain (Kaye et al., 2010). Furthermore, in older age, several people encounter communication difficulties caused by cognitive impairment (e.g. dementia, Parkinson's disease) that make pain assessment more challenging. Self-report evaluation of pain in older age is sometimes complicated also by the association with depressive or somatic symptoms (Parmelee et al., 2013). This is why, in certain cases, it is recommended to include also a family report and a full clinical interview (Molton & Terrill, 2014). Evaluating the cognitive status of a person is relevant for pain assessment (Corbett et al., 2012) since it helps decide what kind of measurement tools we can use. Another important component of pain assessment in older age is the evaluation of daily functioning, meaning to what extent can the person still perform activities of daily living (ADL, e.g. bathing, eating, dressing) or instrumental daily activities, such as shopping, preparing meals, cleaning, and managing money (Kaye et al., 2010).

As mentioned above, the most common method to assess pain in midlife and older age is self-report (Collett et al., 2007). Self-reports include questions about the sensory and emotional experience of pain as well as the impact it has on several domains of the persons' life (e.g. daily functioning, social relations, etc.) and the location, frequency, and intensity of the painful experience. Evaluation usually includes pain intensity scales, pain maps, and observing the pain-related behaviours. However, in some cases, the older persons' ability to self-evaluate and report pain can be compromised by several factors (e.g. impaired cognition or communication abilities). In such cases, other methods need to be applied to evaluate pain. For instance, one can rely on observing pain-related behaviours (Zwakhalen et al., 2006). Verbal and non-verbal cues need to be observed, and, in this sense, observer-rated scales can be applied to evaluate pain (Schofield, 2006). A series of numeric and visual scales to measure the *intensity* of pain are available (Cavalieri, 2007). For example, for the *numeric distress scale*, patients are asked to evaluate their pain on a scale from 0 to 10 where 0 means no pain and 10 signifies very intense pain (Cavalieri, 2007). The *McGill Pain Questionnaire* (Melzack, 1975) is successfully used to appraise the sensory, affective, evaluative, and miscellaneous components of the pain experience (Ngamkham et al., 2012; Kaye et al., 2010).

The visual analog scale (VAS), the thermometer scale, and the pain faces scale (Kim & Buschmann, 2006) or the Wong Backer faces scale are used in the case of patients who are cognitively impaired (Cavalieri, 2007; Ali et al., 2018). For instance, the VAS was applied successfully both in clinical and research setting (Ali et al., 2018). Nevertheless, some older patients encounter difficulties in completing the VAS (Ali et al., 2018). In this context, the choice of vocabulary for assessing pain in older adults is important to help them describe their pain (e.g. use words such as burning, throbbing, tightness, discomfort, sore, ache, sharp, dull, etc.). For patients who suffer from dementia, scales such as the Pain Assessment in Advanced Dementia (PAINAD) or the Checklist of Non-verbal Pain Indicators (CNPI) can be used (Lints-Martindale et al., 2012). In the case of older individuals with cognitive or language impairment cues, such as crying, moaning, changes in gait, and posture, withdrawal or agitated behaviour can show that the person is in pain (Kaye et al., 2010). Also, reports from relatives and caregivers can be included in the evaluation (Kaye et al., 2010).

The complexity of the pain experience should require a multidisciplinary approach for effective diagnosis and treatment (Kaye et al., 2010). The team can include doctors, psychologists, psychiatrists, and physical therapists (Kaye et al., 2010). The different approaches and knowledge are needed to complete the multifaceted assessment of pain in older age. After the sensorial components of pain have been measured (e.g. intensity, character, duration, location, frequency), other evaluations should include a medical and medication history and physical examination, assessment of factors that influence pain, evaluation of the impact of pain on the older patients' daily life and functioning, screening for depression, screening for cognitive impairment, and assessment of gait and balance (Kaye et al., 2010).

Pain assessment is very important also after a treatment has been started. For instance, older people can use *pain logs or diaries* to document their pain sensation and afferent emotions, cognitions, and behaviours on a daily basis. Such instruments help to evaluate the effectiveness of treatment and make necessary adjustments in the medication or other pain management approaches (Cavalieri, 2007). Based on the pain severity and level of dysfunction, a follow-up period should be decided upon in order to test the treatment effectiveness. This can range from 1 to 4 weeks depending on the specific situation of the person (Kaye et al., 2010).

From a positive psychological perspective, it is relevant to evaluate both the experience of pain and its impact on people's daily lives. The latter can help motivate individuals to engage in pain management strategies. Moreover, it is important to examine *beliefs about pain* (e.g. "I don't want to be a burden", "nobody is interested in my suffering", "nobody can understand my sorrows", etc.) and its treatment as well as the associated *emotions and behaviours* (e.g. anxiety, depression, fear of pain, avoidance behaviour). For instance, often older people report how they received an education that emphasized stoicism (e.g. they should not cry or complain too much). Consequently, they do not consider it appropriate to complain about their pain and prefer to suffer in silence (Kumar & Allcock, 2008). Such beliefs need to be identified and changed for the people to learn to manage their pain. Older individuals also have ways to cope with pain that can sometimes be very effective. Thus, from a positive psychology perspective, one should also evaluate

Table 16.1 Instruments to measure protective factors for dealing with pain

Protective factor	Evaluation instrument
Sense of coherence	Sense of coherence scale (SOC-13) (Eriksson & Lindström, 2005), a shorter version of the SOC-19 (Antonovsky, 1987)
Social network size	Social network index (SNI, Cohen et al., 1997) measures 12 types of social relations
Social support	Duke social support index, short version, 11 items (DSSI, Koenig et al., 1993), social interaction and subjective support scale
Self-efficacy	The General Self-efficacy Scale (GSE, Schwarzer & Jerusalem, 1995) 10 items
Hope	The Hope Scale (Snyder et al., 1991) 8 items
Optimism	Life Orientation Test (LOT, Scheier & Carver, 1985), LOT-Revised (LOT-R, Scheier et al., 1994) 10 items
Gratitude	The Gratitude Questionnaire (GQ-6, McCullough et al., 2002) 6 items
Grit	The Perseverance and Passion for Long-term Goals scale (Duckworth et al., 2007) 12 items
Character strengths	Values in Action Inventory of Strengths (VIA-IS Peterson et al., 2005) 24 strengths

strengths (e.g. flexibility, discipline, positive attitude towards life in general) and *adaptive coping mechanisms* (e.g. seeking support, searching for ways to lead as normal a life as possible) that people apply to deal with their pain and associated suffering. Various psychosocial factors can represent both risk and protective factors when dealing with pain. Among the risk factors are negative ageing stereotypes (e.g. "pain is normal in old age), negative beliefs about pain as described earlier, the existence of multiple chronic complaints (e.g. diabetes and arthritis), counterindications for taking painkillers, and negative emotions that can increase the pain experience (e.g. depression, anxiety). Protective factors include a series of character strengths such as optimism, grit, gratitude, hope, and self-efficacy (Allenden et al., 2016). These can be measured for instance with Values in Action (VIA) classification of strengths (Park et al., 2004). The 24-character strengths from VIA are organized around six virtues: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence (Allenden et al., 2016). Table 16.1 provides an overview of the strengths we can measure to see if older individuals possess positive strengths to help them deal with pain.

Models That Explain Pain in Midlife and Older Age

In order to manage pain, it is important to first understand how pain occurs. This is relevant also for patient and caregivers' education and can help improve treatment adherence and effectiveness. As already mentioned above, one specificity of pain in older age is that it is linked to a series of medical conditions such as arthritis or osteoporosis. Thus, it is not surprising that for a long time, pain was regarded only from a medical point of view, as caused by illness or physical injury. Nowadays,

pain is considered to be the result of multiple causes, comprising biological, psychological, and social factors (Penlington et al., 2018).

One of the most famous theories that explains the experience of pain is the *gate control theory* (Melzack & Wall, 1965). This theory postulates that the dorsal horns of the spinal cord act as a gate for the transmission of messages from the body to the brain. This gate can be closed or opened depending on various factors such as past experience, beliefs, expectations, or attention. This theory is relevant because it was the first to claim that pain can also be the result of top-down processes (Penlington et al., 2018). Namely, this means that the brain plays an important role in pain modulation as it can intensify the sensation by making use of various contextual and environmental factors (Penlington et al., 2018). The gate control theory highlights the functional aspect of (Penlington et al., 2018) pain, namely, that it serves to direct our behaviour towards rest and recuperation. This emphasis on pain behaviour is also the focus of *behavioural theories of pain* (Fordyce et al., 1968). Behavioural therapies, for instance, apply operant conditioning techniques to reduce pain behaviours (e.g. complaining, excessive resting) and increase healthy actions (e.g. active engagement in activities that are meaningful for the person). Some principles for the psychological management of pain that were introduced by Fordyce are still relevant in current practice. For instance, targeting pain actions during pain management interventions and performing a functional analysis (i.e. analysing the pain behaviour, precipitating, and maintaining factors) are still integrated in pain management nowadays (Penlington et al., 2018).

With the rise of clinical psychology in the 1980s and 1990s (Gatchel, 1999), the importance of thoughts patters for the pain experience began to be taken into consideration. Thus, the *cognitive behavioural therapy* (Beck, 1970) began to gain in popularity both for understanding and for treating pain. The cognitive theory of pain assumes that physical sensations are interrelated with emotions, thoughts, and behaviours and result in the pain experience (Penlington et al., 2018). Usually, these factors are linked in a circular manner, creating so-called vicious cycles that need to be addressed in therapy. During the intervention, the therapist will guide the person to identify the thoughts and behaviours related to pain and break the cycle of the pain experience. Research has found that pain-related beliefs are associated with appraisals, with the intensity of the pain experience, felt emotions (e.g. depression), physical disability, and social role limitations (Gatchel et al., 2007). Among the negative thoughts that are related to the pain experience is *pain catastrophizing*, defined as exaggerating the threat of pain and rumination about the inability to cope with pain (Edwards et al., 2011). Another important aspect is *avoidant behaviour* due to the fear of experiencing more pain or bodily injury (Leeuw et al., 2007). *Self-efficacy*, defined as the belief that one can cope with pain, no matter the circumstances, represents a resource in dealing with pain (Turner et al., 2007). The cognitive theory of pain assumes that, if the beliefs associated with pain are identified and changed, then one can reduce the intensity of the pain experience.

According to the *cognitive behavioural model*, pain starts with a physical sensation such as a throbbing back pain or headache. This physical sensation triggers a behavioural response or fight (e.g. trying to find a cure that can control the pain, get help and support) or flight (e.g. denying that one is suffering, postponing going to a

doctor, too much resting, avoiding moving). Both physical sensations and actions are associated with certain thoughts (e.g. "this is terrible", "why is this happening to me?", "I am being tested", "I can cope with this and find help") and emotions (e.g. fear, anger, frustration, depression). All these four factors (i.e. thoughts, emotions, physical sensations, and behaviours) are influenced by the context (e.g. cultural beliefs, social norms, socio-demographic variables) where a person lives. In case of chronic pain, because the threat is persistent, this can lead to hypervigilance understood as the tendency to constantly scan the environment for stimuli that could cause harm and injury (Dehghani et al., 2004). Living with a constant feeling of threat can maintain the felt pain.

In case of some forms of specific and frequent types of pain, researchers attempted to identify risk factors or protective aspects. For example, lower back pain (LBP) represents one of the most common health problems among older adults and is associated with pain and disability (Hoy et al., 2012). Compared to middle-aged adults, people over 65 years old are more likely to develop LBP that lasts for more than 3 months, with risk of becoming a chronic problem (Hartvigsen et al., 2005). Older age itself is a risk factor for LBP. Other non-modifiable risk factors include age-related changes in central pain processing (i.e. areas in the brain responsible for the processing of pain diminish with age, such as, the cingulate, insula, or the striatum), cognitive disability (i.e. dementia and inability to express pain), low socioeconomic status, previous work exposure, gender (i.e. women being more susceptible to develop LBP as compared to men), and genetics (Wong et al., 2017). The modifiable risk factors include stress and negative emotions (e.g. depression, anxiety), fear-avoidance beliefs, pain catastrophizing, smoking, inactivity, social environment, poor self-perceived health, and falls (Wong et al., 2017). In terms of physical activity, it is interesting to note that high-intensity physical exercise can raise the risk for LBP, while walking for 30 min each day for at least 5 days of the week as well as performing strengths exercises can lower the risk for LBP (Kim et al., 2014).

In terms or *protective factors*, for example, pain self-efficacy and pain acceptance were identified as helpful in managing pain in older adults (Martinez-Calderon et al., 2020). Thus, treatments can include components concerning what people can do to manage pain and raise their pain self-efficacy as well as how to accept pain to start thinking about how to manage it. Another study showed that sense of coherence (SOC, Antonovsky, 1987) plays an important part in managing pain, namely, older individuals high on SOC were less vulnerable to catastrophizing and could cope better with pain (Andruszkiewicz et al., 2017). Two main types of coping with pain were identified, namely, an active, problem-focused approach and an emotion-focused strategy. The former means that people try to control their pain or eliminate its source. People who apply this strategy are focused to maintain activity, divert their attention from the pain, exercise, and try to find ways to diminish their pain (Andruszkiewicz et al., 2017). Individuals who apply emotion-focused coping try to reduce unpleasant emotions connected with pain. Such persons are rather passive, try to avoid activity, and try to get social support (Andruszkiewicz et al., 2017). Task- or problem-solving-related coping is considered to be more effective because people actively seek information and ways to diminish their pain, while, in case of

emotional coping, they sometimes avoid thinking about their pain or deny its existence (Andruszkiewicz et al., 2017). One ineffective coping strategy is to catastrophize, meaning focusing on the pain and interpreting it as a catastrophe, which enhances the suffering (Andruszkiewicz et al., 2017). Resources such as SOC (i.e. comprehensibility, manageability, meaningfulness) can help individuals cope with pain because they engage in active coping and can maintain meaningful relations with others that can strengthen their social support networks (Andruszkiewicz et al., 2017). Individuals with high SOC show a better understanding of things that are happening to them, are better at selecting the right coping strategies, and can give meaning to their experiences, including pain (Andruszkiewicz et al., 2017). Because individuals with high SOC show better functioning in all life domains (i.e. cognitive, emotional, social, physical) (Andruszkiewicz et al., 2017), one can say that they have better developmental resources to deal with pain. Interventions that focus on improving SOC in individuals who experience pain may help them learn to manage and reduce their suffering. Recent studies have also illustrated the importance of resilience resources for managing pain (Hemington et al., 2017; Esteve et al., 2018; Ramirez-Maestre et al., 2019). Resilient individuals can function and even experience positive emotions despite feeling pain because they apply better coping strategies, are more flexible, can adjust their goals better, and can accept reality as it is (Ramirez-Maestre et al., 2019).

Why Intervene: Pain and Development in Midlife and Older Age

Pain can have a negative impact on development in midlife and older age in several areas such as cognitive, social, physical, and emotional. In the case of *emotional development*, it is known that pain, especially in its chronic form, is associated with depression and anxiety (Kumar & Allcock, 2008) or with feeling lonely (Patel et al., 2013). For example, persistent pain was shown to be an important predictor of depression severity among older adults (Rosemann et al., 2007). The relationship with depression may be cyclical, as pain determines depression and the other way around (Chou, 2007). Nevertheless, from a positive psychology perspective, it is important to note the resilience of older adults in dealing with pain (Molton & Terrill, 2014). For instance, there are older adults who, despite feeling pain, are not depressed or distressed (Molton & Terrill, 2014). Some adults who experience pain develop a positive adaptation, namely, they can control their pain and experience low levels of depression or functional impairment (Cook & Chastain, 2001; Rosemann et al., 2007; Gleicher et al., 2011).

In terms of *physical development*, pain can cause high levels of disability (Blyth & Schneider, 2018). The experience of pain can lead to loss of muscle strength, limited mobility, and physical performance (Kumar & Allcock, 2008). When feeling pain, a natural coping mechanism is to limit physical activity. While resting may be effective in case of acute pain where an injury necessitates rest to heal (Molton

& Terrill, 2014), in case of persistent pain, limiting activity leads to a cycle or decreased participation and increased disability (Jensen et al., 2011). A decline in physical activity is linked to weight gain and obesity in older age (Strine et al., 2005) which then contributes to an increase in pain in the knees, hips, or back (McCarthy et al., 2009). Persistent pain is associated with sleep disturbances, such as not getting enough sleep or, on the contrary, sleeping longer hours than usual (Chen et al., 2011), or may even lead to chronic sleep deprivation among older adults (Artner et al., 2013). Pain also represents a predictor of falls in older age (Gálvez-Barrón et al., 2020) and thus of potential resulting injuries. The ageing of the nervous system (e.g. structure, chemistry, function) can impact pain perception (Molton & Terrill, 2014). Normal ageing is associated with changes in the brain, such as loss of brain volume in the prefrontal cortex and hippocampus (Farrell, 2012). Persistent pain also causes alterations in the brain such as reduction of the thalamus (Rodriguez-Raecke et al., 2009). Alterations of the pain threshold with advanced age were also reported (Gibson et al., 2003) to influence the experience of pain in older age. The diminished functioning of endogenous pain modulatory mechanisms, such as dopaminergic neurons from the basal ganglia (Cole et al., 2010), may also cause increased pain perception.

In what concerns *cognitive development*, studies show that older people who experience pain score significantly lower on memory tests and have an impaired attentional capacity (van der Leeuw et al., 2016) since their attention is mostly focused on their pain. In case of cognitive degeneration, such as for patients who suffer from dementia, pain can have a negative impact as it accelerates cognitive impairment (Corbett et al., 2012). Decline in cognition and verbal expression among patients who suffer from dementia makes pain evaluation more difficult (Scherder et al., 2009) and thus impedes proper treatment. In case of middle-aged individuals, pain can affect how they manage cognitive tasks at work because it interferes with the possibility to concentrate for longer time periods.

In terms of *social development*, older individuals can become more isolated (Rosemann et al., 2007) because they restrict their activities. Thus, their social networks and possibility to receive support is affected by pain. Older people tend to have smaller social networks (see chapter on social development). However, this does not automatically mean that they have little social support. As postulated by the *socioemotional selectivity theory* (Carstensen et al., 1999) (see chapter on social development), older individuals tend to have relations with close others and prefer smaller networks that are emotionally significant to having many social connections. Older adults with chronic pain rely on social support (Martin et al., 2012) to cope with their condition. Larger and significant social networks (i.e. in terms of support) can help older adults to deal with pain (Ferreira & Sherman, 2006), showing the effect of social development on pain experiences in older age. In case of middle-aged adults, these can find it difficult to juggle their many social roles (e.g. parent, caregiver, spouse, employee, etc.) when feeling acute or chronic pain. Also, the stress of facing various social role demands can increase pain intensity and cause disability among middle-aged adults.

In terms of *personality development*, this can influence how people cope with pain (Naylor et al., 2017). Higher harm avoidance can create more vulnerability to the formation of a fear-avoidance way to cope with pain (Naylor et al., 2017). Thus, a person enters a vicious cycle of fear, avoidance, and suffering related to the pain experience. Neuroticism is known to increase the perception of pain intensity, especially when pain catastrophizing thoughts are present (Banozic et al., 2018). Additionally, chronic pain may lead to increases in neuroticism since a study of developmental course of neuroticism across the lifespan showed this can increase in adverse circumstances (Aldinger et al., 2014). Also, concerning the link between personality development and pain, there is evidence that, with age, people become more tolerant of uncertainty (Le, 2008). On the one hand, this can prove helpful in dealing with pain experiences. On the other hand, the experience of pain can train a person to become more resilient (Molton & Terrill, 2014). Older adults may have few coping strategies, but they apply them in multiple settings (Moos et al., 2006). In case of pain, older individuals tend to make use predominantly of emotional coping (Molton & Terrill, 2014). Stoicism, defined as enduring pain and suffering without complaining (Yong, 2006), can be a personality trait, modelled by the education one received as a child. This can help older adults deal with the stress caused by experiencing pain (Cook & Chastain, 2001). However, stoicism can prove to be a barrier towards diagnosing and treating pain (Yong, 2006; Cornally & McCarthy, 2011) because stoic individuals tend to minimize or deny pain. As discussed above, among the protective factors, in case of pain and its management, is a high sense of coherence (SOC, Antonovsky, 1987) because this trait can help people give meaning to their pain experiences and choose the effective coping strategies. Also, the other way around, effective pain management could help develop SOC among older individuals.

How to Intervene: Pain Management in Midlife and Older Age

Older adults who experience pain are very affected in the performance of daily living tasks (e.g. taking a shower, getting dressed). One study showed that 70–80% of older adults who experienced pain were also impeded in their daily living activities (Patel et al., 2013). This gender difference was explained through an interplay of physical, psychological, and social factors that determine the reporting or underreporting of pain (Turk & Okifuji, 2002). Women tend to live longer lives and are more prone to disability and slower recovery rates (Hardy et al., 2008). Specifically, chronic pain is considered to be one of the main causes of disability in older age (Blyth & Schneider, 2018) as well as healthcare service utilization (Song et al., 2016). Caregivers are affected indirectly since they also experience higher distress (e.g. the feeling of not being able to help to relive the suffering of a loved person) and directly since they need to take responsibility for the person who is suffering and that often involves financial costs. Pain was also associated with suicide risk

and mortality (Kumar & Allcock, 2008; Almeida et al., 2012). All in all, considering the high prevalence rates, the disability, and negative emotional consequences (Blyth & Schneider, 2018) as well as the high economic costs of pain (Gaskin & Richard, 2012), it becomes clear that pain management in older age is highly relevant.

There are several factors that can influence treatment effectiveness for pain management in older adults. For example, polypharmacy represents one issue that can affect pain management in older age (Molton & Terrill, 2014). The use of some painkillers such as anti-inflammatory drugs can cause negative side effects. For example, long-term use of ibuprofen can trigger gastrointestinal bleeding and renal dysfunction (Cooper & Burfield, 2010). Opiates remain an important pain management tool for the elderly (Papaleontiou et al., 2010). However, these may cause undesirable effects such as chronic constipation (Papaleontiou et al., 2010), somnolence, disorientation, and problems with balance and dizziness which constitute a risk for falls (French et al., 2006). Taking these side effects of painkillers into consideration, it comes as no surprise that medication adherence rates are low among older individuals (Chang et al., 2011). Low treatment adherence (i.e. not respecting treatment recommendations) can manifest itself by taking fewer doses of medication or taking the pills only when the pain gets really bad (Molton & Terrill, 2014). This makes psychosocial interventions very important for pain management among the elderly (Molton & Terrill, 2014). Medical treatment (e.g. pain killers, surgery) can help and is necessary especially for very severe pain, but psychological treatments of pain should be taken into consideration especially for improving the functionality of the older person. Other works describe the medical treatment of pain in older adults (see Cavalieri, 2007; Kaye et al., 2010; Ali et al., 2018). In this chapter, I will focus on psychological strategies of prevention and intervention from a positive psychology viewpoint and a developmental perspective.

When designing interventions, first, one should identify the psychological and physical risk factors for experiencing pain in older age. Applying the *cognitive behavioural theory of pain*, one would first gather knowledge regarding the pain sensation (e.g. location, duration, frequency, intensity). Then, one would identify pain-related cognitions, emotions, and behaviours. The intervention objectives from a positive psychology perspective would be, for example:

1. Decrease pain perception.
2. Increase functionality, for daily activities (e.g. washing, eating, dressing) and instrumental daily activities (e.g. shopping, cleaning, preparing meals).
3. Increase and strengthen existing adaptive coping strategies.
4. Reduce negative affect connected to the pain experience (e.g. anxiety, anger, depression) and increase positive emotions (e.g. happiness, feeling relaxed).
5. Change negative cognitions associated with the pain experience (e.g. pain catastrophizing).
6. Increase social support networks.

In the following I will discuss the abovementioned goals, referring to strategies that can help with their implementation. However, these are only some suggestions and

are by no means exhaustive. These goals and strategies are meant to give some ideas and encourage the readers to look for further professional advice.

Changing Beliefs and Attitudes Related to Pain

According to CBT principles, changing cognitions leads to changes in emotions and behaviours. As discussed also in other parts of this chapter, older adults often consider pain as a normal part of ageing. For instance, one study showed that 87% of older participants considered that pain is something to be expected in old age (Sarkisian et al., 2002). Another common attitude is that of downplaying the importance or pain severity (Molton & Terrill, 2014). This often happens among adults who have multiple chronic illnesses, and thus an arthritic condition may be seen as not as bad as a cancer diagnosis. However, such beliefs can serve as barriers towards reporting their suffering and pain management (Gagliese, 2009) and need to be changed in interventions.

Another ineffective way to react to pain is to catastrophize, thinking it is awful to feel pain. Catastrophizing can lead to avoidance behaviour and passivity and increase the person's suffering. Also, catastrophizing can affect information processing in the sense that it will bias older individuals to attend to pain stimuli selectively and strongly (Crombez et al., 2013). People who catastrophize tend to hyperfocus on pain sensations, cannot control pain-related thoughts, and find it difficult to engage in tasks because they anticipate pain experiences (Quartana et al., 2009). Thus, reducing catastrophic thinking and the linked avoidance behaviours can represent aims of pain management interventions (Flink et al., 2015). This can be done with a silver lining exercise where participants learn to evaluate both negative and positive sides of experiences and try to reframe the situation by emphasizing the positive aspects (Flink et al., 2015). For example, one can see the negative, fear-provoking aspects of experiencing pain but also some positive attributes related to the developmental challenge of dealing with it effectively. Another exercise aims to shift the focus of the person's experience from negative to more positive things in ones' life. This can be done by writing down positive things that one had experienced in the previous week (Flink et al., 2015). The Pain Catastrophizing Scale (Sullivan et al., 1995; Sullivan, 2009) can be used to assess catastrophizing in relation to the felt pain. The scale describes 13 thoughts and feelings that individuals can experience when they are in pain. These are organized into three categories, namely, magnification ("I keep thinking of other painful events"), rumination ("I can't seem to keep it out of my mind"), and helplessness ("I feel I can't go on").

After identifying negative or ineffective beliefs related to the pain experience, one can replace them with more adaptive ways of thinking. For instance, one can foster tolerance (e.g. the idea that the pain is dreadful, but one can do something to reduce it), flexibility (e.g. changing coping strategies if the ones that one uses do not work), and increasing pain self-efficacy (i.e. the belief that one can handle one's pain). The Acceptance and Action Questionnaire-II (Bond et al., 2011) can be used

to measure flexible thinking. This questionnaire includes ten items such as "It is OK if I remember something unpleasant". For instance, new generation CBT interventions, such as acceptance commitment therapy (ACT) and mindfulness, encourage people to pursue the activities that are important for them by accepting rather than challenging pain and pain-related emotions and cognitions (Driscoll et al., 2021). Such approaches support the development of psychological flexibility (i.e. a positive psychology strength) and cognitive defusing (i.e. distancing oneself from one's thoughts). Concerning the latter, it is important to note that often people identify too much with their thoughts (e.g. they think "this pain will never stop"), and this can worsen their distress. Cognitive defusing encourages people to notice such thoughts but not to identify with them. Acceptance means that we continue to engage in activities that we like (e.g. shopping, hiking, dancing, playing with grandchildren, etc.) despite feeling pain and negative emotions and resisting the urge to avoid unwanted emotions (e.g. frustration when one cannot do sports as before). ACT therapy for chronic pain encourages individuals to recognize the self as distinctive from one's suffering, readiness to accept one's struggles as they are without superimposing a narrative (e.g. "it is awful"), identifying values, and committing to achieve these regardless of the struggles one needs to deal with presently (McCracken, 2015). Sessions include learning core skills, such as cognitive defusing, mindfulness, commitment to action, and acceptance as a way to build cognitive flexibility (McCracken, 2015). Mindfulness interventions aim to untangle the experience of bodily pain from emotional suffering by emphasizing awareness of the body, breathing, and activity (Driscoll et al., 2021). Older individuals can be taught to differentiate between their physical pain and associated thoughts and feelings. They can also learn to distance themselves from the pain, both emotionally and cognitively, so as to react to their pain intentionally (e.g. applying adaptative coping strategies) rather than impulsively (e.g. avoidance) (Driscoll et al., 2021).

Identify and Strengthen Effective Coping Mechanisms

Older people sometimes apply pain management strategies that are ineffective, such as restricting their activities or effective methods such as seeking expert help to treat their pain. Unfortunately, inactivity leads to restriction of social contacts, feelings of depression or loneliness, and physical consequences such as pressure sores or feeling breathless. Studies that compared coping mechanisms in older and younger adults who felt pain showed that often older adults use fewer strategies because they know what "works" for them and thus focus on these (Molton & Terrill, 2014). According to the CBT model, constant pain can overwhelm a person's usual coping abilities (Penlington et al., 2018). That is why, one component of intervention is to make sure that the person has enough coping skills and teach them new ones (e.g. relaxation techniques, activity management, specific physical exercises that help with dealing with pain). As stated above, problem-focused coping can be more effective than emotional focused coping (Andruszkiewicz et al., 2017), and thus

interventions can concentrate on training the former. Problem-focused strategies comprise engaging in exercise, actively seeking support and treatment, distracting attention from the pain sensation, and making efforts to maintain an active lifestyle.

Increasing Support and Communicating About Pain

Social support plays an important part as a resource for dealing with pain (Martin et al., 2012). However, often, older people have smaller social networks or live alone. Smaller social networks may be less able to provide the needed support for older individuals (Molton & Terrill, 2014). Also, if the social networks are composed of similar individuals (e.g. older people tend to have friends that are also old and have different aches and pains), this reduces the chances that one will receive instrumental support (e.g. help with cleaning, cooking, shopping, etc.). However, individuals who are in a similar situation can provide emotional support because they understand what a person is going through. Qualitative studies revealed the importance of talking about pain. Thus, for example, support groups can give people an opportunity to share their experiences and suffering. It is also an occasion to exchange tips and strategies on how to cope with pain. For example, in a report on pain experience, an older woman described how reading had become a problem for her since she found it difficult to hold a book or sustain her head for longer periods of time. Going to a support group helped her get the idea that she can use a music stand to hold her books (Kumar & Allcock, 2008). This represents a simple idea, but she had not thought about it before as she was too caught up in her problem.

Dignity was singled out as an important ingredient of communication and pain management (Kumar & Allcock, 2008). Dignity implies that the older person involved gets to decide by herself or himself what treatment is given to relieve the pain and who administers it. Older individuals should retain a sense of control over their pain management and should be treated as a person who suffers from pain and not just a patient who is controlled by his or her pain. It is important that older people understand how some beliefs (e.g. catastrophizing) may maintain or even increase their pain because they act as barriers to coping. Talking about pain and related feelings, beliefs, and behaviours can help change ineffective coping strategies. In this sense, supportive therapy was shown to be effective (Driscoll et al., 2021). Supportive psychotherapy provides a safe environment where the person can talk about pain and reflect on coping with it, process information about the experienced distress, and receive validation (Driscoll et al., 2021). Factors such as the therapeutic alliance, active listening skills, empathy, and positive regard are important for the success of such supportive interventions (Driscoll et al., 2021). Supportive therapy functions well for the emotional components of pain, for example, in order to increase positive mood (Hoffman et al., 2007). However, for reducing pain, one needs to combine it with more specific therapies and, depending on the case, also with pharmacotherapy.

Positive psychology principles can be applied to implement the abovementioned pain management goals. For example, one intervention using positive psychology principles included 1-h meetings for a period of 7 weeks (Flink et al., 2015). Between meetings, participants were given exercises as a homework to practice and record in a workbook. The first 2 weeks focused on teaching the rationale of positive psychology and self-compassion. Exercises included "becoming aware of one's suffering", the "self-compassion mantra", the "self-compassion letter", and "self-compassion diary" (Neff & Lamb, 2009; Smeets et al., 2014). Self-compassion is very important because participants learn to be kind to themselves, especially in difficult moments when they experience pain (Flink et al., 2015). Self-compassion can be measured with the self-compassion scale (Raes et al., 2011). The scale includes 12 items with statements such as "I try to see my failings as part of human condition". The third week was dedicated to gratitude and the application of the "three good things" exercise (Seligman et al., 2005, 2006). Weeks four and five were aimed at developing positive affect through savouring exercises such as replaying happy days (Seligman et al., 2005; Bryant, 2003). The Savouring Beliefs Inventory (Bryant, 2003) can be used to measure the capacity to savour positive outcomes. The inventory includes 24 items organized around three factors, namely, anticipating upcoming positive events, savouring the moment, and reminiscing positive experiences. Weeks six and seven were focused on working on becoming the best possible self with exercises, such as "best possible self-visualization" and forming a maintenance plan (Peters et al., 2010; King, 2011). These exercises can increase optimism and life satisfaction (Flink et al., 2015). The last session was dedicated to evaluating the intervention and formulating a maintenance plan (Flink et al., 2015). Results from the study point out that positive psychology principles should be used to enhance the benefits of CBT for pain management interventions.

Another study testing a positive psychology intervention for patients with chronic pain showed that participants scored higher on happiness, optimism, positive future expectancies, ability to live life despite pain, positive affect, and self-compassion after the intervention (Boselie et al., 2018). Participants also scored lower at depression, anxiety, and catastrophizing following the positive psychology intervention. However, task performance did not improve dramatically (Boselie et al., 2018). The positive psychology intervention was Internet-based and had an 8-week length. Patients received instructions via an online platform and practised their exercises on their own at home. The intervention was divided in four sections, namely, self-compassion, positive focus, savouring, and optimism (Boselie et al., 2018). Self-compassion refers to the capacity to treat oneself kindly and avoid self-criticism in situations where one experiences pain (Neff & Germer, 2013). For instance, participants write a self-compassion letter to themselves from a friends' perspective (Boselie et al., 2018). In order to raise awareness concerning the positive side of life (Seligman et al., 2006), the three good things exercise is proposed. This means that participants write down three good things that happened during the day and why they happened. This is performed daily for a whole week (Boselie et al., 2018). Savouring strategies are meant to increase the frequency of positive experiences on a daily basis. For example, participants plan pleasant activities, entitled mini

vacations of 20 min (Boselie et al., 2018). In module four, participants perform the "best possible self" exercise (Peters et al., 2010), where they imagine and write about the best possible life despite undergoing pain. The concept of the intervention was to focus on resilience factors rather than on the pain experience itself. Chronic pain patients would learn to focus on what they enjoy in life despite undergoing pain (Goubert & Trompetter, 2017).

Pain Prevention for Middle-Aged and Older Individuals

Unfortunately, pain cannot be totally prevented in midlife and old age. However, as we have seen above, there are risk factors for experiencing more severe pain. Consequently, we can focus on these to reduce the probability of enduring a lot of pain in late life. From a positive psychological viewpoint and developmental perspective, we can train our strengths (e.g. resilience, optimism, hopefulness, gratitude, etc.) in order to prevent the occurrence of severe pain in midlife and older age. Development in several areas can also help with preventing pain in midlife and older age. For example, physical development through regular exercise can improve muscle strength and balance and prevent falls and associated pain. Enhancing resilience and SOC as part of personality development can improve coping strategies for dealing with pain. Social development can ensure that one has the right social support when dealing with pain in older age. Improving emotion-regulation strategies can prevent negative emotional reactions in response to pain (e.g. depression, anxiety, fear, anger, frustration, etc.). Also, it can enhance successful emotional coping and reduce the probability of ineffectual emotional coping strategies such as denial. Cognitive development in the sense of identifying and talking about pain in constructive ways, instead of complaining or catastrophizing, can help to prevent reduced functionality because of pain in older age. Having a positive attitude towards seeking help can increase the probability that one will rely on problem-focused coping to effectively deal with occurring pain (e.g. actively seeking support, distracting one's attention from pain, engaging in physical exercise).

Taking the public health definitions of prevention into consideration, one can classify programme goals according to primary, secondary, and tertiary prevention. Primary prevention would refer to the target group of individuals who do not yet experience pain symptomatology. Building developmental resources in young and middle-aged individuals to prevent pain in older age can represent goals for primary pain prevention interventions. Secondary intervention would target older people who have some pain symptoms but have not yet developed a form of chronic pain. In this sense, one can intervene to reduce the risk factors (e.g. sedentarism, lack of social networks, catastrophizing beliefs). However, from a positive psychology perspective, secondary prevention can aim to build positive strengths (e.g. optimism, resilience, sense of coherence), encourage social support seeking, foster problem-focused coping, and teach practical strategies to deal with pain (e.g. certain physical exercises, relaxation techniques). All these strategies would be implemented in

order to prevent pain symptoms to develop into chronic pain. Tertiary prevention would target those individuals who already suffer from chronic pain, and it would aim to increase their quality of life despite undergoing pain. In this sense, CBT strategies (e.g. intervening on the cycle of pain, changing negative beliefs, reducing avoidant behaviour, decreasing negative emotions associated with pain) can be applied together with positive psychology principles (e.g. increasing resilience, optimism, gratitude, grit, hopefulness, etc.). For all types of prevention, increasing developmental resources can play an important role, for example, increasing social networks and improving social skills (i.e. social development), increasing resilience and openness to new experiences (i.e. personality development), fostering emotional regulation skills (i.e. emotional development), enhancing cognitive flexibility and decision-making (i.e. cognitive development), and building muscle strength and joint flexibility (i.e. physical development).

Conclusions

Even though pain represents a frequent experience in midlife and older age, it is still underassessed, underdiagnosed, or misdiagnosed (Molton & Terrill, 2014), meaning that its prevalence is probably a lot higher than reported. Several middle-aged and older adults are reluctant to talk about their pain and associated suffering because they do not want to become a burden to others, wish to stay autonomous, or consider that pain is "normal" in midlife and older age. The idea that pain is part of typical ageing represents a negative ageing stereotype that unfortunately represents a barrier to seeking (e.g. older adults adopt a stoic attitude of enduring pain) or being offered treatment (e.g. when health professionals dismiss the pain experience of older adults or diminish it by considering it less relevant than that of younger patients). For effective prevention and pain management in midlife and older age, one should note that pain does not constitute a characteristic of normal ageing. Even if pain is part of life and cannot be avoided at all times, one can develop effective strategies that help reduce the negative consequences of pain (e.g. negative emotions such as depression or anxiety, avoidant behaviour, loneliness, and disability).

Because pain is both an objective and subjective experience, one needs to use several tools to evaluate not just the pain experience (e.g. intensity, location, frequency), but also the associated emotions (e.g. depression, frustration, anxiety), cognitions (e.g. beliefs about pain), and behaviours (e.g. actions taken to deal with pain). In addition to assessing risk factors for pain (i.e. factors that determine pain and its maintenance), from a positive psychology perspective, one would also evaluate strengths and adaptive coping strategies that help a person deal with pain. Since unfortunately, older persons often suffer from several pain conditions, one needs to evaluate the risk factors and protective factors for each specific type of pain. Focusing on protective factors and developmental resources for dealing with pain helps to treat the middle-aged and older individuals as a whole person and not just as a sum of pain symptoms.

An important message to transmit to older adults is that improving one's coping strategies to deal with pain is still possible even in midlife and older age. Interventions to manage or reduce pain in midlife and older age are highly relevant because pain can impact development in older age across life domains and negatively affects older adults' overall health and well-being. Furthermore, effective pain management can have a positive impact on development by providing growth experiences. Positive psychology principles can provide a framework for designing pain management interventions. Pain management interventions from a positive psychology viewpoint aim to develop strengths (e.g. optimism, resilience, grit, gratitude, etc.) and effective coping strategies (e.g. active problem-focused coping). A positive strategies toolbox can include exercises that train one's capacity for self-compassion, gratitude, identifying positive aspects of life, reframing negative perceptions of pain and suffering, building pain self-efficacy, or visualizing one's best possible self despite undergoing pain. Positive psychology strategies can be applied jointly with cognitive behavioural therapy principles. The latter includes intervening to change negative beliefs (e.g. catastrophizing about the pain experience, denial of pain), emotional reactions (e.g. fear of pain, depression), and detrimental actions (e.g. avoidant behaviour, excessive alcohol consumption). Overall, building developmental resources can help prevent and manage pain in older age. For example, strengthening social networks (i.e. social development), developing emotional regulation (i.e. emotional development), fostering resilience and optimism (i.e. personality development), building physical strength, and encouraging health behaviours (i.e. physical development) can contribute to building a strong resource pool for preventing and managing pain in midlife and older age.

Reflection Questions

1. How would you explain the cycle of pain to your grandparents?
2. How would you explain pain and pain management from a positive psychology perspective to your parents?
3. Identify three risk factors and three resources that you possess to manage pain.
4. Think about your grandparents or other older individuals you know. How would you explain the link between pain and development in older age, to convince them that pain management is useful? Include at least three arguments in your answer.
5. Use positive psychology principles to formulate three objectives and three strategies to include in a pain management app for older adults.
6. Apply positive psychology principles to formulate three objectives and three strategies to manage pain to include in an intervention with your parents or other middle-aged adults you know.
7. Name three strategies for pain management prevention in midlife or/and older age.

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Chapter 17
Anxiety Disorders in Older Age: Prevention and Intervention from a Positive Psychology Perspective

Introduction

As we have seen in the chapter on emotional development (see chapter on emotional development in this book), negative emotions also play an important role for our development in middle age and old age. Anxiety represents one of the most prevalent forms of negative emotions among older individuals (Welzel et al., 2019; Lenze & Wetherell, 2011) and thus makes it a relevant topic to be addressed in terms of how to design prevention and intervention programmes targeted at middle-aged and older adults. The topic has become extremely relevant especially in the context of the corona pandemic, since the latter emphasizes a multitude of threats in the environment such as the threat of getting infected or transmitting the virus to other people, the threat of negative consequences after having the illness, or the threat of negative side effects of the vaccination. Other factors that contribute to the unpredictability of the social context, such as travel restrictions or regulations regarding the number of people one can invite to a party (e.g. wedding planning, Christmas party with older relatives), lockdowns, and home schooling, can also increase the anxiety a person feels daily. Older individuals were particularly affected since they were considered an "at risk group" from the beginning of the pandemic (Shahid et al., 2020) and had to make changes to their everyday life as a protection measure (e.g. self-isolate at home, use social distancing). These health policy measures may have ensured protection from infection with COVID-19 but had negative consequences on a personal level, such as feeling lonely, depressed, or anxious (Shahid et al., 2020; Peng & Roth, 2021; Heidinger & Richter, 2020), and reduced physical activity levels (Creese et al., 2021), healthcare utilization (Ksinan Jiskrova et al., 2021), and social interaction (Richter & Heidinger, 2020). In addition to the health policies, experiencing COVID-19-related ageism (Skoog, 2020) and increased fear of infection (Warren et al., 2021) contributed to a raise in anxiety among older adults (Richter & Heidinger, 2021). Thus, the COVID-19 pandemic represents an

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example of how different factors can interact and contribute to a raise in negative emotions such as anxiety among older individuals. The influence of such circumstances on anxiety was shown to be moderated by a series of factors that can be associated with personal development, such as personality traits (Wei, 2020), social resources (Litwin & Levinsky, 2021), emotional regulation (Prout et al., 2020), or anxiety sensitivity (Warren et al., 2021) as well as cognitive skills such as tolerating uncertainty (Parlapani et al., 2020). These results illustrate how development in several domains may impact anxiety in older adults in certain predisposing social circumstances. Experiencing anxiety in midlife and older age can restrict development on several levels (e.g. socially, emotionally, cognitively, physically) as the quote from the book Dune by Frank Herbert points out "fear is the mind-killer, the little death that brings total obliteration" (Herbert, 1965, p. 1). From a positive psychology perspective, it is interesting however to ask whether anxiety can also stimulate development in midlife and old age, and how one can reduce anxiety in order to foster development among older individuals?

The existing evidence-base points out that anxiety disorders are very common among older adults and that they can be quite severe (Lenze & Wetherell, 2011). However, the good news is that anxiety disorders are treatable and that addressing anxiety can also help reduce the risk for developing other potential age-related problems such as depression or dementia (Lenze & Wetherell, 2011). Unfortunately, middle adulthood and older age relate to a variety of situations and contexts that may trigger anxiety. Having children or grandchildren, grown-up children moving out, emerging health problems, dealing with job loss, divorce, caring for sick relatives, and confronting one's own ageing are among the most common situations that can fuel anxiety. Furthermore, if anxiety remains undiagnosed during middle adulthood, there is a high risk that problems only get worse in older age. However, not all people develop anxieties once they reach middle age or older age. Just as there are situations that trigger anxiety and factors that facilitate it, there are also factors that can protect people from developing anxiety despite living in predisposing circumstances (e.g. social contexts characterized by uncertainty and instability, financial issues, illness, etc.).

First, it is important to distinguish between anxiety and fears. Everybody encounters fear in life, and as with all negative emotions, while it is unrealistic to believe that we will get rid of our fears forever, it is important to think about how we learn to deal with our fears. Eliminating fear completely from our lives would not be possible and probably also not advisable, since fear can play a motivating role or a protective role in specific circumstances. Fear and worries to a certain extent can be helpful for our survival or well-being. For instance, if we fear getting ill, such as in case of a potential infection with the COVID-19 virus, we may take preventive actions such as getting vaccinated, wearing a mask in public spaces, going to the doctor, doing sports, or adopting a healthy diet to avoid illness. Fear is known to us already as children from our cultural context. For example, fear is part of fairy tales that convey cautionary messages intended to help us avoid unnecessary dangers and learn to listen to our parents or elders. Thus, fear can have an adaptive function in our lives. In contrast, anxiety is defined as a state of fear without a clear, identifiable

source that interferes with our daily functioning and therefore has no adaptive role. On the contrary, anxiety is connected to insomnia, to eating disorders, and to social issues (e.g. not being able to concentrate on work, not being able to sustain a romantic relationship, avoidant behaviour like avoiding speaking in public or going out to crowded places, etc.). Thus, anxiety can stop us from living a happy fulfilled life or ageing well.

In this chapter, I will use a positive psychology viewpoint to explore meanings of anxiety among middle-aged and specifically among older individuals and what strategies can be applied to prevent anxiety or intervene to reduce its occurrence in midlife or older age. I will first differentiate the experience of anxiety in younger and older age, examine how to evaluate anxiety, and then go on to discuss how anxiety can hinder or facilitate development in midlife and older age. Finally, I will discuss some ideas on how to prevent anxiety related to ageing and some intervention methods for the specific case of anxiety related to falls.

Defining Anxiety Among Older People

As mentioned above, fear is a component of our lives and is present throughout the lifespan. Children may be afraid of the dark and monsters, and these fears can accompany one for life without turning into an anxiety disorder. While it is normal to worry before an exam, when these worries stop you from preparing for the exam, then these worries turn into a problem. Furthermore, there are social circumstances when fears tend to get exacerbated. For example, in pandemic times, our fears were constantly stimulated by news about death and illness. Such constant exposure to bad news may affect older people more, since they are frequently labelled as a risk group within the mass-media discourse on death and frailty. Older people were often described as being at risk of getting infected or dying following a COVID-19 infection and advised to protect themselves and stay at home to keep safe. Nevertheless, several people would not consider home a safe place either. They could still experience several fears or worries about their health, their family, their finances, or their overall safety, even when being at home. Fortunately, not all old people develop anxiety disorders. What makes the difference? In the following I will summarize what anxiety disorders are and how to identify them. This issue of diagnosis is especially relevant since it was noted that anxiety disorders are often underdiagnosed or incorrectly diagnosed in the elderly population (Lenze & Wetherell, 2011; Bassil et al., 2011). Also, in this sense, it is relevant to have age-sensitive diagnostic tools to identify anxiety among older adults, since anxiety may have different manifestations in older age as compared to younger age groups.

In general terms, anxiety can be described as including a series of cognitive, emotional, physical, and behavioural symptoms. Cognitive symptoms comprise worries, intrusive thoughts, rumination, depersonalization, derealization, poor concentration, impaired memory (Byrne, 2016). Emotional signs include fear, dread, a sense of impending doom, and emotional numbness but also anger, depression, or

irritability (Byrne, 2016). Bodily symptoms usually comprise sweating, tremor, blushing, stomach churning, muscle tension, palpitation, shortness of breath, frequent urination, diarrhoea, and insomnia (Byrne, 2016). The most frequent behavioural symptoms are avoidance of the situations that are considered dangerous (e.g. speaking in public, taking the elevator, going to the market by oneself, going to the doctor, etc.) or repetitive checking (e.g. checking if the oven is on or off, checking if one has closed the door, and going back home to check if the door was really closed) and elimination of stimuli that are considered threatening (e.g. in case of fear of falls, eliminating the objects in the house that can make one trip and fall, such as the carpet, climbing the stairs in case of taking the elevator, avoiding crowded spaces such as markets, avoiding social situations where one would need to talk to other people, etc.).

One of the most common types of anxiety disorders is the *generalized anxiety disorder* (GAD) with a prevalence of up to 9% within the elderly population (Bassil et al., 2011). According to the DSM criteria (DSM V, American Psychiatric Association, 2013), GAD symptoms include excessive worry (apprehensive expectation) and anxiety, occurring consecutively most days than not for at least 6 months. Usually, the person also recognizes that the worries he or she experiences are excessive, but they are also perceived as uncontrollable. As the name of the disorder conveys, the worries and anxiety have no specific object. Anxiety can be about life in general, the future, or multiple specific topics like health, exams, family, vacation planning, or any other subject we can think of. Another important diagnosis criterion is that the person who is experiencing worries and anxiety finds these difficult to control. Mostly, it is the other way around, and the person feels that the worries and fears control him or her. A third diagnosis criterion is that anxiety and worry are associated with at least three symptoms, such as (1) restlessness or feeling on edge, (2) getting easily tired, (3) concentration difficulties or the feeling that one's mind goes blank, (4) irritability, (5) muscle tension, and (6) sleep disturbance. At the point of diagnosis, one should establish that these three symptoms have occurred most days than not during the last 6 months. Another relevant criterion for diagnosis is that the symptoms cause significant distress and impairment for the life of the person who experiences them. However, the disturbance should not be the cause of the direct effects of substance abuse or a general medical condition. The differential diagnostic must be made with depression and other types of anxiety disorders as well as with mood disorders, psychotic disorders, or pervasive developmental disorders. Additionally, one should take note that anxiety is different from feeling distressed in older age (Moult et al., 2019). Distress represents a subjective negative experience that can be triggered by the death of a loved person or a recent diagnosis with a chronic illness (Moult et al., 2019) or by social and political events (e.g. financial crisis, war). Distress can be associated with anxiety or depression, but it is also distinctive (Geraghty et al., 2015) as the person who experiences distress does not meet the criteria to diagnose anxiety or depression according to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM V, American Psychiatric Association, 2013) or International Classification of Diseases Tenth Addition (ICD-10 WHO 2016).

Compared to younger adults, older individuals do tend to have more ageing-related worries connected with GAD, such as memory loss, fear of falls, fear of losing autonomy, or getting different illnesses. However, they tend to worry less about the future compared to younger individuals who suffer from GAD (Bassil et al., 2011). One study conducted with individuals who were older than 65 years in Turkey during the COVID-19 pandemic showed that female gender, economic loss, uncertainty, and time spent following news concerning the pandemics were predictive factors for GAD in this age group (Sirin et al., 2021). Protective factors were higher education, having hobbies, and doing regular physical activity (Sirin et al., 2021). Therefore, identifying and concentrating on hobbies as well as performing some form of regular physical exercise can be applied as preventive measures for GAD.

Obsessive compulsive disorder (OCD) represents a type of anxiety disorder where a person has frequent intrusive thoughts or worries and feels the need to perform certain routines repeatedly. The performance of the latter induces distress and impairs general daily functioning. The most common symptoms are obsessions and compulsions. *Obsessions* can be described as thoughts that represent persistent and unwanted mental images or impulses that generate anxiety, disgust, or unease. Common obsessions include those referring to contamination, to symmetry, intrusive thoughts about religion, sex, or harm. *Compulsions* refer to repeated actions or routines that a person develops as a response to their obsession. Common compulsions include cleaning, excessive hand washing, organizing and arranging things, counting, looking for reassurance, and checking things, such as if, for example, one has turned off the oven, locked the front door, or taken the iron out of the socket after use. These actions are performed in order to release the stress caused by obsessions, and many individuals perform these even if they know that it is harmful for them. People who suffer from this condition are also frequently aware that the stress resolution is only temporary and that the intrusive thoughts will eventually return at some point. One also needs to be aware that not any ritual is a compulsion. Our little relaxation rituals such as morning coffee drinking routine or our health routines, such as going swimming after work, are not a compulsion but represent something that we do for pleasure or for our health. Also, the definition of compulsions depends on the context where they appear. For instance, cleaning and arranging things for several hours a day is not unusual for someone who works as a cleaner. However, when people spend more hours than needed daily for cleaning and arranging their house, in order to release the distress caused by intrusive ideas of contamination, we can suspect a case of OCD. Concerning age differences, studies identified similar obsessions and compulsions in young and older adults (Bassil et al., 2011). The most common compulsion among older adults is handwashing and most frequent obsessions, including the idea of having sinned (Kohn et al., 1997). Older patients tend to have fewer concerns about symmetry, and they also do not usually use counting rituals (Kohn et al., 1997). Also, OCD seldom starts in old age and usually often shows an evolution across the lifetime, often with reduced symptomatology in older age (Skoog & Skoog, 1999). This last point also illustrates a potential link with development across the lifespan.

Phobias (specific phobias) refer to fears that have a specific object such as, agoraphobia, defined as the fear of being in a crowd. One of the most common fears in older age is the fear of falling (FOF) that will also be addressed more specifically later in this chapter. Statistics show that almost 60% of older adults who have a history of falling hold this fear, while 30% with no history of falling are also afraid that they will do so (Boyd & Stevens, 2009; Alcalde Tirado, 2010). Fear of falling is more prevalent among older women than in men, and it tends to increase with age (Boyd & Stevens, 2009; Alcalde Tirado, 2010). This particular phobia could have a protective function since it helps older people to avoid accidents (e.g. falling down the stairs). However, it can also lead to the severe restrictions of activity (e.g. not leaving the house anymore, giving up activities like going for walks or shopping for fear of having an accident), reduced number of social contacts, impaired physical and cognitive functioning, as well as loss of autonomy (Boyd & Stevens, 2009; Alcalde Tirado, 2010). In this sense, fear of falling is detrimental for development, because it can negatively impact social, physical, and cognitive development in older age.

Social phobia or *social anxiety disorder* (SAD) refers to the fear of embarrassment or humiliation when performing certain actions in public, such as speaking, eating, dancing, singing, etc. One of the most common fears associated with SAD is that of speaking in public, but, we must distinguish this from being just shy or introvert. Symptoms do not differ significantly between young and older adults. However, it was suggested that, in the case of older adults, more common fears concern eating food in front of others or specifically for older men urinating in public toilets (Bassil et al., 2011). Social anxiety disorder was found to be more prevalent among older adults who experienced a loss, such as the death of a life partner (Cairney et al., 2007).

Agoraphobia represents the fear and avoidance of situation from where escape is considered to be difficult or embarrassing (Byrne, 2016). It can also manifest itself as a fear of being outside, in crowded places, and people who suffer from this condition usually avoid being in large supermalls and markets or going to parties with many people or to the cinema. This type of phobia is not very common among older adults, and it usually appears earlier in life (Bassil et al., 2011). However, the condition can have a comeback in older age following a medical event such as a stroke (Bassil et al., 2011). Agoraphobia is usually associated with a panic attack, but most geriatric patients suffering from agoraphobia do not have a comorbidity or panic disorder (Bassil et al., 2011). Agoraphobia among older patients is more common in women, widowed individuals, divorced persons, individuals who suffer from a chronic condition, and those who present other psychiatric complaints (Cairney et al., 2007).

Posttraumatic stress disorder (PTSD) occurs after exposure to a major traumatic event (e.g. death, combat, assault, rape, being a refugee, etc.) and implies intrusive reexperiencing of a traumatic event in nightmares or intrusive thoughts or flashbacks. Symptoms also include hyperarousal, emotional numbing, and avoidance behaviour (Byrne, 2016). In older adults, recollections of past traumas can lead to new symptoms of PTSD. Neurodegeneration in patients who suffer from a type of

dementia can disinhibit PTSD symptoms in older patients. Negative life events such as loss of a spouse, financial problems, chronic pain, or cognitive decline can also precipitate or revive PTSD symptoms associated with earlier exposure to a certain trauma (Tedstone & Tarrier, 2003; Bassil et al., 2011). Older people are more likely than younger ones to deny their symptoms if they come from a culture that emphasizes stoicism and strength (Creamer & Parslow, 2008). This can also lead to older people not getting diagnosed or treated.

Panic disorder (PD) refers to having frequent unexpected panic attacks, paired with the fear of future panic attacks and avoidant behaviour (Byrne, 2016). Symptoms in older adults include shortness of breath, dizziness, and trembling. These symptoms may overlap with other existing medical conditions in old age, like chest pain without evidence of an existing cardiovascular condition (Beitman et al., 1991). PD rarely has its onset after the age of 60 (Bassil et al., 2011). Usually, when PD debuts after the age of 60, this happens when it is associated with another medical issue or psychiatric disorder (Bassil et al., 2011). Nevertheless, PD in older adults tends to be less severe than in younger adults. Factors that predict the onset or maintenance of PD in old age are stressful events or a major loss (Bassil et al., 2011).

As mentioned in the beginning of the chapter, besides diagnosis with questionnaires and clinical interviews, it is relevant to understand the perspective of middle-aged and older adults regarding how they experience anxiety. This can help to develop objectives for intervention, especially from a positive psychology perspective (Seligman, 2008, 2011) where one would target the development of strengths in addition to reducing the negative emotions. Going back to the initial example of anxiety experienced by older individuals during the COVID-19 pandemic, a study from the UK reported that one in three of the older people participating in the survey declared that they felt their anxiety increased during the pandemic (Age UK Report, 2022). The participating older individuals reported being anxious about getting infected with COVID-19 and being anxious about the well-being of their families and about the future. For some of the old people included in the study, the anxiety was debilitating, causing them to experience frequent panic attacks and affecting their everyday life. For example, one 70-year-old male participant recounted how he has been experiencing frequent headaches and migraine with a sensation of flashing light in his eyes and was afraid of going to the hospital. A female participant in her early seventies also described how she felt so anxious that she would wake every morning with a sensation of her heart racing and a thumping headache. She also reported that she often had mood swings and panic attacks. After hearing the media messages concerning the vulnerability of the elderly, older individuals were afraid to leave the house. They were also scared that other people did not follow the guidelines imposed by public policy and that if they went out, they would get infected with COVID-19 and die. Several of the older individuals included in the study reported that they struggled both with anxiety concerning the threat of going out and potentially getting infected and the loneliness they felt staying at home. For example, one man in is early seventies reported that he felt more fearful and aware of his own mortality. Other worries included fear about the future and that their lives

would never be the same again. For instance, one woman in her early sixties expressed her anxiety that the pandemic would never end; she felt vulnerable and scared. Some of the old individuals included in the study have lost loved ones due to corona. In many cases because of lockdown policies, they did not get a chance to say goodbye and experienced distress, and some were grieving alone, without any form of support, which only increased their anxiety. For example, a woman in her late seventies recounted how, because of the stress following the death of her son, she developed PTSD symptoms and her husband also experienced anxiety. Because of constant worries of getting infected, some older individuals said they had lost confidence in performing regular activities, such as going shopping, and several said they avoided going out to crowded places. A woman in her early eighties said that before the pandemic she used to be socially active and go to group activities in the community, but now she fears leaving her home and feels she has lost her ability to cope with everyday life. An old man in his seventies described his anxiety during the pandemic as feeling robbed of his freedom and life. All in all, the Age UK study on the influence of the pandemic on older individuals' mental health illustrates how anxiety can take the form of worries, fears, ruminations, lack of confidence, and avoidant behaviour. It also exemplifies how the emotional (e.g. prevalence of negative emotions, loneliness), social (e.g. lack of social contact and support), cognitive (e.g. rumination, negative thoughts about the future), and physical (e.g. somatic symptoms) development is affected by stressful circumstances (i.e. the pandemic and the associated public health regulations, such as lockdowns and social distancing) that trigger anxiety symptoms. It also provides an example of a stressful context where many old people can experience anxiety, but not all of them develop an anxiety disorder. In the following, I will examine how one can diagnose anxiety in older age.

How to Diagnose Anxiety Disorders Among Older Adults

We have already seen above how anxiety is defined and what types of anxiety disorders can occur in older age. But how can we know that an older person suffers from anxiety? What are the instruments that we can use to evaluate anxiety among older adults, and what are the challenges in doing so? It has been pointed out that it is relevant to use age-related criteria to diagnose anxiety in older individuals. Diagnostic tools should be sensitive to the needs of older individuals (Grenier et al., 2011; Lenze & Wetherell, 2011).

Anxiety in older age is sometimes difficult to diagnose because of its *comorbidity* with other mental problems such as depression (Bassil et al., 2011). Anxiety symptoms are known to often overlap with other medical conditions like hyperthyroidism and frequently present themselves as psychosomatic pain (Bassil et al., 2011). To make matters even more confusing, anxiety can appear secondary to another medical condition (e.g. having cancer or suffering from cardiovascular disease), substance abuse, or medication ingestion (Bassil et al., 2011). Another

challenge when working with older adults is that they often hold negative attitudes towards mental health problems so they do not want to admit they could suffer from such a problem (Moult et al., 2019). This means that older adults only consult a medical doctor when they feel that they cannot tolerate the symptoms anymore (Moult et al., 2019). By this time, feelings of distress may have evolved to become an anxiety disorder or a form of depression or both. That is why an early diagnosis of a mood disorder is very important (Moult et al., 2019). Nevertheless, receiving the label of anxiety too early during a medical or therapeutic assessment may cause further stress and inhibit people to seek treatment (Moult et al., 2019). As mental disorders are often stigmatized, being labelled as suffering from a mental condition does not make acceptance easier. Similarly, in some cases the problem may only be one of feeling distressed after a negative event in one's life or because of a chronic medical condition (e.g. having diabetes, suffering from chronic pain) and may not be a type of anxiety disorder that can be diagnosed with DSM V or with ICD-10.

Anxiety disorders often do not have their onset in old age but tend to begin in younger adulthood and continue well into older age. Left untreated, the problem of anxiety can become more severe with older age when the situations that may trigger anxiety can increase, as the well-being of the person decreases. For example, in the case of the general anxiety disorder (GAD), the onset is mostly in younger adults in their twenties, while fewer adults were reported to develop GAD for the first time in their fifties (Le Roux et al., 2005). Usually, experiencing some form of loss or trauma makes people prone to develop a form of anxiety (Moult et al., 2019). Health professionals and therapists should be aware of this fact when evaluating the case of an older person. Previous research suggests that referring an older person who feels distressed to social prescribing initiatives can help reduce symptoms of anxiety or depression (Moult et al., 2019). *Social prescribing* refers to directing older people to services in the community, such as support groups for their problem or courses where they can acquire new skills or hobbies. Thus, the communication between health practitioners or therapists and this service sector in the community is highly relevant.

Concerning the assessment of anxiety in older age, one evaluation tool that is commonly used is the *Geriatric Anxiety Scale* (GAI). The GAI includes 20 items designed specifically for the older population (Pachana et al., 2007). The instrument evaluates on a dichotomous scale the anxiety that a person has experienced during the last 7 days. One advantage is that the instrument employs simple language that is easy to understand and makes filling out the questionnaire easier for older individuals. A shorter form of the GAI was developed (Byrne & Pachana, 2011), namely, the GAI-SF, that has only 5 items ("I worry a lot of the time," "Little things bother me a lot," "I think of myself as a worrier," "I often feel nervous," and "My own thoughts often make me nervous") and was used successfully also with adults older than 80 years old (Welzel et al., 2019). Responses have a yes/no format, and scores range from 0 to 5 and identify persons with anxiety with a cut-off higher than 3 (Welzel et al., 2019).

Explaining Anxiety in Older Age

There are several theories that explain what anxiety is and how it happens, and some of these explanations can be applied for understanding anxiety in midlife and old age. The *biological theories* emphasize the adaptive role of fear in our lives (Byrne, 2016). According to such theories, phylogenetically we are programmed to react to threatening stimuli in our environment with a fight or flight reaction or in some situations with a freezing reaction (i.e. play dead to trick our potential enemies). The activation of the hypothalamic-pituitary-adrenal axis and of the limbic system upon encountering a threat in the environment triggers the stress hormones, namely, adrenaline and noradrenaline, from the adrenal medulla and cortisol from the adrenal cortex (Byrne, 2016). The activation of these hormones triggers several autonomic reactions (e.g. pupil dilatation, sweating, tachycardia) and behavioural responses (e.g. getting ready to fight, freezing). There is evidence that 30–40% of the diagnosed anxiety cases have a genetic cause (Norrholm & Ressler, 2009). Genetic factors interact with the environment and facilitate the onset of an anxiety disorder (Xie et al., 2009). Research suggests that genetic factors continue to be active in older age and can lead to a late onset of an anxiety disorder (Gillespie et al., 2004).

Psychological theories differentiate between anxiety as a trait (i.e. personality trait) and as a state (Byrne, 2016). Trait anxiety is relatively stable over the lifespan, because it reflects genetic influences and early childhood experiences, while state anxiety fluctuates and is related to negative events experienced in life (Byrne, 2016). Certain personality traits are linked to anxiety, for instance, neuroticism is connected to GAD, low levels of extraversion are connected to social phobia, and high levels of conscientiousness are linked to OCD (Byrne, 2016). Behavioural theories postulate that anxiety appears when one is exposed to danger from the environment (US, unconditional stimulus) and this is then linked to a harmless cue from the environment (CS, conditional stimulus). The future exposure to the CS triggers the fear response and avoidant behaviour. Avoidance behaviour can be functional for the short term since it leads to the temporary reduction in anxiety. However, this temporary reduction of anxiety reinforces the avoidant behaviour and leads to its maintenance. Avoidance is not effective in the long run because it prevents habituation to the feared cue or context (Byrne, 2013). For example, if an older person is afraid of going out to crowded places, in the beginning not going to the market will help to feel better. One has stayed at home and feels safe. However, in time, this old person may start avoiding other social situation where there are crowds or even stay mostly at home altogether. In this example, the comfort of being at home and feeling safe reinforces the anxiety to go out.

Considering anxiety in midlife and old age from a positive psychology perspective constitutes a challenge since this clearly represents a negative emotion that one would like to control or reduce. One way to approach anxiety from a positive psychology viewpoint is to concentrate on the strengths a person can develop in order to deal with anxiety. Instead of just looking at the risk factors for developing anxiety

in older age, one can explore the protective factors one could identify and improve in order to prevent the onset of anxiety or to manage it. For example, studies show that positive psychology strengths, such as optimism, hope, gratitude, self-efficacy, life satisfaction, and happiness, are associated with reduced anxiety and psychological adjustment (Jones et al., 2013). Hope, optimism, and resilience were found to protect individuals in stressful situations, prevent anxiety, and foster well-being (Avey et al., 2011). In order to better understand mental wellness and well-being, positive traits were classified in a handbook, similar to the DSM, namely, in a *Character Strengths and Virtues* (CSV) (Peterson & Seligman, 2004). The CSV includes 24-character strengths organized in six core values: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence (Peterson & Seligman, 2004). A further classification entails intellectual strengths and emotional, interpersonal strengths (Park et al., 2004). Thus, to understand anxiety among middle-aged and older people, we can examine their intellectual, emotional, and interpersonal strengths that can act as protective factors in stressful circumstances. Furthermore, from a developmental perspective, we can look at emotional (e.g. emotional regulation capacities), cognitive (e.g. inhibitory capacity for negative thoughts, cognitive flexibility), social (e.g. social skills, social support networks), personality (e.g. optimism, hopefulness), and physical (e.g. health, mobility) resources that a person possess in order to deal with anxiety in midlife and older age.

Why Is It Relevant to Intervene and Address Anxiety in Midlife and Old Age?

Anxiety disorders can appear early in life, and, even if, for a long time, it was believed that anxiety diminishes with age (Bassil et al., 2011), nowadays, it is known that anxiety disorders are highly prevalent among older individuals (Lenze & Wetherell, 2011; Byrne, 2016) even the very old over 80 (Welzel et al., 2019). An important aspect of anxieties experienced in older age is that they may be more difficult to diagnose or to treat since older adults often represent a hard-to-reach group for psychologists. For example, older people may think that feeling anxious is "normal" in older age as one is confronted with fears about illness and death or financial issues and would not consider talking to someone about it. Nevertheless, it is highly relevant to talk about one's fears and anxieties in older age just as with any life stage since these negative emotions can interfere with daily life. Also, it was shown that anxiety in older age relates to higher risk for depression, dementia, and health disease (Lenze & Wetherell, 2011; Byrne, 2016). Nevertheless, the good news is that anxiety disorders are treatable among middle-aged and older people. However, identifying and diagnosing anxiety in older age and motivating older people to participate in treatment remain relevant challenges. Medical treatments, such as providing benzodiazepines, muscle relaxants, and sedatives to older patients, only address the somatic manifestations of anxiety. In contrast, psychotherapy can help

manage anxiety overall, and psychological counselling in older age can prevent the occurrence of anxiety.

As stated above, the prevalence and incidence of anxiety in older age is higher than reported in studies, as older individuals tend to underreport anxiety symptoms or because of differential diagnostic issues (e.g. differentiating with somatic complaints). Negative views on ageing can play a part in the underdiagnosis of anxiety among middle-aged or older people. For example, anxiety can be regarded by both older adults and health personnel to be a normal manifestation of old age, and thus the relevance of the symptoms may be underplayed or considered something older individuals just need to deal with as part of growing old. However, this is easier said than done, since anxious older adults often report memory impairment, low satisfaction with life, poor self-perception of health, and increased loneliness (de Beurs et al., 1999).

A second reason for the importance of addressing anxiety in older age is that symptoms may differ in older adults as compared to younger ones. This represents yet another explanation why, sometimes, anxiety may remain underdiagnosed among older people. Furthermore, if not treated, anxiety in midlife and older age can lead to serious health problems or other emotional issues (e.g. depression, risk for suicide) or create problems for significant others (e.g. children, life partners). For example, anxiety in older adults has been linked to the risk of developing cancer, cardiovascular problems, or even Alzheimer (Martens et al., 2010; Lenze & Wetherell, 2011). This link is explained by the effects of chronic anxiety on the physical and cognitive health of older adults. Higher levels of anxiety and stress vulnerability lead to increased cognitive decline and risk for developing Alzheimer (Wilson et al., 2011). Moreover, anxiety symptoms can predict impaired performance of daily living activities for over 1 year (Lenze et al., 2005).

A third important reason for addressing anxiety in old age is that this can be "inherited" by the children and grandchildren of older individuals, through frequent exposure to rumination and avoidant behaviour. Furthermore, patients with anxiety are less independent and can increase the burden felt by their relatives and caregivers (Bassil et al., 2011). The latter can develop anxiety or other forms of psychological pathology due to prolonged exposure to the anxiety of the older adults or because of caregiver duties that they need to perform.

A fourth reason refers to the fact that when anxiety appears for the first time in older age, it can predict the onset of cognitive impairment or even dementia (Byrne, 2016). In this sense onset of anxiety symptoms in later life can be an alarm signal to act and treat anxiety and prevent the development of cognitive impairment. Anxiety is also associated with suicide in older age (Voshaar et al., 2015; Byrne, 2016), making it yet another reason to intervene and help people manage their negative emotions.

How to Intervene to Help Older People Suffering from Anxiety

Knowing that anxiety represents a relevant problem in older age is just the first step towards intervention. The existing literature includes information on the effective treatment of anxiety among elderly by using cognitive behavioural (CBT) psychotherapy methods and alternative strategies such as relaxation, mindfulness training, or bibliotherapy (Lenze & Wetherell, 2011). Often older people may present themselves with symptoms to the general practitioner (GP) and describe mainly the physical pain they experience such as tensed muscles, shortness of breath, or trembling. Often, GPs only recommend medication or taking time to relax. Nevertheless, as in the case of distress experienced by older individuals, interventions that demedicalize the problem are needed, and self-management strategies should be encouraged (Moult et al., 2019). *Self-management* means that a person is encouraged to take more responsibility for their health, behaviour, and well-being (Moult et al., 2019). While this may sound as more work for the individual, self-management also leads to more freedom and autonomy, which are components of successful ageing (Rowe & Kahn, 1997). Self-management implies that a person can identify and monitor symptoms and have the appropriate responses ready to implement such as behavioural, cognitive, or emotional strategies (Miller et al., 2015; Moult et al., 2019). Learning self-management strategies in case of anxiety disorders can lead to personal development on an emotional, cognitive, physical, personality, and social level. Learning self-management strategies in older age can also help prevent the occurrence of mental health disorders or the development of distress into an anxiety disorder (Moult et al., 2019). In the case of those older adults who already developed an anxiety disorder, self-management strategies can be used to empower them, to raise their self-confidence. Being more confident helps people control their mental health and decreases the feeling that symptoms control them. Self-management strategies imply teaching older adults how to help themselves in situations that trigger their distress, especially as with older age these situations may multiply.

Often people identify and apply some form of self-management strategy themselves (Moult et al., 2019). This represents an important resource for counselling since we can start our assessment and intervention from what people already are doing to control their negative emotions. Moult et al. (2019) describe the case of Anne, an older lady who started experiencing distress after loss of mobility and social contacts. The first thing she did in response was to apply some self-management strategies such as reading, socializing with friends, going to church, and seeking social support in the community. Unlike Ann, Owen first consulted his GP when experiencing great distress. His GP suggested the diagnosis of depression and prescribed medication and therapy. Owen did not accept these prescriptions and decided he will take matters into his own hands. However, compared to Ann, he did not seek out support groups in his community to get social support but decided to look for opportunities in his community in order to learn a new skill. Owen reported that he

focused on gardening because this was an activity that helped him to control his distress (Moult et al., 2019). An important lesson we learn from these stories is that health professionals and counsellors should first asses the strategies that older individuals already use and integrate them in the intervention. This increases the chances that the treatment strategies will be accepted by the person suffering from anxiety.

There are several challenges and opportunities when treating anxiety in older patients. One opportunity may be the fact that older persons have experience with managing their own negative emotions, and as mentioned above their strategies for self-management can be put to good use during counselling or therapy. An important challenge can be represented by their ideas and beliefs concerning mental distress, such as not wanting to be labelled as "mentally ill" and being reluctant to follow therapeutic advice. Another factor that can complicate treatment is when older individuals suffer from more than one form of anxiety or there is a comorbidity with depression (Bassil et al., 2011). Sometimes, older people suffering from anxiety also do not respond very well to medication. Ageing is suggested to influence the effect of psychotropic medication among older patients (Bassil et al., 2011). Compliance to medical treatment can be inhibited by sensory or cognitive deficits associated with older age, polypharmacy, coexisting medical issues, or sensitivity to anticholinergic side effects (Von Moltke et al., 1998). Benzodiazepines are usually recommended for acute or short-term anxiety episodes but can be cardiotoxic, or their frequent use can lead to cognitive impairments or falls (Bassil et al., 2011). Thus, their use can have serious side effects for older patients and lower medication adherence. That is why the use of psychotherapy in addition to pharmacotherapy is encouraged in geriatric patients, and there is evidence base that this combination works well for older adults (Black, 2006).

Among psychotherapeutic interventions, the cognitive behavioural therapy (CBT) is among the most researched (Gonçalves & Byrne, 2012; Andreescu & Varon, 2015). CBT has been tested in intervention studies with older adults suffering from anxiety and proven to be effective (Gonçalves & Byrne, 2012). Moreover, CBT offers an alternative to medication, especially benzodiazepines that can have negative side effects in older adults (Glass et al., 2005). Some authors suggested some adjustments should be made to CBT methods when working with older adults, such as having more sessions and providing explicit learning aids and information materials written in big letters (Laidlaw et al., 2003). Also, it was suggested one should enhance CBT protocols to make them more adaptable for older individuals who encounter cognitive challenges (Mohlman et al., 2003). Mohlman (2008) introduced attention process training to strengthen attentional and executive skills in older patients suffering from GAD. Techniques that proved useful include relaxation training, cognitive restructuring, and visualization relaxation (Ayers et al., 2007). Usually, CBT interventions for addressing anxiety in older adults include a combination of relaxation training, with cognitive restructuring and exposure (Schuurmans et al., 2006). Other authors specifically developed a modular approach to treating GAD in older adults (Wetherell et al., 2011). This modular method

(Wetherell et al., 2011) implies supplementing medication with a number of CBT modules that are adapted to the particular symptomatology of the patient (e.g. behavioural activation for depression symptoms, exposure for phobias).

Anxiety has been specifically linked to an inability to solve everyday problems (Byrne, 2016). Consequently, *problem-solving therapy* was proposed for the treatment of anxiety, such as defining the issue, using brainstorming to identify alternative solutions, and finding the most useful solution for the specific context of the problem (Byrne, 2016). However, compared to CBT, there is little research on the effectiveness of problem-solving therapy for older adults suffering from anxiety (Seekles et al., 2011; Lam et al., 2010), and more research is needed to prove it useful for treatment in older age (Byrne, 2016).

Other forms of complementary therapies, such as relaxation techniques, biofeedback, dancing, yoga, massage therapy, music, art, meditation, and spiritual counselling, can all be used for the treatment of anxiety (Bassil et al., 2011). All in all, this represents another opportunity when working with older individuals, that one can be creative and adjust the therapeutic methods to the person's needs and life experience. An important thing to keep in mind is that one should examine one's own negative stereotypes when working with older adults (e.g. anxiety is a normal part of ageing; older adults cannot learn new strategies to control their emotions). This act in itself represents both an opportunity and a challenge for health professionals and therapists working with older patients. In the following I will present two case studies, one referring to the prevention of anxiety concerning ageing or being old and the other to anxiety concerning falls. Both of these anxiety forms are very common and thus represent relevant case studies for interventions.

Case Study: How Can We Prevent Anxiety About Ageing?

One of the most frequent anxieties that can occur in older age is that about ageing itself or anxiety concerning death (Zhang et al., 2019). *Ageing anxiety* comprises negative emotions relating to growing older, including physical and psychological losses (Lasher & Faulkender, 1993). Anxiety about physical losses includes being afraid that one would lose mobility and autonomy (e.g. not being able to take care of oneself, perform daily routines like bathing, cooking, or shopping). Some persons are afraid of losing their looks and attractivity because of negative changes in their appearance (e.g. wrinkles, grey hair). Anxiety about psychological losses includes fearing cognitive decline (e.g. loss of memory) and loss of control over one's life or holding fears concerning social losses (e.g. losing one's social support network, losing a spouse, losing one's social status with retirement age). Fears concerning one's death are also connected with ageing and gradually losing one's health. All the abovementioned fears share the fact that one is scared of change and loss and determine ageing anxiety or anxiety about being old (Lasher & Faulkender, 1993).

As we have seen in previous chapters of this book, negative ageing stereotypes influence views on ageing and may induce a fear of becoming old as well as anti-ageing actions (Chonody & Wang, 2014). How can we help people to stop fearing to grow old? A first obvious answer is that we can change their views on ageing. As mentioned frequently in this book, having positive views on ageing can act as a buffer for experiencing the stress of growing old. From a positive psychological perspective, having positive views on ageing constitutes a resource for health and well-being in older age (Craciun, 2019; Craciun et al., 2017). Apart from changing views on ageing, promoting self-efficacy towards dealing with anxiety concerning growing older can also prove effective. In order to do this, one can use testimonials of older individuals who manage growing older in a positive way.

Learning strategies, such as positive reframing of stress situations and relaxation techniques, could also prove useful. For the former, older persons can learn to look beyond the unspecific, general anxiety and identify concrete situations that trigger specific fears linked to old age and growing older (e.g. fear of disability, illness, death, and financial difficulties, fear of being less attractive and lovable, etc.). Then we can explore what thoughts are associated with these concrete fears and the situations where they frequently occur. Third, we can think of alternative ways of interpreting the identified situations and how this would lead to other emotions as opposed to fear and anxiety. Forth, it is important to practice these new thought patterns until they become automatized and replace the old anxiety-inducing thinking style. Trying to convince other people about the benefits of an anxiety-free thinking pattern can help them to believe more in the benefits of the newly acquired thinking style. Learning *relaxation techniques* that we can apply in situations where we feel anxious without a clear reason can be very helpful in preventing the onset of chronic anxiety in older age. We need to try out different relaxation techniques such as breathing exercises or progressive muscle relaxation and discover which one fits best with our needs in different anxiety-provoking situations. Making plans for old age can also help to buffer the fears that we may have regarding this stage of one's life. As Freda Lewis-Hall, the former President of Pfizer said, we should "turn fears into healthy actions" to prepare for old age (Selig, 2021). For example, in order to address the fear of physical decline and mobility loss, we can strengthen bodily resources by doing some form of physical exercise every day and aim for at least 150 min of exercise a week (Selig, 2021). It is also important that, as we get older, we avoid sitting for longer time periods without moving. Thus, getting up and doing some activity, even if it is walking around the house, cooking, and watering plants, can be helpful. We should also pay attention to sleep hygiene and aim to sleep around 7 h per night (Selig, 2021) as well as aim to maintain a healthy weight by adopting a balanced diet (Selig, 2021). In order to address fears of being alone in old age, we should work on developing social skills and keeping social support networks for older age (Selig, 2021).

Case Study: Fear of Falls Among Older Adults – How to Intervene?

Fear of falls (FOF) has been recognized as a relevant psychological problem because of its consequences on the daily life of the elderly (Jorstad et al., 2005). FOF refers to a temporal state of apprehension concerning a specific threat, in this case the situation of falling (Payette et al., 2016). While some older adults have an increased risk for falling, others only have a low risk but have unwarranted fears concerning the probability of falling (Payette et al., 2016). These excessive concerns with falling form part of the anxiety diagnostic, namely, a specific phobia related to falling (American Psychological Association DSM-52013). Older people who suffer from this specific phobia often also fear other situations, such as being robbed or forgetting appointments (Howland et al., 1993). Such symptoms that include excessive worries on several topics (e.g. forgetting things such as a wallet at the supermarket, leaving the front door open, being in places from where escape is difficult or where one could feel sick, etc.) could also be classified as a general anxiety disorder (GAD) (DSM-52013). Thus, although GAD is different from FOF, they are related, in the sense that FOF may be a manifestation of GAD and reflect on the worry topics among older adults (Murphy et al., 2002).

The prevalence of FOF among older adults ranges between 21% and 85% (Scheffer et al., 2008) depending on how it is measured and whether older people admit they have this fear. Unfortunately, the frequency of falls is high among older adults with estimates ranging between 29% and 77% (Hadjistavropoulos et al., 2011), and the consequences can be fatal (Chen et al., 2008; Morsch et al., 2015). According to statistics, around three quarters of hospitalizations among older adults are related to falls (Holloway et al., 2016), so that it comes as no surprise that older adults should fear these. Negative consequences of falls include loss of mobility and autonomy, injuries, hospitalization, and increased mortality risk among older individuals (Chen et al., 2008; Morsch et al., 2015). Nevertheless, FOF has negative consequences itself and therefore is important to be addressed and treated among older adults.

FOF constitutes a risk factor for reduced quality of life and well-being and loss of autonomy among older individuals (Young & Williams, 2015). Fear of falling can lead to activity restrictions and thus negatively affects the emotional (e.g. loneliness, hopelessness), cognitive (e.g. negative thoughts, cognitive rigidity), social (e.g. reduced social life), and physical (e.g. weakened muscle capacity) development of older adults. The latter can lead to increased risk of falls (Perez-Jara et al., 2010). FOF is reported as a leading cause of fall risk, which can cause injury, morbidity, and mortality among older individuals (Hadjistavropoulos et al., 2011). FOF was shown to determine worse balance performance and can cause alterations in gait and posture control (Hadjistavropoulos et al., 2011). Anxiety influences the attentional processes required to maintain posture and gait control. Studies show that, when performing a balance task, performance is enhanced when attention is allocated externally rather than internally to one's own feet (Lohse et al., 2011;

Young & Williams, 2015). The internal focus of attention leads to stiffening actions (e.g. the sensation that your body freezes) (Masters & Maxwell, 2008). The focus of attention on internal stimulus tends to be higher in older adults who are frequent fallers, especially when the task is demanding, such as one needs to climb the stairs carrying a tray with food (Wong et al., 2009). Self-efficacy is also very important in the context of FOF, because it can influence the amount of fear one experiences when facing a threat (Carpino et al., 2014). For example, the concept of falls efficacy refers to the confidence that one can manage a threat, namely, in this case the threat of falling (Payette et al., 2016). Table 17.1 lists a series of scales that can be used to measure FOF and falls efficacy.

For designing interventions, it is relevant to evaluate the realistic fear of falling among older adults, since, as stated above, there are situations when the elderly are really at risk of falling (Payette et al., 2016). In case of FOF, fears are however most of the time excessive (Payette et al., 2016). For example, an older person can see a flowerbed falling from the balcony and start fearing that he or she may one day fall from the balcony just as the flowerbed did and as a consequence decide not to go out on the balcony anymore. The person suffering from FOF will ruminate about potential threatening situations where one could fall and the negative consequences of falling and will engage in avoidant behaviour concerning threatening situations. This situation is similar to PTSD, when, often, stimuli are incorrectly evaluated as being threatening (Foa, 2011). Non-threat-related information is processed as being threatening, and fear is activated, making older people feel that the world is a threatening place (Adamczewska & Nyman, 2018). FOF is defined as the fear that one experiences during activities that are perceived as constituting a concrete threat for falling. FOF can be adaptive but also maladaptive (i.e. overprotective, leading to increased anxiety and avoidant behaviour). Anxiety in the context of FOF refers to the perceived possibility of falling and its negative consequences (Adamczewska & Nyman, 2018). When anxiety is present, FOF becomes maladaptive, and everyday life situations begin to be perceived as threats for falling (e.g. watering plants on the balcony, cleaning the house, cooking, bathing, etc.). Also, when feeling anxious or experiencing FOF, old people lose confidence in their ability to perform everyday activities (e.g. going shopping, cooking) without falling. In turn, low confidence can

Table 17.1 Instruments to measure FOF and falls efficacy

Fear of falls	Falls efficacy
Survey of activities and Fear of Falling in the Elderly [SAFFE (or SAFE, Lachman et al., 1998)]	Mobility Efficacy Scale (MES, Lusardi & Smith, 1997)
University of Illinois at Chicago Fear of Falling Measure (UIC FFM, Velozo & Peterson, 2001)	Adapted Falls Efficacy Scale (aFES Lusardi & Smith, 1997)
	Falls Efficacy Scale–International (FES-I, Yardley et al., 2005)
	Falls Efficacy Scale revised (rFES, Tinetti et al., 1994)

increase anxiety about falling (Adamczewska & Nyman, 2018). As mentioned above, *falls efficacy* is defined as the belief to be able to execute activities without falling (Adamczewska & Nyman, 2018). Thus, when designing interventions, we need to identify the maladaptive FOF and anxiety and decrease them while increasing falling efficacy. From a positive psychology perspective, increasing strengths, such as falling efficacy, is a relevant objective. This aim can be achieved using strategies that are similar to those for increasing general self-efficacy, namely, modelling (e.g. showing examples of older people who deal with FOF and anxiety and tackle the threatening situations effectively without falling), verbal persuasion (e.g. activating a support group that helps to raise the confidence of the older individual), individual experiments (e.g. the person tries out a threatening action and realizes that it is not that threatening after all and that he or she can handle it), and visual imagery (e.g. the old person imagines how he or she performs a feared action without falling). Physical exercise interventions can also reduce FOF by increasing physical strength, gait, balance, and mood among older adults (Kendrick et al., 2014). Exercise interventions can include doing yoga, Tai Chi, or dancing, since all of these focus on strength and balance (Kendrick et al., 2014), qualities needed to prevent the risk of falls in older age. Combining physical exercises that increase muscle and balance skills with educational components that target self-efficacy and the negative thoughts that trigger the fears may prove effective. For example, one intervention to reduce FOF (Brouwer et al., 2003) in older adults combined physical activity sessions with educational sessions (e.g. participants discussed concerns about falling, identified risks for falls and solutions to prevent falling, the importance of good nutrition and activity, how to stand up after a fall, wearing proper footwear). Participants received a manual of the educational intervention and information regarding help resources in the community (Brouwer et al., 2003). The effectiveness of the programme was attributed to the increased physical ability and perceived health (Brouwer et al., 2003). From a developmental perspective, building strengths in all domains (e.g. muscle and balance as physical strengths, social support as a social strength, self-efficacy as a cognitive strength) can provide resources for older adults to prevent actual falls and thus prevent or reduce FOF altogether.

Conclusions

Like other chapters on negative topics (see chapters on loneliness, depression, suicide, and death in this book), examining anxiety from a positive psychology and developmental perspective may seem odd at first glance. However, it is relevant to explore the developmental potential of dealing with negative emotions such as anxiety in midlife and older age. As discussed within this chapter, anxiety is sadly very often present among middle-aged and older individuals, and the stressful situations that may trigger anxiety in older age increase as people grow older (e.g. health issues, death of loved ones, financial problems, etc.). Furthermore, anxiety may be

even more prevalent than reported by statistics around the world, since one of the issues in older age is that anxiety is often underdiagnosed and dismissed as a "normal" emotion in midlife and especially in older age. This, however, represents a negative stereotype about old age and older individuals. Feeling anxious in older age is not a normal state of things, and feeling anxious can have several negative consequences for the health and well-being of middle-aged and older individuals. Left untreated, anxiety can affect development in old age across domains. For example, it can lead to cognitive decline, shrinking of social networks, increased loneliness, hopelessness, depression, loss of physical strength, and increase in neuroticism personality traits. Therefore, it is important to screen for anxiety among older individuals and use age-appropriate instruments to do so. This can help identify the older individuals who need psychological help and design tailored interventions to assist them to cope with anxiety in old age. Designing interventions from a positive psychology viewpoint means not just focusing on reducing anxiety, but at the same time strengthening effective skills and coping mechanisms that individuals already use to cope with negative emotions as well as teaching them new strategies (e.g. relaxation techniques, stop thinking techniques for negative thoughts). From a developmental point of view, building strengths in different domains can help prevent anxiety in midlife and older age. For instance, building the cognitive reserve, developing social skills and support networks, training emotional regulation capacity, fostering optimism and hopefulness, and encouraging physical mobility and health-promoting behaviour (e.g. balanced diet, regular medical check-ups, physical exercise, etc.) can constitute protective resources against experiencing anxiety in older age. Addressing ageism and changing negative views on ageing can have an impact on prevention and intervention in the case of anxiety about growing old as well as fear of falls (e.g. falling should not be a normal part of ageing, and strengths can be built in different development domains in order to prevent falls). Fostering capacities such as self-efficacy (e.g. falling efficacy in the case of fear of falls), optimism, hopefulness, positive attitude to life, openness to experiences, effective social skills, cognitive reserve, emotional regulation, or physical strength can help build a resource reserve for individuals in their old age to help prevent or reduce anxiety. All in all, applying positive psychology strategies to prevent or reduce anxiety in older age can have a beneficial impact on the development of middle-aged and older individuals in all life domains.

Reflection Questions

1. Reflect on three resources that you could develop for yourself in an effort to prevent anxiety in your old age.
2. Give three reasons why it is important to tackle anxiety in older age.
3. Name two factors that can act as barriers and two facilitating factors for interventions to reduce anxiety in older age.

4. In your opinion, can anxiety foster development in older age? Explain your response.
5. Explain in your own words how anxiety and development in older age are linked.
6. Develop three objectives and three strategies for an application intervention to tackle fear of falls among older individuals.

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Chapter 18
Depression in Old Age: Prevention and Intervention from a Positive Psychology Perspective

Introduction

Depression represents one of the most frequent mental health issues among middle-aged and older adults, apart from anxiety disorders (see chapter on anxiety disorders in the present book). Prevalence estimations point out that among the general population of older adults, about 10% to 19% present symptoms of depression and 2% to 4% present symptoms of major depression (Bjørkløf et al., 2013). Nevertheless, such statistics may not reflect the real prevalence of depression in older age, since, often, depression is underreported among older adults (Anderson, 2001). Thus, unfortunately, the actual depression incidence and prevalence may be higher among older people. Nevertheless, one positive aspect is that, since only between 10% and 16% of the older population are diagnosed with a clinically significant form of depression (Blazer, 2003), this constitutes an argument that depression is not a normal component of ageing (Power et al., 2016). However, underreporting and underdiagnosis remain important issues concerning depression in older age (Rodda et al., 2011). This is something that we need to consider when designing interventions for the older population. Depression can take several forms, and this makes it even more difficult to diagnose compared to other mental health concerns. Common symptoms include sad mood, negative intrusive thoughts, loss of interest in life, lack of joy from activities that were once very enjoyable, concentration difficulties, sleep trouble, apprehension, incessant thoughts of death, chronic unexplained pain, and memory problems. Several of these symptoms could indicate other medical problems and are often mistakenly attributed to old age (i.e., it is "normal" for old persons to lose interest in life or feel pain), dementia or poor health. Older age can unfortunately provide many opportunities to feel sad (e.g., diagnosis of an illness, loss of significant others, retirement, etc.). Also, feeling sad is sometimes an absolutely normal emotional reaction in certain contexts (e.g., loss of a loved one, diagnosis with an illness). Furthermore, sadness occurs at any stage in life and can definitely not be equalled with a diagnosis of depression.

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Underreporting of depression can have several causes including shame concerning talking about depression or feeling sad, not wanting to be a burden to other members of the family, lack of knowledge about depression and that there is available treatment. According to critical voices concerning the successful ageing model (Rowe & Kan, 1998), some older people are afraid to talk about being depressed or do not want to recognize they are sad because they feel a pressure to fit the ideal of the active, autonomous old person (Liang & Luo, 2012). Sometimes, it can happen that health personnel or caregivers think that feeling sad is normal in old age and by doing so reinforce the negative ageing stereotypes of older patients. This can lead to older people not being taken seriously when they talk about their depressed mood. Also, sometimes their symptoms are considered to be a medical affection rather than an emotional one. Unfortunately, it is true that sad events can accumulate over the lifetime and lead to an onset of depression in older age. Losing friends, the death of a life partner, a diagnosis of chronic illness are just a few examples of situations that can trigger depression in older adults. Depression in old age is often associated with illness, disability, loss of loved ones or other sad events, isolation, and loneliness (Anderson, 2001). Not diagnosing it can in time lead to negative consequences like cognitive deterioration, suicide (see also chapter on suicide in the present book), or natural death as well as increased costs for treatment (Anderson, 2001). Nevertheless, simple interventions can help prevent depression or treat it when this has already occurred. Treatment can lead to reduced costs for the health system, social services, or community care (Anderson, 2001).

In the present chapter, I want to explore from a positive psychology perspective how depression is connected to development in older age in several life domains (i.e., cognitive, social, emotional, physical, and personality). A challenging question in this sense is whether depression can play a role for development in older age, and if yes, what role? Also, another interesting question is how to treat depression with a positive psychology approach that usually focuses on positive emotions and their maintenance. In an attempt to answer such questions, the chapter will explore the characteristics of depression in older age, why it is important to address it as a relevant problem for the older age group and what solutions are proposed from a positive psychological point of view, namely what strategies can be applied to prevent or cure depression among the elderly. In the context of the present book, treatment from a positive psychology perspective means to recognize the potential for growth of this particular negative emotion, but also address it in order to enhance the quality of life of the person who suffers from depression in older age.

Characteristics of Depression in Old Age and How to Diagnose It

Depression among older individuals is usually linked to psychological factors and stressful life events (e.g., after the death of a loved one, entering retirement, being diagnosed with a chronic illness). Sometimes depression can also be hereditary, but

in case of genetic transmission, usually there is an early onset of depression before the age of 60. Depression that develops after the age of 60 is usually accompanied by another health problem that is typical for older age. For example, there is a high prevalence of depression among people with dementia, Parkinson disease, stroke, diabetes, or cardiovascular disease (Rodda et al., 2011).

Depression can be diagnosed with the help of DSM-5 and ICD-10, just as in the case of anxiety disorders (see chapter on anxiety disorders in the present book). Depression is defined as a mood disorder that causes persistent feelings of sadness or loss of interest in life and that has a negative impact on a person's daily functioning and quality of life (Power et al., 2016). According to DSM-5 and ICD-10, in order to diagnose someone with depression, at least five from a list of negative symptoms need to be present for at least 2 weeks and represent a change from the previous level of functioning. These symptoms include: depressed mood most of the day, almost every day; significant reduced interest in life and most activities most of the day, almost every day; significant weight loss without diet, or weight gain, increase or decrease in appetite almost daily; insomnia or hypersomnia nearly every day, psychomotor agitation or retardation for almost every day; fatigue, loss of energy nearly every day; feelings of worthlessness and excessive guilt for almost every day; reduced ability to concentrate or indecisiveness, almost every day; and thoughts of death or recurrent suicidal ideation for almost every day or a specific plan for suicide (DSM-V). A second relevant criterion according to DSM-V is that the person experiences distress or impairment in their social, occupational, or other important areas of functioning in their life because of the above-described symptoms. A third criterion is that the symptoms cannot be explained by the effects of substance abuse or another medical condition. A fourth criterion is that the symptomatology is not better explained by schizophrenia or other psychotic disorders. A fifth criterion is that there has not been a manic or hypomanic episode in the life history of the potential depressed patient.

According to ICD-10, there are two large categories of symptoms (i.e., category A and B) that need to be present for the diagnosis of depression. Category A symptoms include (1) depressed mood, (2) loss of interest, loss of enjoyment, and (3) reduced level of energy and activity. Category B includes symptoms such as (1) reduced concentration, reduced attention span, (2) diminished self-esteem and confidence, (3) ideas of guilt and unworthiness, (4) disturbed sleep, and (5) diminished appetite. Mild depression means that at least two symptoms from group A and two from group B are present to a mild degree for a minimum period of 2 weeks. In case of moderate depression, two symptoms from group A and two from group B need to be present to a marked degree for minimum 2 weeks. In case of severe depression, all three group A symptoms and four group B symptoms need to occur and have a severe intensity. The symptoms need to be present for 2 weeks minimum, but if they are particularly severe or have a rapid onset, an earlier diagnosis is possible.

When thinking about ageing and depression, one may ask oneself how the prognosis of depression in older individuals may differ from that of younger ones? In this sense, several factors were identified that might predict a poor prognosis of depression. These include older age, depression severity, chronic somatic

comorbidity, an external locus of control (Licht-Strunk et al., 2007). However, for example in terms of depression remission rates, these did not differ significantly between older and middle-aged people (Mitchell & Subramaniam, 2005), but relapses were more frequent among older individuals (Mitchell & Subramaniam, 2005).

When diagnosing depression in older adults, ideally, we should conduct a clinical interview with the person, observe the person's behaviour and gather collateral information from relatives and care givers who know the person well. This is important because, sometimes, depressed persons do not notice the changes in their behaviour, or they cannot verbalize them. Also, when gathering information about symptoms, we should also take note of the factors that precipitate or maintain depression in older adults. Even if we cannot eliminate causal factors (e.g., a chronic illness, death of a loved one), sometimes we can act and reduce depression by concentrating on the precipitating and maintaining factors such as negative thoughts, lack of social support or poor emotional regulation skills.

Instruments to measure depression among older adults include the Beck depression inventory, the hospital anxiety and depression scale, the patient health questionnaire, the geriatric depression scale, and the Cornell scale of depression and dementia (see Table 18.1).

Depression may be more difficult to diagnose in older age since older people often to do not talk about it when they feel sad or down. Also, because many older people live alone, there is often no one to notice that their behaviour has changed (e.g., they don't have appetite, they do not get out of their bed) and that they may be depressed. As mentioned in the introduction, sometimes negative ageing stereotypes may act as barriers for diagnosing depression in older age. For example, even if older people notice that they have symptoms (e.g., they feel sad and unmotivated most of the days, they have lost joy in doing the activities they used to like, they do not feel like going out, they have trouble sleeping, they do not have appetite, etc.), they may dismiss it as "normal" considering their older age (Rodda et al., 2011). Sadly, sometimes also health personnel such as for instance the GPs do not pay attention to these signs in older adults. This can happen because of lack of time or

Table 18.1 Instruments to measure depression in old age

Instrument	Description
Geriatric depression scale (GDS-15)	Was developed specifically to assess depression among older adults, validated with older adult populations, 15 items, Sheikh & Yesavage, 1986
Cornell scale for depression in dementia (CSDD)	Validated for older adults, 19 items, Alexopoulos et al., 1988
Patient health questionnaire (PHQ-9)	Validated for older adults, 9 items, Kroenke et al., 2001
Beck depression inventory (BDI)	Beck et al., 1961
Hospital anxiety and depression scale (HADS)	Validated for older adults, 14 items, Zigmond & Snaith, 1983

because they believe that a sad older person who does not expect much from life in general is not unusual (Rodda et al., 2011). Sometimes, the clinical symptomatology may also appear different in older people. For instance, they may present somatic complaints, psychomotor retardation or agitation, cognitive impairment, anxiety, and physical disability (Alvarez et al., 2011; Beekman et al., 2000). Thus, one should bear in mind when screening for depression that older individuals may often minimize their symptoms and display them as somatic problems (Rodda et al., 2011). Furthermore, sometimes the representations of older people concerning what depression means may differ from the ideas that GPs or health professionals hold about depression in older age (Bristow et al., 2011). Asking for help may be difficult for older individuals suffering from depression (Chew-Graham et al., 2012). One study showed for instance that older people who were diagnosed with depression refused the treatment that was proposed to them (Van der Weele et al., 2012). This can happen because older individuals have different representations of illness and treatment compared to the health professionals who are trying to help them.

Qualitative research results can help shed light into how older individuals think and talk about depression. For instance, a qualitative study with individuals aged 67–88 years old showed there is a continuum in what concerns understanding and accepting depression among older people (Gordon et al., 2018). Three typologies were identified on this continuum, showing the variety of depression conceptualizations among older individuals and the fact that these are not static (Gordon et al., 2018). The superficial accepters seemed to acknowledge their depression because they talked about it openly and used lots of facts to describe how they felt. However, they tended to deny being depressed, explained how they tried to hide it from others and how they feared being stigmatized for suffering from a mental illness. Several of the superficial accepters depicted themselves as experts on depression and showed anger and distress because healthcare professionals did not understand their symptoms (Gordon et al., 2018). A second category was formed by those who were trying to understand their symptoms. These individuals felt they had ignored their symptoms in the past and were now trying to face up to the diagnosis and find explanations for it. A third category were the ones who were unable to articulate and described coping with depression by blocking their feelings. People from this category usually described their symptoms in terms of physical suffering, such as back pain, tinnitus, distress, or heartbreak (Gordon et al., 2018). A general issue that came up in this study was that older people do not want to be a burden to others and thus avoid talking about their depression symptoms and internalize these instead (Alderson et al., 2014). Other studies also pointed out that talking about their depression is not easy for older individuals, and that some would rather describe their symptoms as a change in their sense of self in the context of their life story (Alderson et al., 2014). Questionnaires to identify and assess depression can only be helpful if patients can talk about their symptoms (Gordon et al., 2018). Diagnosing depression in older age depends on the extent to which the older persons can conceptualize their depression symptoms, degree of acceptance of having a mental problem and extent to which they can communicate their needs (Gordon et al., 2018).

Explaining Depression in Older Age

Several reasons were formulated to explain why older people tend to suffer from depression. As mentioned above, these explanations do not imply the fact that depression is a characteristic of old age but list a series of risk factors and factors that protect individuals from developing depression in old age. For example, the negative life events and depression model postulates that negative experiences may accumulate across the lifespan, resulting in an onset of depression in older age (Mclean & Link, 1994). Negative life events comprise disruptive experiences (e.g., chronic illness) or meaningful experiences (e.g., death of a loved person, retirement). Disruptive experiences determine a set of changes and readjustments that the person needs to make (e.g., diabetes means being insulin dependent, adjusting lifestyle, socializing patterns, etc.). Meaningful experiences can arouse intensive negative emotions, such as sadness, frustration, anger. Both readjustments of daily life and intensive negative emotions can trigger depression.

The diathesis stress model suggests that depression in old age is determined by a combination of personal vulnerability and stressful life events (Maier et al., 2021). Individual vulnerability comprises genetic factors, developmental factors (e.g., adversity or trauma experienced in childhood), sociodemographic circumstances (e.g., education, income), lifestyle (e.g., physical activity, alcohol consumption), mental and physical health status, disability, and psychosocial factors (e.g., sense of coherence, locus of control, social support networks, etc.) (Maier et al., 2021). Psychosocial factors are relevant from a positive psychology perspective because they can constitute protective factors regarding depression in older age. For instance, a higher level of social support, larger social networks and participation in the community were found to protect older people from developing depression (Maier et al., 2021; Uemura et al., 2018; Luppa et al., 2012). Having a sense of coherence was found to be protective for depression in older age (Misawa & Kondo, 2019). An important implication for the evaluation of depression among older adults and designing interventions to reduce depressive symptomatology is to assess protective factors that can be included in the intervention programs. Table 18.2 depicts a series of instruments that can be used to evaluate protective factors.

Since positive psychology focuses on identifying and increasing strengths and resources, when attempting to understand depression, one can regard its occurrence as a consequence of lack of enough internal (e.g., effective emotional coping strategies) or external resources (e.g., social support networks). From this perspective, it is relevant to examine what are the strengths that one can develop or the resources that one needs to foster in order to prevent or reduce depression among older individuals. Such strengths include internal locus of control, high self-efficacy, and sense of control.

Locus of control (LOC, Rotter, 1966) represents one psychosocial protective factor in case of depression. LOC implies who or what is responsible for certain outcomes in ones' life. Internal LOC refers to attributing results to personal effort, while external LOC attributes outcomes to powerful others or luck. *Self-efficacy*

Table 18.2 Instruments to measure protective factors for developing depression

Protective factor	Evaluation instrument
Sense of coherence	Sense of coherence scale (SOC-13) (Eriksson & Lindström, 2005), a shorter version of the SOC-19 (Antonovsky, 1987)
Social network size	Social network index (SNI, Cohen et al., 1997) measures 12 types of social relations
Social support	Duke social support index, short version, 11 items (DSSI, Koenig et al., 1993), social interaction and subjective support scale
Self-efficacy	The General Self-efficacy Scale (GSE, Schwarzer & Jerusalem, 1995) 10 items
Hope	The Hope Scale (Snyder et al., 1991) 8 items
Optimism	Life Orientation Test (LOT, Scheier & Carver, 1985), LOT-Revised (LOT-R, Scheier et al., 1994) 10 items
Gratitude	The Gratitude Questionnaire (GQ-6, McCullough et al., 2002) 6 items
Grit	The Perseverance and Passion for Long-term Goals scale (Duckworth et al., 2007) 12 items
Character strengths	Values-in-Action Inventory of Strengths (VIA-IS Peterson et al., 2005) 24 strengths

represents the belief that one possesses the skills or resources to achieve what one wants to (Bandura, 1977). *Sense of control* refers to the belief that one can influence certain situations (Lachman & Weaver, 1998). Sense of control can be regarded as a coping resource to prevent depression (Wheaton, 1985) as well as manage stress (Antonovsky, 1987). An internal LOC is useful for preventing feelings of helplessness and depression, especially in stressful situations (Bjørkløf et al., 2013).

The *transactional model of coping* postulates that the person and the environment are in a continuing mutual relationship, where the stressors are evaluated as a function of the coping resources. Coping can be focused on solving practical problems (i.e., problem-focused coping) or on reducing the negative emotions (i.e., emotion-focused coping) (Folkman & Lazarus, 1980). The methods that are chosen depend on the coping resources that a person holds. Depression may result when a person does not have enough resources to cope with a situation or does not apply the right strategies to change the stressful circumstances or reduce the negative emotions that are related to it. According to Antonovsky (1987), coping represents a resource that can be used in stressful situations to maintain health and improve wellbeing. In order to cope, a person needs to have a certain worldview, namely see the world as being comprehensible, manageable and meaningful (Antonovsky, 1987). Studies report that more adaptive coping (e.g., internal locus of control, higher sense of control, use of problem-focused coping strategies) is associated with lower levels of depression among older adults (Bjørkløf et al., 2013). Promoting a sense of meaning, of emotional comfort, personal control, mental health, and good relations with others can act as protective resources against developing depression or help to reduce it among older adults (Bjørkløf et al., 2013). One study looked at positive psychology predictors and showed that a combination of self-efficacy, grit, optimism and hope predicted lower levels of depression among older adults

(Allenden et al., 2016). Resilience and a positive outlook on life were also found to increase wellbeing in older adults (Vahia et al., 2011) and thus may act as protective factors against developing depression in old age.

The Relationship of Depression with Development: Why Intervene?

Development in all domains in later life is linked with depression. On the one hand, developmental factors can play a role in the onset of depression. On the other hand, depression can cause impairment of development in later life. Several developmental factors can lead to the onset of depression in older age.

Biological risk factors associated with physical development can play a role, namely the cortical and limbic system that are involved in mood regulation and expression (Power et al., 2016). Poor physical health is associated with depression (Power et al., 2016). Specifically, frailty, pain, sensory impairment, and cardiovascular disease can represent factors that trigger depression in older adults (Power et al., 2016; Robinson & Spalletta, 2010). Several illnesses that are common in old age such as arthritis, osteoporosis, type 2 diabetes (Power et al., 2016) or Parkinson, cerebrovascular diseases, or stroke are frequently associated with depression (Reinjders et al., 2008; Rodda et al., 2011). Endocrine or metabolic disorders (e.g., thyroid disease) can cause depression in old age (Rodda et al., 2011). Often, the links between biological factors and depression are associated with unhealthy lifestyles or repeated exposure to stress. The combination of stress and unhealthy habits over the lifetime can determine vascular problems, a weakened immune system or hypertension. All of these represent risk factors for cardiovascular diseases and can also facilitate the onset of depression. In contrast, depression was shown to be a risk factor for stroke in older adults (Liebetrau et al., 2008) or cardiovascular disease (Choi et al., 2014) and thus influence physical health and development. Depressed people who suffer from cardiovascular disease also have an increased risk of mortality (Meijer et al., 2013). In this context, the threshold hypothesis (Taylor et al., 2013) suggests that, after a vulnerability threshold is crossed, several factors (e.g., vascular processes, inflammatory processes, etc.) can lead to depression because they upset the affective or cognitive neural circuits.

A second category of depression determinants are associated with social development. For example, poor social networks (reduced level and sources of social support, few social contacts, poor interpersonal relations, or lack of love relationships) can trigger depression (Power et al., 2016). Regarding social factors, stressful life events, such as losing significant others, financial difficulties or having to take on a caregiver role can cause depression (Molyneux et al., 2008; McCrory et al., 2013; Cole & Dendukuri, 2003). Also, the loss of social roles or social status can trigger depression among older people (Rodda et al., 2011). The death of a life partner and the subsequent experienced loneliness are particularly risky for the onset of

depression (Golden et al., 2009; Luanaigh & Lawlor, 2008). Social support was identified as another important variable with both too much or too little perceived social support as risk factors for depression (Chi & Chou, 2001). A poor quality of the relationship with the life partner represents an important risk factor for depression among older age groups (Ivan Santini et al., 2015). Depression can cause a disruption of social networks as people isolate themselves. Furthermore, depression is usually associated with loneliness and can cause impairment of social skills since people do not go out and socialize anymore. Thus, social development is affected by depression in older age.

Cognitive development also has an impact on depression onset. For example, executive issues such as reduced problem-solving or decreased attention capacity or reduced inhibition of negative material can lead to developing depression (Power et al., 2016). As stated above, cognitive decline and dementia are risk factors for depression in older age (Rodda et al., 2011). The relationship is a reciprocal one, namely depression can in turn lead to cognitive impairment or dementia. Earlier studies pointed out that in older persons with late-life onset of dementia, the risk of cognitive impairment was high (Baldwin et al., 2006). This effect was also reported for people who have several episodes of depression during their lifetime. The cumulative effect of several depressive episodes can lead to dementia in older age (Barnes et al., 2012). The link between depression and dementia is not yet fully explained. However, there are factors, such as amyloid plaque deposition, inflammatory processes, cerebrovascular or neuroendocrine processes, hypercortisolaemia, loss of hippocampal volume, and reduced cognitive reserve that are considered as potential ways to explain the association of depression and dementia (Power et al., 2016; Rodda et al., 2011).

Personality can also contribute the onset of depression. Anxiety, negative thinking patterns, cognitive distortions can lead in stressful contexts to undesirable coping strategies and depression. Personality traits and thinking patterns are involved in depression also earlier in life and continue to be relevant in older age. According to the *stress vulnerability model*, if a vulnerable personality is exposed to a very stressful environment, this will result in the development of depression (Goldberg & Huxley, 1992). The nature of the stimuli that trigger depression in older age may be different from those that contribute to the onset in younger years. For older people, bereavement and diagnosis of a chronic illness or loneliness are more probable to cause depression (Power et al., 2016). Neuroticism, low sense of mastery (Steunenberg et al., 2010) and avoidant and dependent personality types are more prone to having depression in old age (Power et al., 2016). Among the common thinking patterns in depressed individuals, catastrophizing, and overgeneralization, as well as negative appraisals were found to be frequently present (Von Hippel et al., 2008). Difficulties in inhibiting the processing of negative information are associated with rumination among depressed individuals (Von Hippel et al., 2008). In this context, prolonged depression in older age can also lead to changes in personality, in the sense that people become less open to new experiences or more neurotic.

In terms of emotional development, poor emotional regulation skills and ineffective coping can trigger the onset of depression. For example, poor skills in dealing

with negative emotions caused by pain, disability, illness, bereavement, or fear of death can trigger depression in older age (Rodda et al., 2011). Being depressed in older age can hinder emotional development, since depression is often associated with anxiety, anger, or other negative emotions. Learning how to cope with depression in older age can stimulate emotional development as well as growth in other developmental domains.

All in all, one can conclude that depression in older age is associated with poor health and cognitive functioning (Power et al., 2016) and this can affect the development of older individuals in several areas. Depressed older individuals will be impaired in their cognitive, social, emotional, physical and personality development. Depression in older age is linked to suicide risk and natural mortality (Anderson, 2001; Power et al., 2016) because people sometimes just lose their will to live (see chapter on suicide prevention in the present book). Apart from being distressing for the depressed individuals themselves, depression also causes distress for family and loved ones who do not know how to deal with the issue and can develop depression themselves as a side effect of their caregiver role. Depression can be transmitted genetically to the next generation, but also by modelling certain behavioural and thinking patterns that may be copied later in life by children and grandchildren. For example, if a child has seen the grandparents react in a depressed way to stressful life events, he or she may copy this behaviour (e.g., isolate when stressed, keeping problems to oneself, etc.) or depressive ideas (e.g., nothing matters in life, people are mean, the future will bring nothing positive). Since the number of older individuals is growing in many countries and a large percentage of these are suffering from some form of depression, this can imply high costs for health services (Manthorpe & Iliffe, 2010; Bjørkløf et al., 2013).

How to Intervene: Treating Depression Among Older Individuals from a Positive Psychology Perspective

In order to understand how to intervene and prevent or treat depression in older age, it is relevant to study the factors that influence its onset and course. As stated above, when assessing depression, from a positive psychology perspective one should also look at how people cope with their problem. Depression in older age often requires medical treatment, but since pharmacotherapy is not the aim of the present chapter, I will refer to other literature that describes this issue comprehensively (see Power et al., 2016; Rodda et al., 2011; Anderson, 2001).

Psychological interventions often focus on the behavioural symptoms of depression, such as lack of activity or social engagement. Psychological treatments represent the first line of intervention in minor and moderate depression, while severe depression requires pharmacotherapy or a combination of medication with psychotherapy (Power et al., 2016; Rodda et al., 2011). In case of older adults, we need to check for some factors before informing them about therapy options. Such factors

refer mainly to access to therapy, such as, whether the person has the possibility to commit to weekly sessions, whether there are therapists available in his or her neighbourhood and so on. These factors can represent barriers for adhering to a therapeutic program in older age and solutions need to be found in collaboration with the elderly themselves when possible, or with their caregivers.

There are a series of psychological interventions that were shown to be effective in case of mild and moderate depression in older age. These include structured exercise programs, bibliotherapy, and problem-solving therapy (Blake et al., 2009; Van't Veer-Tazelaar et al., 2009). In case of severe depression, medication is necessary before one starts a psychological intervention program. An important point to make from the beginning is that older adults can benefit from psychotherapy (Rodda et al., 2011). In this sense, it is relevant to address potential negative ageing stereotypes in older people because these may act as barriers towards the success of therapy. Older people need to believe that they can still change and learn to manage depression even if they are older than 65 years old. Concrete examples and success statistics can be provided to older adults to convince them that they may benefit from therapy. For instance, cognitive behavioural therapy, interpersonal therapy, and problem-solving therapy were shown to be as effective in depressed older adults as for younger depressed individuals (Cuijpers et al., 2009). Therapeutic intervention options include cognitive behavioural therapy or interpersonal therapy. *Cognitive behavioural therapy* (CBT) assumes that changing dysfunctional thought patterns leads to changes in behaviour (e.g., being more social, being more active) and consequently to higher wellbeing. CBT is known to be helpful in relapse prevention for depression among older adults and effective especially in combination with medication (Power et al., 2016). *Interpersonal therapy* (IT) targets four aspects that are involved in depression, namely grief, role transition, interpersonal deficits, and interpersonal disputes (Power et al., 2016). The person is guided by the therapist to assess these aspects and helped to reinterpret the negative emotions in more positive ways (Power et al., 2016).

Part of a good intervention concerning depression in older age is how to talk to older people about their problem and possible solutions. A good *communication* between health professionals and older individuals can help increase the motivation to participate in therapy. Table 18.3 summarizes some important points that we can

Table 18.3 Communicating with older adults about depression

Intervention objectives	Communication
Address negative ageing stereotypes	Explain depression is not a normal part of ageing Explain that depression can have different symptoms, more emotional ones (e.g., feeling sad), somatic ones (e.g., feeling tired, restless, loss of appetite, trouble sleeping, etc.)
Focus on developmental capacities	Present different strategies for how development on a cognitive, social, emotional, physical and personality level can help decrease depression and prevent relapses
Focus on positive psychology strengths	Build self-efficacy concerning dealing with depression Identify and foster signature strengths

communicate to older people with risk for depression or who were already diagnosed with the depression.

As mentioned in the section about how to diagnose depression in older age, sometimes this is difficult to put in practice, because older individuals lack abilities to communicate their symptoms and needs. For example, older people may feel ashamed to ask for help, may dread becoming a burden for others, feel responsible about their symptoms or feel uncomfortable talking about their emotions. In this context, how we talk to older people about depression becomes very important. The Beyond Blue foundation from Australia offers some concrete advice about how to communicate with older adults about depression and seeking professional help (www.beyondblue.org.au, Beyond Blue Foundation, 2022). In the following, I will summarize some of their suggestions concerning how to talk to older persons about depression.

One important first step in this sense is to let older individuals know that one is concerned about changes in their behaviour and offer support (e.g., "you seem more tired than usual, have you noticed anything going on lately?", "you do not seem your usual self lately, is there any way I can help?", "I am worried about you, if there is something I can help with, please tell me and we can find solutions together"). Also, we should not get frustrated if older people do not share their feelings right away, but rather appreciate the little amount they do communicate. Another important point is to attempt to listen actively, without jumping in to provide your own solutions to their problems. Actively listening to the story of the older person means asking questions about their feelings and perceptions of events (e.g., how they feel, when they feel this way), checking that we have understood correctly what they depicted, using their language when talking about symptoms and avoid evaluations such as "you have a problem" or "you have depression". It is also relevant to transmit the message that feeling tired, irritated, or down is not part of normal ageing. Being supportive in a constructive manner is also part of an effective communication with older depressed individuals. For example, we can ask them what we can do to help while also encouraging their independence and individual decision-making and avoid giving unnecessary advice (e.g., "how can I help? Can you tell me what I can do to make things easier or better for you?", "I want to help you, but I do not want to impose, so please tell me what I can do"). It is important that older people remain active themselves, so that taking on all their responsibilities is not necessarily a good idea (e.g., "I could help you with your shopping each week, but it would be nice if we can go to the supermarket together if you have the energy"). Asking older people how they need to be helped is very important since some really treasure their autonomy and do not like to be told what to do (e.g., what they should eat, how they should clean their house, etc.). Moreover, it is relevant to cherish their wisdom and try to base solutions on their life experience and coping mechanisms as well as make them feel supported in trying to feel better. Even if the older individual is not yet ready to talk about his or her feelings or problems, we can still help by encouraging him or her to talk and not internalize his or her thoughts and emotions. We can try to understand why it is difficult for them to communicate their ideas and feelings and show patience (e.g., "I am here to help, so please tell me

what has happened?", "I would worry more if you do not tell me, so please tell me what is going on"). We can focus the conversation on the changes they have noticed (e.g., what has changed for them) and what they cannot do any more (e.g., go shopping, clean the house, meet people, etc.). Another important point is to help older persons to cope with obstacles and transmit the message that these are normal and do not represent a sign of failure (e.g., "It is nice to see you active today, I know this is not easy for you"). We can also encourage older people to seek professional help, for instance suggest that a psychologist may help them feel better and provide examples of older individuals who were helped. Since suicide can be a problem in older age (see chapter on suicide), it is important to check that the person is safe in this sense (e.g., "I know that when people are feeling this sad, sometimes they think about ending their lives, have you ever had such thoughts?"). We can also help by making a plan together with the older person. The plan can be to talk more at another time point, to see them more often, to check on them or to seek professional help together (e.g., "have you thought about what you can do to feel better? Do you want me to help you think about some solutions?"). While it is important to respect their right not to seek help, it is also relevant to keep trying to bring this issue into conversation, provide reassurance that they are not the only ones going through such problems and that there is no shame in seeking professional help.

From a positive psychology perspective, *interventions* to help older individuals suffering from depression would not just focus on reducing the negative emotions, but also on increasing wellbeing. Psychological wellbeing is regarded as the presence of psychological resources (e.g., positive emotions, self-acceptance, autonomy, purpose in life, etc.) and not just as the absence of mental problems (Ryan & Deci, 2001). Positive psychology strategies, namely activities that are meant to enhance positive emotions, cognitions and behaviours can be used to increase wellbeing. For instance, such strategies may include writing gratitude letters, identifying and thinking about one's positive experiences, practicing positive reframing thinking, socializing (Lyubomirsky et al., 2011). Particularly in case of depressed individuals, these have been shown to benefit from increases in positive emotions because these help to recover from the effects of negative emotions, improve coping skills and prevent relapses (Tugade & Fredrickson, 2004; Fredrickson & Joiner, 2002; Fava & Ruini, 2003). Engaging in enjoyable activities, using one's signature strengths in novel ways, replaying positive memories, monitoring wellbeing, practicing emotional skills, such as acceptance and mindfulness can help manage depression (Fava et al., 1998; Seligman et al., 2005; Grossman et al., 2007; Zautra et al., 2008) by building strengths in the emotional, social, and cognitive domains of development. Positive psychology strategies were shown to work better in older individuals (Sin & Lyubomirsky, 2009). This was explained by referring to the greater wisdom and effective emotional regulation that is associated with older age (Carstensen et al., 1999).

Positive psychology interventions aim to cultivate positive feelings, cognitions, and behaviours (Sin & Lyubomirsky, 2009). In case of depression among older adults, intervention goals from a positive psychology perspective can include: (1) enhancing wellbeing, (2) improving effective coping mechanisms (e.g., teach new

coping strategies and make plans to apply these to real life situations), (3) enhance strengths such as self-efficacy, optimism, gratitude, forgiveness, positive affect, (4) improve developmental strengths (e.g., emotional regulation, cognitive reserve, social skills and networks, openness to new experiences, physical strength and mobility, etc.). Before starting the intervention program, we need to make sure that older people understand the benefits of the positive psychological treatment and are motivated to adhere to it. This can be done by exploring their ideas about depression and treatment and addressing potential negative beliefs. For example, one belief that is prevalent in older adults is that depression is understandable and justifiable in older age (Murray et al., 2006). This may lead to a passive attitude among older depressed individuals and low expectations concerning treatment (Burroughs et al., 2006). Changing these negative ageing stereotypes that "depression is normal" in older individuals can lead to a more active attitude concerning treatment of depression. This can be done by applying cognitive behavioural strategies where the negative ideas are identified and alternative thoughts are formulated (e.g., depression can be changed in old age, some older people are depressed but this does not mean that depression is a normal part of ageing). Social support groups can also help older individuals to share their experiences with other peers suffering from depressive symptoms.

A next step would be to identify strengths and developmental resources that can help older people to deal better with depression. Often, older individuals already have some form of coping style when it comes to dealing with their depression. Thus, when planning an intervention, one should start from the coping strategies that the person already uses and analyse their effectiveness in dealing with depression. One qualitative study identified cognitive, social, and practical strategies among older depressed individuals (Von Faber et al., 2015). Cognitive strategies included keeping up appearances for other people, comparison with peers who were worse off, putting problems into perspective, positive reappraisal of the situation, making plans for the future or thinking about how to make a new start (Von Faber et al., 2015). Another strategy was stopping the negative thoughts by engaging in a distractive action (e.g., walking the dog, shopping, going to the hairdresser, etc.). Social coping included engaging in activities with other people, talking to others, writing letters, caring for others, doing voluntary work (Von Faber et al., 2015). Practical coping strategies included doing sports, self-medication, relaxation exercises, talking to a doctor about pain or cognitive symptoms such as memory problems (Von Faber et al., 2015). Some of these strategies can be effective in dealing with depression, and therefore, they can be integrated in the intervention as concrete action plans. In addition, the person can benefit from learning new coping strategies that can fit into the positive strategies toolbox. These positive strategies toolbox can entail exercises that were proven to be effective in reducing depression and enhancing wellbeing among older adults (Proyer et al., 2014). For instance, the *gratitude visit exercise* requires that a person writes a thank you letter to someone he or she has not thanked before (i.e., if the person is available, but this can be done also by sending the letter or placing it as a farewell ritual for a deceased person), reading the letter to the intended person, and thinking about the positive feelings while writing

and reading the letter. The *three good things exercise* requires that a person thinks about three good things that have happened to him or her on that particular day, reason why these things happened as well as what emotions were exactly experienced. This can be done each day of the week before going to bed. Another useful exercise is to *use signature strengths in a new way*. After completing the Values-in-Action Inventory of Strengths (Peterson et al., 2005), the person receives feedback regarding his or her top five strengths (i.e., the signature strengths) and trained to use them in a new way, on each day of the week. Since humour is also an important strength for reducing and preventing depression in older adults, some authors developed an exercise called *three funny things* (Gander et al., 2013). This is very similar to the three good things exercise, only that the person needs to think about three funny things that have happened to him or her during the day and can be repeated on each day of the week.

The developmental resources framework also provides a menu of strategies that older individuals can apply to cope with depression and improve wellbeing. For instance, one can improve emotional regulation strategies and foster positive emotions by engaging in pleasant activities (i.e., emotional development), build the social network and improve social skills (i.e., social development), increase cognitive flexibility and decision-making abilities (i.e., cognitive development), foster openness to new experiences and optimism (i.e., personality development), and build mobility and physical strength (i.e., physical development).

Prevention of Depression in Older Age

All in all, intervention for depression in late life implies many challenges. That is why, when possible, prevention of depression is more efficient than treatment. Traditionally, in public health, one differentiates between primary, secondary, and tertiary prevention of depression in late life.

Primary prevention refers to educating the public concerning risk and protective factors for depression in older age and lifestyle changes one could initiate in order to prevent depression. Primary prevention concerns addressing all aspects of life (e.g., cognitive, emotional, social, etc.) to prevent the onset of depression in older people. Education through mass-media and social media can play an important role in transmitting knowledge on the disease and helping to reduce stigma, misconceptions (e.g., depression is an untreatable disorder among older adults) and negative ageing stereotypes (e.g., depression is normal in old age). Encouraging social engagement of older individuals and intergenerational community actions can help to reduce the risk that older people feel lonely or isolated. Furthermore, community actions can include support groups for bereavement, chronic illness diagnoses or other age-related problems. Support networks should start in midlife, so that people have time to prepare for old age and develop coping mechanisms that will help them later in life. In terms of prevention of depression, but also as a treatment and prevention of relapse, physical exercise is highly recommended among older adults.

Physical exercise has positive effects for mental and physical health and positive effects for the social integration of older adults (Power et al., 2016). Primary prevention also involves enabling access to treatment for depressed older people. This implies removing health system barriers (e.g., improving knowledge and communication among health professionals), improving screening methods for depression, reducing ageism among health professionals, and educating older individuals concerning symptoms of depression and treatment options.

Secondary prevention refers to designing intervention to prevent depression among certain groups that are at risk. For example, such groups include patients with cardiovascular diseases, diabetes, chronic pain, osteoporosis, and arthritis, just to name a few. People who have recently lost a loved one (e.g., parents, children, spouse) are also at risk for depression. Similarly, caregivers experience a lot of stress and are prone to develop depression and should be offered preventive help. Secondary prevention involves educating the at-risk group concerning depression symptomatology, risk, and protective factors. From a positive psychology perspective, one would emphasize strengthening protective factors among older individuals who are at risk of developing depression. Protective factors can include character strengths and virtues (Park et al., 2004) as well as developmental resources (i.e., cognitive, emotional, social, personality and physical). The Values in Action (VIA) classification of strengths includes 24-character strengths grouped around six virtues, namely wisdom and knowledge, courage, humanity, justice, temperance, and transcendence (Park et al., 2004). Strengths comprise self-efficacy, optimism, hope, creativity, love of learning, open-mindedness, grit, and gratitude (Allenden et al., 2016). Working on developing these strengths in at-risk groups of older people can help prevent depression.

Tertiary prevention refers to those groups of older people who have been diagnosed with depression, who already manifest symptoms and need interventions to improve their quality of life. Identifying depression at an early stage, treating it effectively and preventing relapse are very important in this context. Treatment adherence may constitute a problem in older persons with depression. These can hold certain negative beliefs about treatments, concerning side effects of antidepressants (Maidment et al., 2002) or interactions with other medication they need to take. Objectives of tertiary prevention of depression in older age are to increase treatment adherence, promote lifestyle changes, prevent relapses, and increase quality of life of older individuals despite their depression diagnosis. From a positive psychology viewpoint, increasing character strengths may help to reach these goals. Also, building the developmental resources that an older person possesses can further increase the chances of the depression treatment being effective and prevent relapses from occurring.

Medical, psychosocial, and cognitive characteristics of older individuals can influence how depression prevention is organized in old age. For example, older individuals usually have more medical comorbidities compared to younger depressed adults. In terms of social characteristics, older people unfortunately more often are widowed or are experiencing some form of bereavement connected to the death of a friend or relative. Sometimes, older people live alone, far from their

families, which makes them vulnerable to loneliness and depression. In terms of cognitive impairment that affects some older individuals, this has been shown to influence the onset of depression and response to treatment (Alexopoulos et al., 2002).

On a physical level, depression can be prevented with adopting a healthy lifestyle. Since depression is sometimes associated with chronic illnesses in older age (e.g., diabetes, cerebrovascular diseases, hypertension), preventing the onset of such diseases can also prevent depression. Adopting a healthy diet, engaging in physical exercise, and avoiding smoking and excessive alcohol consumption can help with reducing the risk for developing chronic health problems and depression.

Conclusions

Depression is unfortunately highly prevalent in older age and can have a negative impact on older individuals' wellbeing and development across all life domains. Furthermore, depression is often underdiagnosed or misdiagnosed in older age because older people do not talk about their symptoms with health professionals or because their symptoms are dismissed as a normal part of ageing. Despite a high prevalence of depression among older adults, it is important to acknowledge and transmit the message that depression is not an implicit characteristic of old age. Associating depression with old age represents a negative stereotype about ageing and older individuals that needs to be changed in order to increase access to treatment for older individuals. An open and supportive communication with older adults can help health professionals or caregivers identify depression symptoms and encourage older individuals to ask for help to cure their depression. Interventions based on positive psychological principles can help older adults increase their strengths (e.g., hope, optimism, grit, self-efficacy) and improve their coping strategies for dealing with depression. Strengthening developmental resources among older adults can function both as a prevention and a management strategy in case of depression in older age. One important point to get across is that depression in older age is both preventable and treatable and that most people already have the necessary resources to do so. Psychological strategies can help identify and boost these personal resources. Positive psychology strategies are useful for identifying the strengths and developmental resources that older individuals possess in order to prevent or reduce depressive symptomatology. Depression can influence development in older age in negative ways. For example, it can reduce social contacts and contribute to feelings of loneliness and isolation, diminish cognitive capacities, increase negative affect, determine poor health, and risk behaviours (e.g., excessive alcohol consumption, suicide attempts, etc.). Nevertheless, successfully managing depression in old age can contribute to positive development across life domains. For instance, strengthening social networks, social skills and support (i.e., social development), and emotional regulation skills (i.e., emotional development), increasing optimism and openness to new experiences (i.e., personality

development), fostering the cognitive reserve (i.e., cognitive development), and enhancing health and mobility (i.e., physical development) can all contribute to preventing and managing depression in older age as well as fostering overall development among older adults.

Reflection Questions

1. Reflect on your own protective factors against depression in older age and name three of them.
2. Think about your grandparents or another older person you know well and name three risk factors for depression in their case and three character strengths they possess that can protect them from developing depression.
3. You are asked to develop an intervention program for older adults who were diagnosed with mild depression. Develop three intervention objectives from a positive psychology perspective and describe an implementation strategy for each of these.
4. Name three communication principles that can be applied when talking with older adults with depression.

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Chapter 19
Suicide Prevention in Older Age: A Positive Psychology Viewpoint

Introduction

At first glance, positive psychology principles or development may appear to have no common ground with such a topic as suicide in older age. Positive psychology is about strengths, hope, and enjoying life, while suicide is about deciding to end one's life because one has lost hope and does not want to go on living. Since living itself means change and development, the act of suicide would also represent a conscious decision that one does not want to develop anymore in any domain. However, positive psychology principles can be used to help people who think to end their life in older age (e.g., because they are depressed, lonely, have lost significant others, have been diagnosed with a terminal illness, etc.). Moreover, emotional, social, cognitive, personality, and physical development in later life can provide the necessary skills and strengths for suicide prevention in older age.

Suicide is defined as the act of intentionally killing oneself. Because suicide results in over 800,000 deaths annually on a global scale (World Health Organization [WHO], 2018), it is also described as a public health concern. When people think about suicide, they usually connect it with younger individuals, such as troubled youth or adolescents suffering from a broken heart. For example, a well-known phenomenon is that of the Werther syndrome (APA, 2022), that refers to a mass suicide pattern that is triggered by the suicide of a popular role model. The syndrome is named after Goethe's novel "The Sorrows of Young Werther" published in 1774. The story of Werther is said to have determined many young men at the time to emulate the main character's dressing style and manners. Unfortunately, several young men also killed themselves in similar fashion to Werther, causing the book to be prohibited in some areas. Nowadays, suicide remains a topic connected to media and especially social media and youth. For instance, the celebrity suicides in South Korea are famous and place an emphasis on the gender gap, with more young women celebrities committing suicide following the pressures of fame (The Guardian,

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2020). Although research also points out that suicide is usually regarded as a problem for young people (Conwell et al., 2011), prevalence of suicide among individuals who are older than 65 years of age indicate that this represents a public health issue in older age as well (Conejero et al., 2018; Celano et al., 2017). While suicide attempts are reported to be high among young people, older individuals are more vulnerable to fatal first suicide attempts (Young et al., 2020; Conejero et al., 2018).

High rates of suicide were registered globally among older individuals (De Leo, 2022; Conejero et al., 2016; Stanley et al., 2016). For instance, in 2017, it was reported that 16.17 from 100,000 older people in the 50 to 69 age group committed suicide, while 27.45 individuals per 100,000 in the over 70-year-old group died following a suicide attempt (Naghavi, 2019). Compared to these, in the 15–49 age group, only 11.6 per 100,000 individuals died as a result of a suicide attempt in 2017 (Naghavi, 2019). Nevertheless, the situation might have worsened with the corona pandemic and related social distancing policies and rising loneliness (De Leo, 2022; Santini et al., 2020). Suicide rates among older individuals have increased, especially among men (De Leo, 2022). Men are considered to be at higher risk of dying after a suicide attempt because they tend to use more lethal methods such as guns or deadly medications (De Leo, 2022; Van Orden & Deming, 2017) and because they are more affected by loss of status and autonomy in older age (De Leo, 2022).

The actual prevalence of self-harm and suicide attempts among older individuals may be much higher than reported. Negative ageing stereotypes play a role in the underreporting of suicide cases among older persons. For instance, Deuter et al. (2016) argue that deaths caused by suicide are often not examined in older individuals and their death is reported as an accident or as a natural cause death due to old age. Also, death caused by extremely visible self-harm methods such as guns, hanging or a car crash are often reported as accidents (Deuter et al., 2016). Suicide through less obvious methods, such as starving oneself to death, not taking the medications properly or mixing alcohol with medicine, are investigated even less (Deuter et al., 2016). Such situations are called in the literature a "*silent suicide*" where there is a voluntary action to end life (e.g., not eating, not taking medicine), but the act is not acknowledged as such (De Leo, 2022). To complicate matters further, there are situations of *assisted suicide*, when terminally ill patients ask their doctors to accelerate the process of death. Assisted suicide is defined as suicide performed with the help of other people, usually by the ingestion of lethal drugs (De Leo, 2022). *Euthanasia* refers to the ending of life with the assistance of a medical professional who helps the terminally ill patient to end their life in a painless way. This happens with the consent of the patient and/or his/her family (De Leo, 2022). At present, there are only a few countries in the world that permit euthanasia (e.g., Netherlands, Belgium, Canada, Spain) or assisted suicide (e.g., Switzerland) (De Leo, 2022), and both these methods are subject to intense ethical debates.

Suicide still constitutes a taboo topic, connected with shame or guilt. Concerning the latter, for example, in case of caregivers of older people who try to commit suicide, they feel guilty about not being able to take care of their significant others. Thus, it comes as no surprise that many people are reluctant to talk about self-harm

or suicide attempts. Older individuals may be particularly afraid that self-harm behaviour or suicide attempts will be interpreted as a clear sign of mental illness and will result in psychiatric treatment or being sent to an old people's home. This problem is connected to the fact that suicide is still mostly addressed from a deficit-oriented perspective (Rabon et al., 2019) or a medicalized viewpoint (i.e., seeing suicide as a form or a consequence of mental illness) (Deuter et al., 2016). Additionally, older individuals face ageist attitudes also in the sense that suicide is sometimes regarded as "normal" in old age and rationalized in terms of "it is better for the person" because of lack of future perspectives, illness, or loss of autonomy (De Leo, 2022). This, however, demonstrates a disregard for the value of life in older age and presence of ageism in society (De Leo, 2022).

When trying to help older individuals, health professionals tend to focus on risk assessment for suicide and consider this to be most relevant for treatment and prevention (Ryan & Large, 2013). This occurs because these health professionals think from a deficit-model perspective, where addressing risk factors is regarded as enough for developing an intervention. Little attention has been given to protective factors, defined as individual or social conditions that reduce the likelihood of suicide attempts (McLean et al., 2008). From a positive psychology and developmental perspective, it is important to identify and discuss such protective factors and make use of them to design suicide prevention programs targeted at older individuals. Moreover, suicide needs to be regarded as a developmental process, to which both risk and protective factors contribute over time and influence suicidal thoughts and actions (Conwell et al., 2011).

In the present chapter, I will discuss suicide in older age with a focus on how we can prevent it from happening. First, I will examine what suicide means to older people, as well as summarize theoretical models that attempt to explain why they may choose to commit such an act. Second, I will look at how one can recognize the risk for self-harm among older individuals. Third, I will discuss risk and protective factors from a developmental perspective, namely how developmental aspects in older age (e.g., social skills, cognitive abilities, personality traits, emotional regulation, physical attributes) can either facilitate or shield one from suicide in old age. Last but not least, I will explore how one can use positive psychology principles to design prevention programs for different target groups of older individuals. Also, I will analyse how developmental aspects concerning older age can play a role for suicide prevention.

The Meaning of Suicide in Older Age: Risk and Protective Factors

In order to design preventive interventions targeted at older adults, one needs to understand the reasons why older people attempt suicide in the first place. One problem in this sense is that often suicide is not explored from the perspective of older individuals who have attempted to take their lives but failed to do so. There are

few studies that looked at the experience of suicide from the perspective of older individuals (Deuter et al., 2016). For instance, one study investigated the pathway to and from the suicide attempt (Crocker et al., 2006), while another study looked at the meaning that older individuals attributed to their experiences before a suicide attempt (Im & Kim, 2011). Qualitative studies can offer insight into both reasons for attempting suicide and the experience of surviving such an attempt. For instance, one study explored meaning of self-harm in adults who were older than 60 and compared these to the perceptions of the support workers (Troya et al., 2019). Findings lend support to a developmental perspective, showing that stressors accumulate over the lifespan and influence self-harm in older age (Troya et al., 2019). Stressors such as loss, interpersonal conflicts, adverse events, and health problems made older adults engage in self-harm to manage these (Troya et al., 2019). Both stigma and shame were associated with self-harm by the interviewed older adults, illustrating how this is not often a topic that is easy to address (Troya et al., 2019). The testimonials of older adults who engage in self-harm point out how they often do not see another solution to their problem and death becomes a key for getting out of life's troubles (Troya et al., 2019). Interviewed older individuals also talked about the "numbing pain" they felt and about not having persons to share this with (Troya et al., 2019). Unfortunately, self-harm also represents a way to regain control when they feel powerless in their lives and some even mentioned that they feel better after they inflicted pain on themselves (Troya et al., 2019). Self-harm behaviour can represent a cry for help and a predecessor to a suicide attempt (Troya et al., 2019). That is why it is important to identify and acknowledge self-harm behaviour among older adults and intervene to prevent a suicide attempt. Nevertheless, in addition to focusing on meanings of suicide and risk factors that may lead one to an attempt to take one's life, it is relevant to find out what would motivate a person to go on living. For instance, a qualitative study with social workers from South Korea points out the importance of focusing on the reasons for living, the ones that give older persons hope to keep on going (Kim, 2013). This demonstrates the relevance of focusing, not just on risk factors, but also on protective factors that can be included in interventions to help older adults prevent another suicide attempt.

As mentioned above, usually, suicide prevention is conducted from a deficit-perspective (Rabon et al., 2019) and protective factors are often neglected when designing suicide prevention programs (Kim, 2013). This means that most of the times, risk factors are identified at both individual (e.g., depression, substance abuse, suicide thoughts and plans, hopelessness) and social level (e.g., ageism, financial difficulties) (Kim, 2013; WHO, 2018). After identifying the specific risk factors, interventions are designed to reduce these to prevent the suicide attempt and resulting death. Among the most common *risk factors* are experiences of loss (e.g., losing a life partner, death of children, being diagnosed with a chronic illness, loosing autonomy, financial loss), major life changes (e.g., transition to retirement), loneliness (e.g., older adults who live alone or who have lost important people from their social networks), feeling a burden for the family, illness, and pain (Conejero et al., 2018; Jahn & Cukrowicz, 2011). Old persons can be particularly vulnerable to suicide ideation and attempts because of high rates of depression (see chapter),

anxiety (see chapter), pain (see chapter) and other medical problems, loneliness, and isolation (see chapter) and discrimination in older age (see ageism chapter). Several age-related risk factors were identified in the literature to be specific for older age. For instance, living alone represents a risk factor because it makes it more difficult to be rescued in time. Other age-specific risk factors include physical frailty, a tendency to use more lethal means to commit suicide and a strong determination to pursue their plans (Deuter et al., 2016). Feeling like a burden or useless are also common thought patterns that may lead to suicide risk among older individuals (Deuter et al., 2016).

If one were to analyse these risk factors from a developmental perspective, one can say that social, emotional, cognitive, and physical factors are interlinked in making a person vulnerable for a suicide attempt. In terms of social development, limited social connectedness in old age was found to be associated with suicidal behaviour among older adults (Fassberg et al., 2012). For instance, socially stressful situations like becoming a widow or widower, the experience of bereavement or lack of a romantic partnership can place older people at risk for suicide (Conejero et al., 2018). Being ill or suffering from dementia or a cognitive impairment also represent risk factors for suicide among older people (Joling et al., 2017; Conejero et al., 2018). For example, Kim (2013) points out that limited problem-solving skills and cognitive rigidity are risk factors for developing suicidal thoughts when facing stressful situations. Decision ability is also relevant in the context of suicide, since, ultimately, this represents a decision process about dying. Decision-making abilities refer to assessing and foreseeing positive and negative outcomes of a behavioural choice that should maximize expected value (Conejero et al., 2016). One study showed that decision-making abilities were impaired in depressed older adults who attempted suicide (Clark et al., 2011). Cognitive inhibition, defined as the capacity to block irrelevant thoughts and concentrate on a task, was reported to be reduced in suicidal older individuals (Richard-Devantoy et al., 2012). In terms of physical development, illness, pain, and lack of mobility represent risk factors for suicide (Conwell et al., 2011; Stanley et al., 2016). A review of the role of personality disorders in suicidal behaviour in older age illustrates the heterogeneity or personality traits connected to suicidal ideation and actions among older adults (Szücs et al., 2018). Narcissistic and borderline personalities were positively associated with suicidal ideation, while obsessive compulsive and avoidant personality types were positively linked to suicidal actions in older age (Szücs et al., 2018). High neuroticism and low levels of openness can also be risk factors for suicide in older age (Szücs et al., 2018).

Connected to the notion of risk factors, it is important to consider what the *warning signs* are. How can one measure the risk for suicide among older adults? And if yes, what instruments to use? Old age can make things complicated in the sense that, because of, for example, holding negative ageing stereotypes, we may consider that some actions of older individuals are "normal" for their age. Furthermore, in some cases, changes in a person's behaviour may really be connected to ageing. For example, if a person starts having mobility problems, he or she will go out less frequently, will not meet other people and isolate from the outer world. However,

although loss of mobility can be a risk factor for suicide, it does not necessarily trigger suicide ideation and actions. Moreover, as was described in the chapter about pain management (see chapter on pain management in the present book), aches and pain experienced in older age can also determine a person to have suicide thoughts and to see death as a solution to ending a life of pain. Common *warning signs* for potential suicide attempts include a marked loss of interest in hobbies and activities that were previously enjoyed to high extent, reduced contact with family and friends, modifications of eating and sleeping patterns. Suicidal thoughts are always a red flag, especially when a person is talking about death and how they would like to take their lives. More subtle can be statements of hopelessness, such as a person stating that there is not much to be expected of life anymore, not wanting anything from the future, losing the feeling of meaning in life or feeling like a burden to close others (e.g., thinking that others would be better off in a world without them). Signs that can lead to real attempts to end one's life are talking about suicide, threatening to hurt or kill themselves, writing about dying and suicide, actively searching for methods to kill themselves (e.g., putting aside pills) (American Association of Suicidology, 2017). Other signs may include suddenly making or changing one's will, giving away objects that are emotionally important, putting things in order, suddenly visiting family and friends to say goodbye (De Leo, 2022).

From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000; Rabon et al., 2019) and developmental viewpoint (Conwell et al., 2011), it is relevant to look at the strengths that one can develop to reduce the suicide risk. In this context, it is important to examine the *protective factors*, namely what makes an older person strong in order not to attempt suicide, even in situations when one would be at risk (e.g., stressful life situations, financial difficulties, bereavement and loss, illness, etc.). Studies have identified protective factors such as good physical and mental health, strong supportive relationships with friends and family, a feeling of social connectedness, being open and able to ask for help whenever one needs it, having purpose and meaning in life, not having access to lethal means to commit suicide (Heisel & Duberstein, 2016; Van Orden & Deming, 2017; Deuter et al., 2016). Protective factors such as resilience, coping skills, positive emotions and beliefs can be promoted to help people and prevent suicidal ideation and attempts. Positive emotions and psychological strengths are linked to positive outcomes such as better wellbeing, high social connectedness, and mental as well as physical health (Hefferon & Boniwell, 2011). Other protective factors include strong social networks, a good marital relationship, spirituality because they protect older individuals in stressful situations (Deuter et al., 2018). Thus, rather than focusing on the risk factors that lead to ideas about suicide, one should identify what are the strategies that a person uses in order to deal with the stress and pain in life. These strategies need to be discovered in order to include them in interventions to prevent suicide or help individuals who have attempted suicide in their old age. Strategies that act as protective factors can be simple actions that a person performs daily but that can play a role for preventing suicide thoughts and attempts. For example, having a healthy diet and making sure one does some form of physical activity every day (e.g., exercising, biking, going for a walk, spending time with grandchildren,

cleaning the house). Making time for hobbies or activities one enjoys is also crucial (e.g., gardening, reading, going to see a film or a concert). Social relations should be high on the priority list. One should not expect others to call but be proactive and call and text important people in their lives. If possible, one should try to meet new people, make novel acquaintances, and start new activities, if there is an activity centre in the region. In order to give life a purpose, one should find different activities to help others or apply the accumulated knowledge and experience. For example, one can volunteer as a substitute grandparent or for another community services that can make one feel useful and valuable. Last, but not least, it is important to talk about one's feelings and thoughts with significant others or to ask for professional help.

Positive experiences and effective coping strategies can help to understand suicidal behaviour and reduce it because they break the association between stressors and suicidal actions (Wingate et al., 2006). Enjoying high social support, having a meaning in life, and expressing gratitude are negatively linked to suicide thoughts (Heisel et al., 2016). Also, they are negatively associated with risk factors for suicide in older age, such as loneliness and depression (Heisel et al., 2016). This suggests that protective psychological factors can help prevent suicide both indirectly (e.g., by decreasing risk factors such as loneliness) and directly (e.g., by reducing self-harm ideation or suicide plans). One study showed that positive psychology exercises, such as increasing gratitude and use of personal strengths, that were administered to a sample of patients who had suicidal attempts, were associated with reductions in feelings of hopelessness and with increased optimism (Huffman et al., 2014). All in all, one can say that developmental features, such as good emotional regulation in older age, strong social networks and social skills, personality traits, such as optimism and openness to novel experiences, cognitive flexibility, and good cognitive inhibitory abilities (e.g., to help supress negative thoughts), physical mobility and health may all constitute protective factors for suicidal behaviours in older age.

Theories Explaining Suicide in Older Age

How does one explain the decision of an older person to terminate his or her life? Theoretical models are known to offer a background for understanding a phenomenon, explain how it works, and serve as a base for interventions (Stanley et al., 2016). Several theories have been developed in an effort to explain suicidal behaviour. Most of these theoretical models are based on risk factors for suicide but can be analysed also from a positive psychology perspective (see Rabon et al., 2019). For example, the *Emotion Dysregulation Theory* assumes that during childhood, a person does not develop the necessary emotional regulation skills to deal with critical or stressful life situations (Neece et al., 2013). When individuals lack the skills to deal with stress, they adopt self-harm as a coping mechanism for dealing with overwhelming negative emotions (Neece et al., 2013). A solution for designing

interventions from a positive psychology and developmental viewpoint is to teach people emotion-regulation skills, increase their interpersonal competence, nurture distress tolerance (Kleinman et al., 2019) or apply mindfulness principles (Le et al., 2019).

The *Interpersonal Theory of Suicide* (Joiner, 2005) postulates that suicidal intentions and actions are triggered by the feeling that one is a burden and the feeling that one does not belong. When designing an intervention, one can plan to teach individuals interpersonal skills, how to foster gratitude and express forgiveness. The latter can be especially important in older age, when people can look back and identify stories in their lives that were perhaps left unfinished, conflicts that were not resolved or certain people including oneself that were not forgiven. Creating a meaning in life through identifying what one can give back to the community can also provide a sense of belonging and of being useful, despite one's older age.

A similar theory is that of *psychache* (Shneidman, 1993). This theory explains suicide by the existence of unmet emotional needs that cause deep emotional pain and ultimately determine suicide. Taking this theory into consideration, one might attempt to help people identify and address the unmet emotional needs. Goal-directed behaviours, improved motivation and future orientation are recommended from a positive psychology perspective (Rabon et al., 2019). Especially future orientation may be problematic for some older adults. In this case, concentrating on the present and short-term future can be used in interventions. Finding some form of meaning in life, gratitude and forgiveness represent other positive psychology strategies that could be applied in this context.

The *Integrated Motivational-Volitional Model of Suicide Behavior* (O'Connor & Kirtley, 2018) assumes that stressors activate internal vulnerabilities, and these in turn determine suicidal ideation and behaviour. The premotivational phase includes the risk factors and ends in developing an intention for self-harm. The motivation phase includes suicidal ideation and formulation of an intention while the volitional phase implies making plans and the actual suicide attempt (Stanley et al., 2016). In the context of this model, the transition between stages is also relevant, namely what drives a person to get from the intention to the enactment stage. To note, stages can also be cyclical, namely a suicide attempt can trigger further self-harm ideation (O'Connor & Kirtley, 2018). Disengagement from unattainable goals combined with lack of substitute goals are risk factors for developing suicidal motivation (O'Connor, 2011). Risk factors in the volitional phase are fearlessness about death (Ribeiro et al., 2014) and use of more lethal methods when attempting to kill oneself (Conwell et al., 2002). In contrast, future orientation, reasons for living, social and emotional coping are proposed as buffers that can stop the individual's progress from feeling vulnerable to having suicide thoughts, from suicidal ideation to actual attempts and death (Rabon et al., 2019).

There are also a series of positive psychology theories that address suicidal behaviour. For example, the *Broaden and Build Theory* (Fredrickson, 2004) assumes that by enhancing opportunities for positive experiences, thoughts and emotions, wellbeing may improve, and in this context, suicide risk will be reduced. Positive experiences and emotions broaden the horizon of a person and lead to learning new

skills and resources (Fredrickson, 2004). In contrast, negative emotions tend to focus the attention of a person on the negative content, not leaving time and energy for other explorations or learning new things or meeting new people. Research shows that the presence of negative emotions does not necessarily lead to suicide risk, but rather the absence of positive emotions is riskier in this sense (Rabon et al., 2019). Thus, in this sense, it is important to help individuals develop positive coping skills that can trigger positive emotions and experiences that will act as protective factors.

Hope theory (Snyder, 1994) is another relevant theoretical approach that can be applied to suicidal behaviour. As also discussed above, hope is an important protective factor, while hopelessness puts one at risk for suicide (Cheavens et al., 2016). Hopelessness was shown to represent an important risk factor for suicide specifically in case of older adults (Stanley et al., 2016). The Geriatric hopelessness scale (GHS) (Fry, 1984) with its suicidal risk subscale (i.e., GHD-SR with 11 items) can be used to assess hopelessness as a risk factor among older adults (Stanley et al., 2016). According to hope theory, hopefulness is triggered by the ability to set goals as well as the motivation to pursue and attain these goals (Snyder, 1994). In the context of suicidal behaviour, the ability to identify and follow positive goals acts as a buffer for suicide attempts and actions (Grewal & Porter, 2007). Moreover, it was shown that people who attempt suicide have a problem with following their positive goals. Thus, from the perspective of hope theory it is important to identify both positive goals and means to achieve these (Rabon et al., 2019). However, Snyder (1994) warns that suicide can become a goal in itself, a last hope when other goals have failed. Therefore, it is relevant to focus on building strengths, such as future orientation, interpersonal skills, and creating opportunities for positive experiences that foster personal growth (Rabon et al., 2019).

Self-determination theory (Deci & Ryan, 2000) represents another positive psychology theory that can be linked to the concept of suicide (Rabon et al., 2019) and applied also in case of older individuals. According to this theory, individual motivation is based on satisfaction of competence needs (e.g., having high self-efficacy), autonomy (e.g., feeling one has a choice) and relatedness (e.g., being connected to other people) (Deci & Ryan, 2000). A person who is self-determined feels free to do what is interesting for him or her and can regulate his or her actions depending on personal values (Deci & Ryan, 2012). Pursuing meaningful activities, forgiving oneself for past mistakes, emotional regulation and mindfulness represent some positive strategies (Rabon et al., 2019), which can be applied in order that people feel capable, independent, and connected to others and, thus, at low risk for attempting suicide in older age. From a cognitive behavioural perspective, thoughts, emotions, and behaviours mutually influence each other (Beck, 1995). In case of suicidal actions, ideas such as "it would be better for everybody if I just die" can result in feeling depressed or losing hope. The latter can then determine a person to engage in self-harm behaviour or attempting suicide. The cognitive behavioural therapy principles can be applied to suicide prevention by, for instance, increasing problem-solving abilities, changing negative thoughts, and increasing social competence (Alavi et al., 2013). The Cognitive-Behaviour-Therapy for Suicide Prevention

(CBT-SP) includes further elements, such as analysing events that are associated with the suicidal action, safety planning, psychoeducation, developing reasons for living, and increasing feelings of hope. These elements usually are addressed before one starts to develop skills such as behavioural activation, mood monitoring, emotional regulation, tolerance of distress, and cognitive restructuring (Stanley et al., 2009).

How to Design Interventions to Prevent Suicide Among Older Individuals

Before setting out to design a suicide prevention program for older adults, one needs to define the target population and asses the risk and protective factors for this particular group. Findings from such an evaluation will help formulate program aims and find the suitable strategies to implement them. Several questionnaires can be used to assess risk and protective factors in case of suicide in older adults. Results from such an evaluation can serve for defining the target population of the prevention program and to design aims and find intervention strategies that are tailored to the target population needs. Additionally, such instruments help to measure the effectiveness of the prevention program. Table 19.1 provides an overview of these

Table 19.1 Suicide risk and protective factors evaluation tools

	Tools
Risk factor	
Hopelessness	Beck hopelessness scale (BHS Beck et al., 1974), 20 items Geriatric Hopelessness Scale (GHS Fry, 1984) 30 items, includes a specific suicide risk subscale (GHS-SR) with 11 items
Health risk taking behaviour for example for self-harm	Concise Health Risk Taking Scale (Trivedi et al., 2011) 12 items
Depression	16 Quick Inventory of Depressive Symptomatology (Rush et al., 2003) 27 items
Negative affect	Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988) negative affect scale
Future thinking	Future thinking task (FFT MacLeod et al., 1997)
Protective factor	
Hope	Adult Hope Scale (Snyder et al., 1991; Snyder, 2002) 12 items
Optimism	Life Orientation Test Revised (LOT-R) (Herzberg et al., 2006) 24 items
Gratitude	Gratitude Questionnaire 6 (McCullough et al., 2002) 6 items measure dispositional gratitude
Positive affect	Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988) positive affect subscale of PANAS, 10 items
Future thinking	Future thinking task (FFT MacLeod et al., 1997)

instruments. However, this list is by no means exhaustive. It can be used as orientation for identifying the instruments we need for developing one's suicide prevention program and for exercising the art of thinking in terms of both risk and protective factors. Some measures can include both risk and protective aspects, such as instruments that measure positive and negative affect or the future thinking task (see Table 19.1). It is important to evaluate future thinking among persons who are at risk for suicide because lack of positive representations of the future is a risk factor for killing oneself (MacLeod et al., 1997). The *future thinking task* (FFT MacLeod et al., 1997) implies that individuals are asked to give examples of positive and negative thoughts they hold concerning the future. In order to do this, they are asked to generate spontaneous answers to questions such as what they are looking forward to in the next week, next month, next 5 years? (i.e., positive thoughts) and what they are not looking forward to? (i.e., negative thoughts). The scores for positive and negative thoughts are calculated and compared (Kirtley et al., 2019). In addition to quantitative measurements, when possible, it is advisable to conduct a qualitative evaluation of the meanings of suicide, thoughts, and behaviours, as well as protective factors in the target population (e.g., interviews with older adults who are vulnerable for committing suicide or who have attempted to do so). Qualitative methods provide a better understanding of the motives for suicide from the older persons' perspective. Qualitative findings can help to create tailored messages for suicide prevention campaigns that are realistic, powerful as well as empowering.

If one would design a suicide prevention program from a developmental and positive psychology perspective, one should set objectives to increase developmental strengths in all developmental domains. For instance, in the *social domain*, one should strengthen social networks and improve social skills for making novel contacts that can offer support when needed. Knowing where and how to receive the needed social support is relevant in situations when one feels vulnerable or overwhelmed by life problems. In *the emotional domain*, it is vital to improve emotional regulations abilities to deal with negative feelings (e.g., depression, anger, frustration, anxiety) and ageing related stress (e.g., financial problems, loneliness, health issues). In the *cognitive domain*, good mental abilities help one to find meaning and purpose in life as well as hobbies that can help spend time in an enjoyable way. Cognitive flexibility helps to change negative thoughts (e.g., ideas of self-harm) and represents an asset for cognitive behavioural therapeutic interventions for older people. Cognitive inhibition aids to control negative thoughts so that one does not spend time ruminating about negative ideas, such as having no future. Training decision-making abilities can also prove useful in situations where one needs to find other solutions to life's problems as opposed to taking one's life. In the realm of *personality development,* fostering traits, such as optimism and openness to new experiences, has positive outcomes for other increasing effective coping mechanisms and thus preventing suicide ideation and attempts. In the *physical domain*, taking care of one's health and mobility in older age is important because it helps one to be active and prevent loneliness. Relevant outcomes of such a suicide prevention program would be to decrease negative feelings, such as hopelessness, reduce

self-harm ideation, decrease the risk for self-harm actions, and increase strengths and coping strategies to deal with difficult moments.

From a positive psychology perspective, we would not just identify and reduce risk factors, but act to increase protective factors in order to help vulnerable individuals. For example, as discussed above, among the cognitive factors that constitute a risk for suicide is hopelessness, defined as a negative view of the future (Rabon et al., 2019). Hopelessness is linked to helplessness, namely not knowing how to get help or help oneself in critical life situations so that death is regarded as the only "way out". Hopelessness is also linked to attributing life events to stable, unchangeable causes, which leads to maladaptive and inaccurate views of the self, the environment, and the future (Klonsky et al., 2012; Zhou et al., 2013). Inaccurate views of the self would be that one is always stupid or general evaluations such as "nobody likes me" and "nothing I do is worthwhile", "I am better off dead, nobody will miss me anyway". Erroneous views of the environment or other people are for example "all people are bad" and negatively biased ideas about the future "only bad things can happen to me in the future". Hopelessness is important because it can be the catalyst that leads from suicidal ideation to concrete attempts (Abramson et al., 2000). Furthermore, hopelessness may become more salient with older age when many people do not find meaning in making plans for a future that they perceive as very short. Challenging these maladaptive beliefs, in addition to increasing social abilities and problem-solving skills can reduce hopelessness (Alavi et al., 2013) and thus decrease the risk for suicide in older people. Increasing positive psychological aspects, such as a positive future orientation and thinking, optimism, hope, and positive problem-solving, can help reduce suicide risk (Wingate et al., 2006; Chang et al., 2013).

When designing a prevention program and formulating objectives, it is important to define the *target population*. Preventive interventions should not be directed only at persons who already tried to commit suicide. From a developmental perspective, we can intervene across the lifespan to prevent suicide in older age. When focusing on ageing individuals, it is not enough to consider the life stage characteristics, but one should identify at which risk stage the older people find themselves (Conwell et al., 2011). One can use, for example, the classification of *primary* (e.g., there are no identifiable risk factors for suicide behaviour, the person is just going through a vulnerable life transition such as retirement, is in a bereavement phase but there are no suicidal thoughts or plans, etc.), *secondary* (e.g., risk factors for suicide are present, such as suicidal ideation, hopelessness, feeling a burden for family, feeling useless) or *tertiary* (e.g., the person has concrete plans to commit suicide or has attempted suicide already but has survived).

Objectives concerning the *primary prevention* of suicide would concentrate on boosting protective factors among older individuals (e.g., resilience, hopefulness, optimism) to prevent suicide risk. Usually, primary prevention aims are focused on health education concerning preparation for old age, identifying risk behaviours for physical health (e.g., smoking, alcohol consumption, etc.), and promoting health behaviour (e.g., physical exercise, healthy diet, etc.). While such interventions are helpful, they refer mostly to physical health. In addition, one should focus on

developing strengths in all developmental domains among the general population of older individuals (e.g., resilience, optimism, hopefulness, positive affect, cognitive flexibility, emotional regulation, etc.). Programs that address negative attitudes and ageism are also recommended on this primary prevention level (Levy & McDonald, 2016). *Secondary* suicide prevention would involve intervening early when risk factors for suicide appeared (e.g., ideation about dying, hopelessness) in order to prevent the onset of suicide actions (Caldwell, 2008). This type of secondary prevention implies that people in the community (e.g., general practitioners, social workers) are trained to recognize suicide risk among older individuals. Communication and education about warning signs is relevant at this stage because suicidal older individuals need to talk about what they are going through, and professionals need to be able to understand the risk signs (Holm et al., 2021). Telephone counselling was identified as an effective preventive strategy (Lapierre et al., 2011). *Tertiary* prevention is designed for those ageing individuals who already engage in suicidal behaviour, and one needs to prevent a further attempt as well as increase their wellbeing. Survivor support groups were recommended as tertiary prevention for young people (Caldwell, 2008) but could function effectively also for older individuals.

Another classification is that of indicated, selective and universal prevention (Conwell et al., 2011). *Indicative prevention* programs focus on individuals who have proximal risk factors and who present visible symptoms for suicide, such as making concrete plans or even attempting to kill themselves (Conwell et al., 2011). The objective in this case is to address the proximal risk factors (e.g., depression, hopelessness) and prevent the expression of suicidal behaviour (Conwell et al., 2011). This is usually done by providing therapy for the mental health issues that are associated with risk for suicide (e.g., depression, anxiety) and engaging gate keepers, such as emergency services or primary care health professionals (Conwell et al., 2011). The latter are involved in identifying the symptoms and referring the person to receive further psychological help. *Selective prevention* targets individuals who are asymptomatic or who present distal risk factors for suicide, or who have an increased likelihood of developing mental health issues that may trigger suicide attempts (Conwell et al., 2011). In this case, one can address the contexts that may place the individuals at risk, the so-called distal factors (e.g., feeling lonely, the feeling that one does not belong, feeling a burden). Thus, for such programs, one can engage the community to provide support to older adults who may feel isolated. Another objective is to increase the independent functioning of older adults, as well as increased access to pain management services or rehabilitation programmes (Conwell et al., 2011). *Universal prevention* targets the entire population and does not focus on specific risk groups (Conwell et al., 2011). The objectives in this case are to reduce general risk factors and enhance protective factors for the entire population to prevent suicide-related mortality (Conwell et al., 2011). Thus, universal prevention does not refer just to older adults, but addresses also younger people who are taught about risk and protective factors. This type of prevention involves educating the larger public concerning ageism, normal ageing, stigma of suicide, pain and disability management, depression, and suicide (Conwell et al., 2011). Policies and legislation that restricts access to suicide means (e.g., access to medication over the

counter, guns, etc.) are also part of universal prevention (Conwell et al., 2011). Universal prevention involves the media and policy makers (Conwell et al., 2011).

Sakashita and Oyama (2019) propose a prevention model for older individuals based on the indicated, selective and universal prevention types. The authors state that there is a suicide process, starting with a nonsuicidal state (e.g., the person does not have any suicidal ideation, but is going through a life crisis or suffers from mental health issues), continuing with suicidal thoughts, making plans to kill oneself and taking action to do so (Sakashita & Oyama, 2019). In the suicidal ideation phase, components such as hopelessness and pessimism are prevalent and should be addressed in psychological interventions (Sakashita & Oyama, 2019). In the planning phase, emulation, access to means of killing oneself and impulsivity are relevant factors and can constitute objectives of interventions (Sakashita & Oyama, 2019). In their model, *universal prevention* targets people who are at the nonsuicidal stage and uses means, such as mass media, to communicate messages to the general population and screen for warning signs for suicide risk (Sakashita & Oyama, 2019). At this stage, a combination of mental health policies, raising awareness about suicide being a problem for older individuals and providing education may be an effective preventive combination (Jenkins & Singh, 2000). Universal prevention can also target people who are at the planning stage, for instance through legislation that restricts access to means for killing oneself (Mann et al., 2005; Sakashita & Oyama, 2019). Additionally, universal prevention can act through responsible media reporting to minimize emulation (Mann et al., 2005). *Selective prevention* can be most effective when targeted at the people who are in the suicidal ideation stage, by screening the at-risk persons, creating crisis helplines (De Leo et al., 2002; Gould et al., 2007) and training gatekeepers (Szanto et al., 2007; Sakashita & Oyama, 2019). *Indicated prevention* is offered at the suicidal thoughts, at the planning and action stages through community support and follow-up interventions, management of potential mental disorders that are associated with the suicidal thoughts and planning and follow-up after the attempts (Sakashita & Oyama, 2019). For example, psychological treatment in combination with antidepressants offered to older patients with depression was shown to be effective (Szanto et al., 2003). Follow-up care after an attempted suicides was proven effective in reducing other suicidal actions (Luxton et al., 2013). Elements of universal, selective, and indicated prevention can be combined to create prevention programs (Sakashita & Oyama, 2019) that address the complex and multifaceted issue of suicide in old age. The model helps to identify older persons who are at risk, to prevent their progressing through the stages (e.g., from suicide cognitions to plans and actions), and ultimately to reduce suicide prevalence in the older population (Sakashita & Oyama, 2019). At community level, interventions to prevent suicide among older people should target all levels and prevention types simultaneously to raise the chances of being successful in preventing death by suicide (De Leo et al., 2002; Szanto et al., 2007; Oyama et al., 2008; Sakashita & Oyama, 2019).

As discussed above, in terms of objectives and prevention strategies, most interventions to reduce suicide behaviour among the elderly target risk factors such as depression, suicidal ideation, or feelings of hopelessness (Brown et al., 2005;

Linehan et al., 2006; Bolton et al., 2015) however with limited impact (Calati & Courtet, 2016). Nevertheless, there is a rising interest in positive psychology approaches to the problem of suicide (Rabon et al., 2019) and positive psychology interventions were proven effective, for instance in case of patients with depression who were also at risk for suicide (Celano et al., 2017). From a positive psychology perspective, some components are particularly relevant when designing suicide-prevention interventions (Rabon et al., 2019) and these can be adapted to be used in case of older individuals (Celano et al., 2017). For example, in one 6-week telephone intervention targeting older individuals with depression and suicidal ideation, several positive psychology components were successfully applied. These included gratitude for positive events, identification, and application of personal strengths, fostering involvement in meaningful activities, leveraging past success and engagement in acts of kindness (Celano et al., 2017). *Gratitude* for positive events implies that participants recollect three positive events from the past week and write about these in a diary (Seligman et al., 2005; Celano et al., 2017). Concerning the identification of personal strengths, older people complete a questionnaire, choose a key strength that is important for them, and make plans concerning how to apply it during the following week (Seligman et al., 2005; Celano et al., 2017). Gratitude can be expressed also in an exercise where people write a gratefulness letter to a person whom they want to thank, preferably someone to whom they did not express gratitude before (Seligman et al., 2005; Celano et al., 2017). To achieve better results, it is important that the people also send this gratitude letter (Celano et al., 2017). Engaging in *meaningful, enjoyable activities* is also recommended as an important technique to promote positive affect (Peterson et al., 2005). Also, recollection of past success and how one achieved it can bring about positive affect and a feeling of empowerment. *Performing acts of kindness* (Lyubomirsky et al., 2005) represents another way to foster experiencing positive emotions and gratitude from other people. Older people can be encouraged to perform three acts of kindness for other persons in the following week. All in all, it is also important to provide older individuals with a toolbox of positive psychology exercises and offer them the choice to select the ones they want to try out (Lyubomirsky & Layous, 2013). *Forgiveness* was defined as a multidimensional construct that incudes various targets (e.g., oneself, others) and methods (e.g., offering, seeking) and is associated with health outcomes (Toussaint & Webb, 2005; Lavelock et al., 2015). Forgiveness exercises may be particularly useful for older people since they may have several regrets about the past or things that they have not forgiven themselves or others and which may stimulate suicidal thoughts. Forgiveness triggers positive emotions and influences health indirectly through involvement in health behaviour and satisfying interpersonal relations (see for reviews Toussaint et al., 2015; Woodyatt et al., 2017) and can be used as a prevention tool (Webb & Jeter, 2015). For example, one can use psychoeducational forgiveness intervention tools (Worthington Jr. & Sandage, 2016). The REACH forgiveness model implies that one recalls an offense, builds empathy, selects forgiveness as a selfless offering, makes a public commitment to forgive, and monitors the progress.

Conclusion

In the present chapter, I presented the issue of suicide in older age from a developmental and positive psychology point of view. Suicide in older age has been mostly addressed from a risk factor perspective (i.e., identifying and intervening to reduce risk factors for suicide), which can be effective, but it also enhances negative stereotypes of ageing (e.g., older people being frail, vulnerable, depressed). Thus, when tackling the problem of suicide in older age, it is important to focus both on risk and protective factors, namely what makes a person strong and what makes older people want to go on living. From a developmental point of view, risk and protective factors are interlinked over the lifespan and could make a person susceptible to suicidal ideation or acts during older age. Thus, depending on the target group (e.g., developmental stage characteristics, stage of the suicidal process) and type of prevention (e.g., primary, secondary, tertiary, or universal, selective, indicative), one should first asses the needs of intervention among older individuals. This can be done by evaluating both risk and protective factors concerning suicidal behaviour with a mixed-methods approach and using qualitative methods to explore the meaning of suicide from the perspective of older adults. Based on the findings of such an evaluation, one would design the prevention program by formulating objectives, outcomes, and strategies to achieve the prevention aims. Program objectives should focus both on reducing risk factors (e.g., reduce hopelessness, depression) and enhancing protective factors (e.g., building strengths such as gratitude, emotional regulation skills, hope). Addressing negative ageing stereotypes and ageism is particularly relevant because it constitutes a cause of suicide underreporting and sometimes also of suicidal ideation and attempts. From a developmental perspective, fostering developmental aspects in all domains constitutes an important goal for suicide prevention programs in older age. For example, strengthening social skills and networks, training cognitive flexibility and decision-making capacities, enhancing emotional regulation skills, fostering optimism and openness to new experiences as well as increasing health and mobility can represent effective goals for suicide prevention in older age. Providing a positive psychology strategies toolbox (e.g., including gratitude exercises, fostering personal strengths, encouraging enjoyable activities, forgiveness exercises, etc.) can also prove very useful when designing suicide prevention programs for older adults.

Reflection Questions

1. Name three factors that can lead to suicide in older age.
2. Think about your grandparents, what are three strengths that they possess that would act as protective factors for suicide prevention in older age?
3. Reflect about yourself, what are three strengths that you want to develop so that you are protected from suicide ideation in older age?

4. Formulate three objectives and describe three exercises for a suicide prevention app targeted at older individuals.

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Chapter 20
Designing Positive Psychology Interventions for Death Preparation and Bereavement Among Older Adults

Introduction

Death is part of life and represents the moment when a person really ceases to develop. Thus, from a developmental perspective, death really denotes an endpoint. Because death is an inevitable experience, we cannot deny its importance even if thinking about it terrifies us or fills us with sadness and despair. One can easily think of many examples of negative emotions and thoughts related to our death or the one of our loved ones. In this sense, thinking about death from a positive psychology perspective really presents a challenge, since there is at first glance a paradox in talking or thinking about death in a positive way. Taking a positive psychology view into consideration, one can ask about the meaning of a dignified death or how to help people prepare for death (e.g., people who were diagnosed with a terminal illness, caregivers who need to accept the death of a loved one, ageing individuals who have an increased awareness of death, etc.).

Although most people fear death, some may come to desire it, especially in older age if they are depressed and do not see a future for themselves. Unfortunately, statistics from several countries show that suicide rates among older individuals are higher or comparable to those among younger persons (Shah, 2007). Such findings raise awareness concerning the idea that sometimes, old age brings with it the desire to end one's life. Some older individuals may not feel comfortable in the "modern world", they may get the feeling that one has lived enough, that one is tired of continuing life's journey. This represents an ethical as well as psychological issue since it raises the question about who should decide concerning death. Are we entitled to decide when to end our lives or not? From a developmental and positive psychological perspective, effort can be invested in suicide prevention (see chapter on suicide for more information). Development in several domains of life (e.g., social, emotional, cognitive, physical, personality) can protect us from suicidal ideation and attempts during our older age.

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Desired or not, death is an inevitable part of life. Like in the story about the "Appointment in Samarra" (Maugham, 1933), one cannot escape the fate of death. Death represents a complex phenomenon, that comprises individual, but also social and cultural aspects. Although death is primarily a biological event, it is saturated with social (e.g., how is death regulated on a social level, inheritance issues, etc.), cultural (i.e., how is death perceived in a specific culture) and political meanings (i.e., death statistics and how they impact health or retirement policies). The meaning one gives to death or meanings that are given within a community can shape how persons live their life (Tomer et al., 2008; Wong & Tomer, 2011) or deal with death and bereavement. The Covid-19 pandemic has brought a new emphasis on death and dying by pointing out the vulnerability of different age groups, especially older people. Also, media coverage of illness and death has increased during the last decades, with coverage of deaths through natural disasters, genocides, migration, or pandemics. Thus, we are exposed every day to death reminders, and are simultaneously intrigued by the mystery of death and frightened by it (Wong & Tomer, 2011). Violent TV series and video games are also a testimony of people's preoccupation and fascination with death (Wong & Tomer, 2011). However, older age with its illness and frailty may change the perspective since the probability of death makes it more real and personal.

The present book adopts a positive psychology perspective to development and examines how a positive outlook on death and dying is related to development. Because death signifies a point of no return, it also means the end of development. However, preparation for a dignified death or helping someone accept the idea of death (i.e., their own or that of other people) can contribute to self-development. Positive psychology principles can be used to invest the experience of death with meaning and help individuals prepare for this moment that is unfortunately inevitable in our lives. The process of preparation is of crucial importance as expressed in the quote from Peter Pan "To die will be an awfully big adventure" (Barrie, 1904).

In the present chapter, I will explore definitions of death from a positive psychology perspective, as well as how one can prepare for a good death. Then I will go on to address the issue of grief and bereavement caused by the loss of loved persons, since this is sadly a frequently occurring event in older age. The potential of self-development and how one could apply positive psychology principles to foster it will be discussed in connection with the preparation for death as well as in the context of bereavement.

Meanings of Death Among Older Adults

Death can be defined as the permanent ceasing of a person as a biological being. Death triggers several emotional reactions (e.g., fear, depression, anger) and various attitudes from denial to acceptance and management of the dying process (Zimmermann & Rodin, 2004; Zimmermann, 2007). From a historical perspective, meanings of a "good death" have changed over the centuries (Cottrell & Duggleby,

2016). During the Stone Age, dying was a natural part of individual life and very much part of the community's life (Kellehear, 2007). Dying somehow "happened" after the person had ceased to exist biologically, and the preparations for the journey towards the afterlife were much more in focus as compared to pre-end-of-life planning (Kellehear, 2007). Only later did the preparations for death gain in importance once society evolved and people had time and resources to prepare for death in advance (Kellehear, 2007). The process of dying started off as a private and community affair but evolved to be more of a personal matter that one needs to manage by oneself (Kellehear, 2007). A "good death" came to be defined as a "well-managed death" (Kellehear, 2007, p. 147). In medieval times, a "good death" was one where you could receive the sacrament which ensured salvation (Ramos Dias, 2020). Death in the contemporary world is often supervised by palliative care professionals and it happens in hospitals or old people's homes (Cottrell & Duggleby, 2016). This gave rise to the "revivalist good death" concept that was proposed within the hospice movement and philosophy (Seale, 1998; Walters, 2004) and progress in oncology research (Gott, 2008). The *revivalist good death* is defined as a peaceful, painless process or a dignified end of life (Cottrell & Duggleby, 2016). According to this definition, death occurs in old age, at home, surrounded by family and significant others (Granda-Cameron & Houldin, 2012). Also, a good death in this sense means that a person is aware of his or her death, has accepted it and has made all the necessary preparations (e.g., legal, financial, medical, emotional, etc.) (Granda-Cameron & Houldin, 2012). The "good death" represents a social discourse that is supposed to guide attitudes and behaviours concerning death and dying in a certain social context (Cottrell & Duggleby, 2016). Thus, it is important to identify social discourses about death in order to understand an individual's perceptions of dying and preparatory behaviours. Sometimes, changing such discourses may be necessary in order to help people to better manage the experience of death. Moreover, sociocultural perceptions of death also influence the care that dying individuals receive. Thus, understanding how such death discourses shape health professionals' beliefs can contribute to the improvement of palliative care services for older individuals. There are a multitude of studies that investigated this topic. In an integrative review, Cottrell and Duggleby (2016) pointed out the main ways in which discourses about the "good death" shape attitudes and behaviours concerning death. One of their findings was that often the "good death" is not regarded from the perspective of the dying individuals (Cottrell & Duggleby, 2016). For example, some patients do not want to be aware of their dying process and do not desire to be autonomous (Gott, 2008). Also, sometimes the "good death" is not possible as in the case of patients with dementia who cannot be aware and embrace their dying process or give meaning to it (Carr, 2003). Another development is that the dying process is being denied altogether (Cottrell & Duggleby, 2016). For example, several older people are influenced by the "right to die" discourse (van Brussel & Carpentier, 2012) and request assisted suicide or euthanasia (Pierson et al., 2002; Wilson, 2009). Cottrell and Duggleby (2016) argue that this means that the focus is on the controllability of death and timing of death and less attention is paid to the process of dying (e.g., preparation, acceptance, meaning) (Clarke, 2006). Death is often

represented in the media as a controlled event, specifically one that happens rapidly, without any prior preparatory dying process (Cottrell & Duggleby, 2016). The "good death" discourse was criticized for not doing what it claims, namely that it is constricting rather than promoting individual freedom (Goldsteen et al., 2006; Broom & Cavenagh, 2010). Also, it is criticized because it rewards certain ways of dying as being "good ways to go" compared to other ways. By doing this, the good death discourse indirectly controls how people die (Zimmermann, 2012). Therefore, some researchers claim that even if death is acceptable in contemporary society, the process of dying is denied (Cottrell & Duggleby, 2016). Moreover, positive concepts were found to be missing in the research literature on the "good death" (Cottrell & Duggleby, 2016). The findings from the review also highlight that denying the process of dying can have a negative impact on development, namely it constitutes a barrier for personal growth, or to finding meaning and enjoyment in life until one's death (Cottrell & Duggleby, 2016). Therefore, it is important to explore the desires that individuals have concerning the dying experience and reflect how positive psychology and developmental aspects can be integrated within the dying process. Death may be approached from many perspectives (e.g., philosophical, moral, medical, societal, cultural, etc.). In the present chapter, I am interested to consider the topic of death from a developmental and positive psychological viewpoint. From a positive psychological point of view, death has many implications, such as, for instance, how to define a good death in psychological terms and how to integrate positive psychology aspects in the dying process? From a developmental perspective, one can ask if "a good death is part of development?" or if "the process of preparing for our death or the death of loved ones is part of our self-development?"

Explaining the Process of Dying: Meanings and Theories

As already discussed above, perspectives on death and dying have changed a lot during the last decades. During the 1960s, the focus was mostly on the illness and treatment and the emotional needs of the patients were hardly considered. For example, in case of terminally-ill patients, doctors did not pay so much attention of the emotional reactions of the persons to the diagnosis or news of their imminent death. Demographic changes with the rise of the ageing population, the hospice movement, and the emergence of palliative care encouraged a growing interest in the feelings and experiences of dying patients (Cottrell & Duggleby, 2016).

The psychiatrist *Elizabeth Kübler-Ross* was the first to examine the process of dying from a psychological perspective and develop a theory on the stages of death acceptance. In her book "On death and dying", she describes the five stages of grief from the moment one finds out the diagnosis until the acceptance of the death experience (Kübler-Ross, 1969*;* Kübler-Ross & Kessler, 2014). This is relevant in the context of positive psychology since one of the aims of a positive approach to dying is to help people accept the fact and find effective ways to cope with it. Also, from

a developmental perspective, going through the five stages represents a journey of self-discovery and personal growth. The first stage in the Kübler-Ross model is called *denial* and reflects how people try to protect their emotions by denying the truth of the information they have received about their death. Denial at this stage can be helpful since it protects us from anxiety and fears. This stage of denial gives the person who is diagnosed with a terminal illness as well as the family members and close others time to process the information and find ways to cope. The second stage is called *anger* because the main emotion is that of being furious or frustrated that this is happening to them. The main question is "why me?" and the irritation and resentment are usually directed either at oneself or at significant others or the medical personnel. At this stage, it is very important that the caregivers react with patience, offer support, and not get angry at the dying individual. The third stage is called *bargaining* because the dying person may try to negotiate with health professionals or with God for an extension of life. For instance, people can think that if they will reform their life, then they will get to live a bit longer. This stage is characterized somewhat by hope because the person believes that if he or she changes something, then they will be rewarded with a life extension. The fourth stage is called *depression,* not in the sense of a psychiatric diagnosis, but as a phase characterized with despair and hopelessness. At this stage, the person feels despair when confronted with mortality and may become withdrawn and refuse to see close others. The fifth stage is that of *acceptance* when individuals embrace their inevitable fate and focus on how to prepare for their death in the best way possible. The author suggests that not all people go through all these stages and also, the process is not a linear one. Some people may reach acceptance right after they have been through the denial phase, while others will never reach the acceptance phase. The model was criticized by other researchers for lacking a thorough evidence base and a theoretical underpinning (Corr, 2018; Stroebe et al., 2017). Moreover, in practice, things may be more complicated since a person might simultaneously experience various emotions related to death. However, the model remains relevant as a guiding tool and because it highlights the importance of emotional and cognitive processes concerning how one deals with one's own or others' mortality. Its legacy is relevant for placing an emphasis on the process of dying, for identifying defence mechanisms, such as denial and emotional reactions, such as depression, that are involved in dealing with the death experience (Wong & Tomer, 2011). Also, the assumption that there are some stages that one person needs to go through to process and accept death is something that many people can relate to. The acceptance of death represents a process of development on an emotional level (e.g., transitioning from anger and fear to acceptance), cognitive level (e.g., from denial to acknowledgment), social level (e.g., from refusing support to actively seeking and accepting it). Researchers identified several types of death acceptance, ranging from neutral form (e.g., facing death in a rational manner), to an approach type (e.g., seeing death as the pathway to the afterlife) and escape form (e.g., seeing death as the better alternative to a painful existence (Wong & Tomer, 2011). In this context, the Death attitude profile-revised (DAP-R, Wong et al., 1994) can be applied to evaluate attitudes towards dying and see to what extent the person is approaching death acceptance.

Based on the different reactions to the death experience, the *dual-system model of coping* was developed to explain how the approach and avoidance tendencies can interact and how individuals can deal with death anxiety while striving to achieve their life goals (Wong & Tomer, 2011). The defensive tendency helps people avoid danger, seek safety, avoid pain and suffering, while the approach tendency is focused on pursuing one's goals no matter the risks involved (Wong & Tomer, 2011). People who have an approach tendency are willing to confront crisis situations and create opportunities for growth (Wong & Tomer, 2011). In this context, the fear of death can teach a person to live authentically and follow one's goals (Wong & Tomer, 2011). Engagement in a meaningful life can act as a protective factor for death anxiety and also aid in the process of dying.

The *terror management theory* postulates that people are driven by a desire to survive and continue their existence, while at the same time being conscious of their finitude in this world. At the centre of fear of death is the idea that one will be annihilated, that the body will disappear, and that the mind and soul will be annihilated (Cicirelli, 2002). In this context, avoiding death anxiety is more important than the search for positive meaning because the latter only serves as a buffer towards our fear of death (TMT, Pyszczynski et al., 2004, 2006). For this theory, the search for meaning in life is considered from a defensive perspective and the focus is on anxiety (Wong & Tomer, 2011) and how to tackle it (Cicirelli, 2002). In contrast, the *meaning management theory* (MMT, Neimeyer, 2001; Wong, 2008; Tomer et al., 2008) prioritizes the search for meaning and the focus is on meaning making, meaning reconstruction, development, and authenticity (Wong, 2008; Tomer et al., 2008).

Death anxiety or fear of death represent common phenomena in all societies (Cicirelli, 2002). Interestingly, some studies showed that fear of death decreases with age (Neimeyer & Van Brunt, 1995; Thorson & Powell, 1991, 2000). Sinoff (2017) argues that old people mostly fear the dying process, rather than death itself. In contrast, young people may fear death with all its associations more than the dying process. From the terror management theory perspective, the way to manage fear of death is to find ways to supress it (Cicirelli, 2002). For example, in order to transcend the idea of death, one can use a form of symbolic immortality that ensures continuity (e.g., having children, through one's work and achievements, etc.). Symbolic immortality means that one is represented by someone or something that will continue to exist even after they are dead (Cicirelli, 2002). Some factors such as high self-esteem, internal locus of control, enjoying strong support from others, higher socioeconomic status and religious beliefs can help manage fear of death (Cicirelli, 2002). Fear of death can be evaluated with the Multidimensional fear of death scale (MFODS Neimeyer & Moore, 1994) that contains 42 items measured on a five-point Likert scale. The eight subscales include fear of the dying process (e.g., violent death), fear of the dead (e.g., fear of seeing a corpse), fear of being destroyed (e.g., fear of cremation), fear for significant others (e.g., fear how others will react to one's death), fear of the unknown (e.g., fear of nonexistence), fear of conscious death (e.g., being falsely declared dead), and fear of premature death (e.g., fear one cannot accomplish enough before dying). Another scale that can be used to measure death anxiety is the Death Anxiety Scale (DAS) with 15 items including statements

such as “I am very much afraid of dying” or “The future holds nothing for me to fear” (Templer, 1970; Sinoff, 2017).

According to Tomer and Eliason (2000), fear of death is directly connected to past and future regrets as well as death attitudes and indirectly influenced by coping processes, beliefs about oneself and the world, and the degree to which death raises the awareness of one’s own dying. Death anxiety reaches a peak during middle age when people are exposed to the death of loved ones (i.e., parents, friends). In older age, death anxiety is reduced despite having more reminders of death, but fear of dying is increased (Sinoff, 2017). One study shows that the death anxiety of middle-aged children was higher than the fear of death manifested by their elderly parents (Sinoff, 2017). Since this age-related discrepancy in death anxiety affected the health communication with the doctors, interventions should focus on the communication about death with the patient, as well as with the significant others (Sinoff, 2017).

Grief and Bereavement: Meanings and Intervention

Another important issue one needs to discuss in relation to death and older age is that of grief and bereavement. Sadly, older age brings with itself many opportunities when one gets to grieve the death of a spouse, relative or friend. Thus, knowing how to do this from a positive psychology perspective can help stimulate development despite the pain and suffering involved. Furthermore, learning to deal with the grief caused by the death of others can help change one’s own perspective on death and dying and assist one in the preparation for one’s own death in older age.

Grief has been mostly, but not surprisingly, addressed from a deficit-oriented perspective, focusing on the negative emotions and how to reduce them (Bonanno, 2000). Lately, bereavement research has shifted perspective and there is evidence that one can improve adjustment and wellbeing even following an experience of loss (Neimeyer, 2004, 2016; Bonanno, 2009; Calhoun et al., 2010). As mentioned above, unfortunately, loss is part of life and older age can constitute a background for more experiences of loss compared to other stages. Loss can be related to experiences, such as the diagnosis of a chronic illness, the status of being in the work force once you retire, divorce or separation, the grown-up children leaving home, and finally, the death of a loved person (i.e., the experience of bereavement). Grief in itself is not pathological; it represents a normal process when we learn to deal with the loss and move on with our lives. According to Roberts et al. (2016), one can use techniques such as narrative reconstruction, posttraumatic growth or enhancing positive emotions to increase wellbeing in persons who have experienced the death of a significant other. This implies that the bereaved person learns how to experience a sense of growth after loss, finds a sense of meaning during and after tragedy, learns how to incorporate the death of a loved one into one’s life story and creates a sense of wellbeing despite loss (Roberts et al., 2016). Also, when addressed from a positive psychology perspective, it comes maybe naturally to think about growth

after a loss and building resilience in children or young persons who have their life ahead of them. In the present chapter, I will address grief and growth in the context of older age. Even if people may have more competences to deal with loss and tragedy in older age, every grief experience is different and can trigger novel reactions. Reflecting on these emotional, cognitive, and behavioural reactions after experiencing loss can foster development among older people who experience loss.

Definitions of grief refer to it as being "the experience of a person who is responding to the death of another human being whom he or she has loved" (Granek, 2010 p. 46). Another more inclusive definition says that grief represents "a natural human response to separation, bereavement or loss, in particular the loss of a loved one" (Buglass, 2010, p. 44). Losing a loved person often leaves one feeling helpless, empty, and distressed. It is difficult to imagine that one could maybe also experience a sense of growth from losing someone. Grieving the loss of another important person represents a process and therefore also entails the potential for change and growth. Learning to focus on the positive psychology principles can help one cope with loss and develop despite experiencing negative feelings. It does not mean that one denies that negative feelings, such as deep sadness, anxiety, helplessness and maybe hopelessness, exist. On the contrary, one acknowledges these feelings and learns to integrate them in one's life story while focusing on their potential for growth. Furthermore, it also implies a re-evaluation of the relation with the dead person, of learning to live with the memory of the deceased. Sometimes, when a loved one dies, bereaved persons may blame themselves or experience survival guilt. However, the process of grieving can also lead to setting new goals and developing one's emotional strengths (e.g., hope, resilience).

When a person experiences loss, their life is changed in a way forever (Roberts et al., 2016). The death of a loved one implies many losses, some direct (i.e., the person is not physically there anymore) and some more subtle (e.g., the loss of a shared everyday life of activities you used to enjoy together, the loss of a common future and common plans). Furthermore, not all losses are the same, they depend on how prepared we are (e.g., was it a sudden death or was it a death following a chronic illness) or what type of relationship we had with the person (e.g., the degree of emotional closeness, the role the person played in our lives). In order to understand grief better, one can think about it in terms of thoughts, emotions and behaviours. Typical thoughts are ideas about the injustice of the situation, thinking about coping or not being able to cope, thoughts about all the things you will miss about the person, remembering conversations, wishing you would have said things or did things in a different way. Emotions can also vary, or we can feel several things at the same time. Typical emotions in case of loss are sadness, regret, fear, guilt, frustration, numbness, or longing. Some typical behavioural reactions are rumination, avoiding being alone, removing reminders, keeping busy, not doing things that you used to do before, especially with the person, going to the cemetery, talking to people, or distracting oneself (e.g., drinking, relaxing, etc.). Grief can occur in frequent waves just at the beginning, and, with time, these may become less common. Prolonged grief or chronic grief that turns pathological and should be addressed

with counselling is the one that does not go away even after enough time has passed (Bonanno & Malgaroli, 2020).

From a positive psychology perspective, addressing grief or bereavement means that the person who suffered the loss must find a meaning for this loss and discover a way to integrate it in their life narrative, often reconsidering things that one has believed or probably took for granted their whole life (Roberts et al., 2016). *Developing positive meanings* can lead to improved wellbeing, heightened engagement with others and having a better sense of purpose (Calhoun et al., 2010). For example, engaging in acts of altruism can help the bereaved person discover new meanings in their life and thus reinvent themselves (e.g., change careers, start a family, try out a new hobby, etc.). On a general scale, meaning making activities include benefit-finding and making sense of existence (Gillies & Neimeyer, 2006). In the context of bereavement counselling or interventions, one can set goals to consider what meanings are created from the loss, what are the ways in which the bereaved person integrates the loss as well as identify ways in which the loss may have changed the bereaved person (Berzoff, 2011). One study on bereaved older persons who had lost a loved one to suicide showed how these changed their everyday lives following the tragedy and how they invested the latter with meaning (Hybholt et al., 2020). The negative emotions associated with the loss were centred around the theme of "broken late-life living", meaning that older adults realized that their everyday life in old age will not be as they had imagined (e.g., sharing things and experiences with the deceased). To adjust to the idea that their everyday lives will not be as imagined, the older individuals applied three strategies, namely, seeking meaning in the suicide, keeping the memory of the deceased person alive and regaining life despite loss (Hybholt et al., 2020). Seeking meaning in suicide involved trying to understand why the person wanted to die, by reviewing conflictual events from their lives or potential signs that may have signalled the suicide. This retrospective inquiry was accompanied by searching for general information about suicide and its causes. An important aspect is that people continued their everyday lives in the meantime, doing shopping, housekeeping, or volunteering (Hybholt et al., 2020). Striving for meaning was paralleled with efforts to forgive the loved one who committed suicide. As second goal was to keep the memory of the deceased alive. This was done through certain rituals that people integrated in their everyday lives (e.g., going to the cemetery, keeping a photo of the deceased in the house, and lighting a candle once a day). The third goal was to regain their life despite loss. This was done by focusing on keeping a balance between mourning the dead and taking part in daily living (Hybholt et al., 2020). This third goal is particularly important, and it is emphasized in several models of grief and coping with bereavement. For example, the model developed by Tonkin postulated that the experience of grief does not mean that you pass through some stages, and then finally you let go, put your suffering behind you. In contrast, the grief stays on as part of our lives, but with time, our life gets "larger", it grows around the grief (Tonkin & Counselling, 1996). If we draw a circle that represents our life and then we mark our grief by colouring this circle, we expect that, with time, this grief-coloured area will shrink. Instead, with time, another circle around the grief-coloured area grows

bigger, representing our life that unfolds around the grief. For example, with time, we start to make new acquaintances and experiences, even have moments when we are happy and forget about our grief. Another model is that developed by Worden (1991), called TEAR. According to this model, "T" signifies to accept the reality of the loss, "E" for experiencing the pain and suffering, "A" for adjusting to the new life without the person, "R" for reinvesting in the new reality. To invest the loss with positive meaning, one thing we can do is develop or choose rituals to remember the person and celebrate their life (e.g., take on existing cultural rituals, religious ones or make our own, such as anniversaries). Another way to remember the person is to create a memory box (e.g., include photos, favourite things of the deceased, letters, presents one has received from them, etc.).

Posttraumatic growth represents yet another goal of grief interventions from a positive psychology perspective and represents the result of the coping efforts that happen after the trauma (Roberts et al., 2016). As a first reaction, losing someone we love determines a sense of vulnerability. At this stage, it is important to listen actively, but without interfering, allowing the person to mourn and cry. Studies show that people who survive the loss of someone report that they feel more confident in their abilities to survive and flourish after trauma. Thus, it is important to help the bereaved person recognize this capacity to thrive and go on with their lives, while feeling stronger and more prepared in terms of coping abilities (Calhoun et al., 2010). Another way to experience posttraumatic growth is that we can develop new roles and relationships (e.g., improve relations with family and friends, re-evaluate former conflicts that one may have with family members and improve relations), focuses to live life to the fullest in the present (e.g., not be afraid to tell people who are important to you that you love them) and experience some form of inner transformation such as a spiritual renewal (Calhoun et al., 2010). The *expert companionship model* can be applied in the context of fostering posttraumatic growth. The model includes several components: showing humility and respect, offering continuous support as a helper, showing tolerance to nonrational reactions, courage to listen and showing appreciation for paradox, such as for instance experiencing vulnerability that can eventually lead to developing strengths (Calhoun et al., 2010). We can build new strengths by, for instance, addressing avoidant behaviour. If after the death of a loved one, we have the tendency to avoid certain places (e.g., the favourite café, the place they used to go on holiday together, etc.), activities that we used to do together (e.g., going swimming, riding a bike) or certain people who remind us of the loss (e.g., seeing common friends). We can make a list of all the places, actions, and people we avoid and then make a hierarchy of the emotional difficulty associated with each of these. We can start by facing the situations one by one, starting with the less emotionally difficult ones, and also asking for support when needed (e.g., go with a friend or relative). During this whole process, we should be kind to ourselves and not rush things. Every person needs a different time to confront things that are emotionally painful. Nevertheless, by going through this process, we become more resilient and maybe also strengthen our social support network. Confronting difficult decisions can also represent a way to build new strengths from loss. Sometimes after the death of a loved one, there are several

difficult decisions to take (e.g., about inheritance, moving, etc.). In this case, one can apply problem-solving skills: write down the problem, brainstorm solutions, assess the advantages and disadvantages for each solution, make a choice, and then plan how to implement the preferred solution. This can enhance the problem-solving skills, decision-making abilities, resilience as well as the belief that we can cope with problems and thrive.

Negative emotions are, not surprisingly, part of the bereavement process. From a positive psychology perspective, it is however important to identify and *foster positive emotions* within the process of grief after loss or trauma (Bonanno, 2009; Folkman, 2008). The bereaved person may fluctuate between negative (e.g., depression, anger) and positive emotions (e.g., feeling confident with oneself), and it is important to focus them on the latter. For example, Folkman (1997) introduced a new dimension in the stress and coping model, namely added meaning-focused coping to problem-focused and emotional-focused coping. The meaning-focused coping helps a person experience positive emotions that provide us with energy and motivation to cope with a stressful situation. Negative emotions often constrict our way of thinking, while positive emotions help us see more possibilities to solve a problem (Frederickson, 2001). Positive emotions are also an important component of resilience (Bonanno, 2009) that in turn stimulates positive coping and growth. Grief counselling from a positive psychology perspective provides a safe mental space where people can explore their negative as well as positive emotions and thrive following trauma (Roberts et al., 2016). For example, we can write the story of the person's death and how it affected us (e.g., focus on the facts and one's emotional reactions). Another option is to write a story to remember how the person's life was or how the life together was. Sometimes, we may have regrets that we left things unsaid or did not get to say goodbye to the person who died. In this case, we can write a letter to the deceased person to express all the emotions and thoughts related to the loss. It is also important to talk or write down all the regrets or the guilt we experience and then think from a perspective of a compassionate friend and write down what type of kind advice would we give ourselves if we were our best friend.

Spirituality was also listed as one of the relevant factors in terms of development for trauma survivors (Tedeschi & Calhoun, 2004). In terms of positive psychology, spirituality is considered one of the determinants of wellbeing (Lopez et al., 2015) and thus can be included as an objective in bereavement counselling or interventions. Spirituality can be a coping mechanism in times of loss and lead to increased optimism and hope (Lopez et al., 2015). People who have experienced the death of a loved one, come to be more aware of their own mortality and reflect on the meaning of death and purpose of life (Tedeschi & Calhoun, 2004). However, this can take the form of rumination about meaning of life, survival guilt, or re-evaluation of the self. Spirituality can provide a more growth-oriented alternative. Some people may go through a religious phase or spiritual transition following trauma or loss (Tedeschi & Calhoun, 2004). Because people often search for meaning after experiencing loss, spirituality can provide a solution to understanding loss and investing it with meaning (Tedeschi & Calhoun, 2006). Also, when grieving the death of a loved one,

a person may want to reconnect with that person and spirituality provides a way to symbolically transcend the borders between life and death. How we explain the disappearance of a loved one is shaped about what we believe concerning life, death, and the afterlife (Chapple et al., 2011). Spirituality can help a person during the bereavement process because it offers comfort and a solution to make sense of the loss, sustain a bond with the lost person, and provide a source of practical healing (Chapple et al., 2011). The latter means for example, that, while acknowledging the pain and suffering connected with loss, a person can also recognize the potential for growth (Currier et al., 2013).

All in all, seeing grief as a process of personal development, rather than a pathological state can contribute to coping with the loss of a loved person as well as enhancing one's strengths (e.g., resilience). This becomes increasingly important with middle-age and older age when people are more frequently exposed to death and bereavement. From a positive psychology perspective, the role of grief counselling and interventions is to use the bereavement process as an opportunity for self-development in several areas, namely social (e.g., developing better relations with friends and relatives), emotional (e.g., increasing self-regulation skills, raising hopefulness), cognitive (e.g., increasing cognitive flexibility), personality (e.g., fostering resilience and optimism), physical (e.g., increase health and mobility).

Interventions to Help People Deal with Death Preparation in Older Age

A positive psychology perspective aims to contribute to an understanding and promotion of factors that help individuals as well as communities thrive (Hefferon & Boniwell, 2011). At an individual level, factors such as satisfaction, wellbeing, growth, hope, and optimism are valued (Seligman & Csikszentmihalyi, 2000). Such factors are however difficult to associate with death and dying or mourning a person we have lost. The *successful ageing model* (Rowe & Kahn, 1987) was criticized, among other things, because it ignores the experience of death as if this would not be part of life or ageing (Cosco et al., 2013). Unfortunately, in many cases, death is preceded by a process of decline. However, theories such as the successful ageing model (Rowe & Kahn, 1987) only focus on individuals who age well. Other models that concentrate on strategies for positive ageing such as the *Selection, Optimization and Compensation model* (Baltes & Baltes, 1990) are also difficult to apply to the process of dying (Cosco et al., 2013).

In response to such critiques, models of successful dying evolved and emphasized how to prepare for a good death. From a positive psychology viewpoint, the experience of death can be regarded as a positive one, in the sense of acceptance and finding meaning, as opposed to denial, fear and despair. The ideology behind palliative care and cultural models of autonomy and choice is also present in positive ageing models and has shaped the idea of a "good death" (Cottrell & Duggleby,

2016). From a western viewpoint, the "good death" signifies a death that is peaceful and dignified, free from pain and distressing physical symptoms (Cottrell & Duggleby, 2016). Also, it is desirable that an individual has made the necessary preparations and plans before dying (Granda-Cameron & Houldin, 2012). The experience of death and dying is influenced by social, cultural, and political discourses that shape the attitudes and beliefs at an individual level (van Brussel & Carpentier, 2012; Zimmermann, 2012). As mentioned in the first section of the present chapter, a review on the "good death" concept in western cultures concluded that even if death is regarded as acceptable, the process of dying is denied (Cottrell & Duggleby, 2016). Positive concepts such as freedom, hope and joy appear to be absent in the social discourse about death (Cottrell & Duggleby, 2016). This can constitute a barrier to applying positive psychology principles when helping people prepare for death or mourn the death of a loved one. Thus, one important aim of interventions for death preparation is to identify beliefs and attitudes concerning dying and death. Second, we would need to attempt to change negative beliefs and tackle fear of dying. Third, we should aim to foster acceptance of death. Fourth, we would start to make concrete plans concerning the preparation process (e.g., what does one want to leave behind, one does one want to do before death happens). In order to evaluate the needs as well as the outcomes of such interventions, we can use some of the instruments listed in Table 20.1.

One first important aim in death preparation interventions for older individuals is to *understand death and dying from the perspective of older individuals*. This means that one should explore what attitudes and beliefs the person has about death, how they picture a good death and what emotions they associate with dying. In addition, from a positive psychology and developmental perspective, one should focus on assessing the individual strengths that a person can use in preparation for death (e.g., humour, optimism, etc.) and developmental processes that are useful (e.g., social skills and networks, decision-making abilities, emotional, regulation, etc.). One of the strengths that older persons can use and train in this context is reminiscence, that was shown to influence meaning in life through the adoption of generative behaviour (Hofer et al., 2020). One strategy that was shown to foster generativity is reminiscence, namely reflecting on one's past. Reminiscence represents a

Table 20.1 Instruments for assessing death preparation-related outcomes

Outcome	Instrument
Death attitude	Death Attitude Profile-Revised (DAP-R, Wong et al., 1994). 5 dimensions including fear of death, death avoidance, neutral acceptance, approach acceptance, escape acceptance measured on a 5-point Likert scale
Death competence	Buguen's Coping with death scale (CDS, Bugen, 1980; Robbins, 1990) 30 items 7-point Likert scale Short version on CDS (Galiana et al., 2019)
Death anxiety	Death anxiety scale (DAS Templer, 1970) Death anxiety inventory (DAI, Tomas-Sabado & Gomez-Benito, 2005) Collett-Lester Fear of Death Scale (Collett & Lester, 1969)
Wellbeing	WHO Wellbeing Index (WHO-5, Topp et al., 2015) 5 questions

developmental task that can have benefits for finding solutions to current problems, fostering self-acceptance, and triggering positive emotions (Hofer et al., 2020). The reminiscence circumplex model (Webster, 2003) postulates that there are several functions of remembering one's past: bitterness revival (e.g., ruminating on regrets), boredom reduction (e.g., keeping one's mind busy), problem-solving (e.g., using past experience to solve present issues), identity (e.g., using the past to better understand who they are in old age), teach and inform (e.g., give back to the community, share experiences with the next generation), death preparation (e.g., using memories to deal with one's own death), intimacy maintenance (e.g., holding on to memories concerning people who are not part of one's life anymore), and conversation (e.g., using memories to talk and connect with other people). From all these functions, death preparation motivates generative behaviour (e.g., guiding the next generation) and thus lends meaning to people's lives (Hofer et al., 2020). In this context, reminiscence exercises can form part of death preparation interventions, as they can help with the understanding of what kind of death a person desires and with death acceptance in particular.

We have already seen in the previous sections that fear of dying and death can constitute a problem in older individuals (Sinoff, 2017; Cicirelli, 2002). Thus, one objective for interventions that prepare older individuals for a good death experience would be to *evaluate and address their fear of dying*. First, one would need to measure to what extent fear of death manifests itself and in what domain exactly (e.g., fear for others, fear of the dying process, fear of the unknown, etc.). The fear of death can be evaluated with the Multidimensional Fear of Death Scale (Neimeyer & Moore, 1994). After identifying the extent of death fear and how it manifests itself, one can apply cognitive behavioural strategies to change negative thoughts about death and reduce fear. Also, since studies showed that external locus of control (e.g., attributing events to uncontrollable external factors) plays an important role in determining fear of death (Cicirelli, 2002), one should address such cognitions in interventions. From a developmental perspective, assets such as good social support networks (i.e., social development), emotional regulation skills (i.e., emotional development), optimism and hope (i.e., personality development), and cognitive flexibility (i.e., cognitive development) can aid in managing the dying process. It is important to address death anxiety or fear of dying in the older person as well as family members (e.g., spouse, middle-aged children) because death anxiety delays making unbiased decisions about the dying process on the side of the patient, family, and health professionals (Sinoff, 2017). It is important to address family members as well because sometimes they believe that the older person suffers from death anxiety, which may not be the case (Sinoff, 2017). Also, sometimes the fears concerning death may differ between the older adults and their grown-up children. For instance, middle-aged children may project their own fears of death and dying on their old and ill parents. Death education programs offered to older individuals with a chronic illness were shown to be effective in reducing fear of death and increasing hope, spirituality and even wellbeing (Pui-Yu Leung et al., 2015; Chen et al., 2020). For example, one such intervention based on the Interactive Model of Client Health Behaviour (Cox, 1982) includes four elements: affective support,

health information, decision control, and technical competence. *Affective support* implied offering support for patients and caregivers on an emotional level by helping patients express gratitude and regret (Chen et al., 2020). The life review exercise was used to draw a life map, where the patient together with family members drew a map of their lives, reviewed the different stages, shared happiness, and regret (Chen et al., 2020). Exercises also included talking about life and death, taking a photo together, patients and caregivers writing thank you cards to each other. *Health information* included offering knowledge on the process of dying so that patients know what awaits them (Chen et al., 2020). The researchers also created an online game featuring a conversation about death, namely an old couple discussing the death of a friend (Chen et al., 2020). Participants and caregivers discussed what is the meaning of good death and received information about palliative care and how to prepare for death. *Decision control* referred to teaching patients what rights and options they have before death, encouraging them to take part in end-of-life decision-making, and increasing their autonomy (Chen et al., 2020). Exercises such as writing an epitaph, discussing funeral affairs, the patient writing a letter concerning their future plans were integrated in the intervention program. *Technical competences* referred to teaching patients and caregivers how to deal with death-related issues, for example bereavement in case of caregivers (Chen et al., 2020). Skills about discussing and coping with death and grief were provided in this context. References such as death education and end-of-life care a practical guide were used to develop the program (Zou, 2008; Kinzbrunner & Policzer, 2011).

After reducing the fear of dying and tackling negative beliefs about death among older individuals, one can address the aspect of *death acceptance*. For example, it is important to ensure that death has a meaning in their life and developmental process. Also, it is relevant to stimulate older individuals to create a legacy, something to leave behind. Based on the TMT model this represents an important aspect to ensure symbolic immortality. In this context, the developmental principle of *generativity*, namely transmitting one's achievements to the next generation (i.e., through raising children, through work) can be useful because it raises one's self-esteem and also certifies symbolic immortality (Cicirelli, 2002). *Gratitude* and *forgiveness* exercises can also be applied with the aim of fostering death acceptance. For example, one can express gratitude for the good moments one has lived, nice persons who are part of one's life. *Gratitude* for positive events can be fostered in an exercise where the elderly recall at least three positive events from their past and write about these in a diary (Seligman et al., 2005). This can be made more specific by focusing on a particular timeline like the past week or past month. Forgiveness is relevant in this context because it helps to prevent that one has regrets concerning how one has lived one's life. Sometimes, living in the moment and enjoying life's small pleasures can help trigger positive emotions and ensure acceptance of dying as a natural part of life. For example, the Japanese practice the art *of ikigai*, namely finding one's purpose and learning to notice the small, beautiful things that surround us (Niimi Longhurst, 2018). Although this seems more like a celebration of life than preparation for death, it does play an important part in accepting death as a natural

part of the life cycle. In addition, it helps in the sense of strengthening gratitude for the present, reducing regrets about the past and worries about the future.

A fourth aim of death preparation should address the idea of *making concrete plans* about the dying process, namely making sure that one can have the death one wishes (e.g., die at home rather than in the hospital). At this stage, after one has accepted the idea of death, it is important to have social resources and networks to help prepare. For example, there are social support groups (e.g., death cafes) where people can talk about death and how to prepare. Spending time with significant others and saying goodbye is also an important part of the process. Death midwifes can help in this process by assisting one in fulfilling last wishes or dealing with legal, financial, and funeral arrangements. They provide nonmedical advice for the dying patient, as well as caregivers concerning the dying process, the emotional, spiritual, and practical aspects (Death midwife webpage, 2022).

Conclusions

Death represents an inevitable end of life, but it is also part of our development since it implies a preparatory process as well as a legacy we leave to the next generations (e.g., in the form of education provided to children, our work, art, etc.). Increasingly, trends in the psychology of dying, as well as positive ageing models emphasize autonomy and the right of individuals to die a "good death", namely a dignified, possibly painless, death at home, in older age. From a positive psychology and developmental perspective, it is important not to regard death as an end state, but rather as process where one can develop and leave something behind (i.e., the generativity principle, see also chapters on social development, on grandparenthood in the present book). While preparing for a good death (i.e., a peaceful, dignified, if possible painless death), one can stimulate development in several areas: the cognitive domain (e.g., decision-making processes are crucial), in the emotional domain (e.g., emotional regulation, hopefulness), in the social domain (e.g., social support networks enhancement), in the personality domain (e.g., building resilience, fostering optimism), and physical domain (e.g., maintaining health and mobility as long as possible).

Coping with the grief caused by the death of a loved one in older age also can lead to further development in various life domains, such as in the cognitive domain (e.g., cognitive flexibility, decision-making abilities, memory skills applied to remember one's life with the deceased person, cognitive inhibition on negative intrusive thoughts), emotional domain (e.g., emotional regulation capacity, learning how to foster positive emotions through reinterpreting a difficult situation), social domain (e.g., social skills, increase of social networks that provide support), personality (e.g., resilience, optimism) and physical domain (e.g., becoming more physically active, taking more care of one's health). Positive psychology principles can

be applied to guide a person on their journey of bereavement and foster posttraumatic growth, narrative reconstruction, and triggering positive emotions. These include making sense of the death, keeping the memory of the deceased alive, stimulating spirituality, integrating the death of a loved person into one's life narrative and focusing on going on, continuing with one's life. From a positive psychology perspective, grief represents a normal process of coping with loss. Learning how to deal with one's loss trough positive psychology counselling or interventions can build strengths, wellbeing, and trigger development in several life domains among older individuals. Furthermore, it can prove useful for dealing with their own mortality and dying process. Preparing for one's death can represent a challenge at any age. Interventions for older individuals should include the exploration of death attitudes and wishes from the perspective of the older persons, assessment of their death anxiety and addressing existing fears of death, promotion of death acceptance and concrete planning of the death process. Positive psychology strategies, such as encouraging generativity (e.g., through reminiscence, teaching, preparing a legacy, etc.), forgiveness (e.g., of oneself or others), positive emotions and experiences (e.g., fulfilling last wishes, reinterpreting situations with humour), decision-making capacity (e.g., making decisions and plans about concrete actions regarding the funeral, will, etc.). All preparatory efforts help in the sense of development in older age (e.g., emotionally, one learns to deal with death anxiety, socially, one finds social support networks concerning death experiences, cognitively, one trains decision-making and problem-solving skills, in terms of personality development, one fosters optimism and hopefulness, physically, one works at staying fit and independent for as long as possible). How one prepares for death also models attitudes and behaviours for the next generation, becoming thus a legacy one transmits to younger people or to members of one's peer group. According to the generativity principle, we reach symbolic immortality through the legacy we leave behind (e.g., education we give our children, work, art, etc.). Therefore, the process of development does not stop with our death, but our legacy can inspire other people to apply positive psychology principles and develop in all life domains.

Reflection Questions

1. Reflect for yourself, what are your own fears related to death and dying?
2. What resources would help an older person you know to prepare for dying. Shortly describe these resources from a developmental perspective.
3. Name three positive psychology intervention objectives and three exercises for a grief counselling intervention targeted at older adults who have lost a person they loved.
4. Name two strategies to address fear of dying among older adults.

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Chapter 21
Conclusion: Ageing and Development from a Positive Psychology Perspective

Becoming is better than being.

– Carol Dweck

The present handbook started from the premise that personal development is important at any life stage, not just during childhood, adolescence, and youth. Since people are living, on average, longer lives, this opens new research opportunities concerning their future development and how to shape it. Additionally, the handbook assumes that midlife and older age still hold an amazing potential for personal growth in all life domains, namely physical (e.g., one can still build body strengths and capabilities), cognitive (e.g., enhance memory capacity, improve decision-making skills), emotional (e.g., boost emotional regulation abilities), social (e.g., expand one's social network, improve one's social skills), and personality (e.g., become more optimistic, more outgoing). Furthermore, the present handbook adopted a positive psychology perspective to explore the individual potential for change in midlife and older age. Namely, it set out to understand personal growth in midlife and older age from a positive psychology viewpoint (e.g., focus on growth rather than decline) and examine how to apply positive psychology principles to foster personal growth among middle-aged and older individuals.

In order to achieve these objectives, the handbook aimed to provide some answers to questions such as, do people still develop in midlife and older age, what internal and external factors influence development in different fields (e.g., physical, cognitive, emotional, social and personality) and how to help individuals foster development in midlife and older age. Thus, for instance, the first part of the book entitled "imagining and planning development" addressed the question of the meaning of development in midlife and older age. Definitions of development were discussed from a theoretical perspective that links growth in older age to positive ageing theories and models. Also, findings from qualitative research were used to show how individuals themselves define and give meaning to ageing and development. Issues

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such as the measurement of development in midlife and older age and intervention frameworks were also addressed in this first part of the book.

The second part of the book is called "understanding and exploring the developmental potential" because I aimed to provide some answers to the question of how development happens in midlife and older age. Thus, the second part of the present handbook focused on specific developmental domains (i.e., physical, cognitive, emotional, social, personality) and examined the features of personal growth as well as how different developmental areas are connected and what strategies to apply to foster growth among middle-aged and older individuals.

Certain issues constitute characteristic challenges during midlife and older age and can entail both benefits and drawbacks for development (e.g., pain management, grandparenthood, bereavement, grey divorce, etc.). Therefore, within the third part of the book entitled "Implementing Positive Developmental Changes", I aimed to address several challenges related to ageing and development and examine how we can apply positive psychology principles to stimulate personal growth among middle-aged and older individuals. Some of the challenges that are discussed concern both middle-aged and older people (e.g., finding love, having a fulfilled sexuality, coping with pain, finding happiness, coping with ageism, becoming grandparents), while some chapters concentrate on issues regarding mostly older adults (e.g., anxiety, depression, loneliness, suicide prevention, death preparation and bereavement). Of course, anxiety and depression are also present in midlife, but their characteristics are not so different from experiencing these problems earlier in life. Thus, I decided to dedicate some of the chapters in this section to specific issues that occur in older age (e.g., interventions for fear of falls, helping people who deal with old age-specific depression, increase pain management strategies, dealing with one's death preparation) and include information on how one can act in a preventive way in midlife (e.g., prevent ageing anxiety, prevent loneliness in older age, prevent cognitive decline). Each of these chapters in part III comprises definitions, measurement instruments, explanatory theories, reference to factors that foster or hinder development, individual meanings and experiences, links between the various developmental areas, and ideas for prevention and intervention from a positive psychology viewpoint. In the following, I will summarize how the chapters answered the main questions of the present handbook.

1. *Do middle-aged individuals and older people continue to develop on a physical, cognitive, social, emotional, and personality level?*

   Based on the arguments displayed in part II and part III of the present book, we can say that middle-aged and older individuals continue to change and grow in what concerns different areas of their lives. Nevertheless, it is important to acknowledge that a change in paradigm was needed to be able to shift the focus from decline to growth in midlife and older age (see Chaps. 1, 2, 3, and 4). This change in paradigm was needed in order to acknowledge that development is still possible among middle-aged and older individuals and look for signs of its existence. The theoretical frameworks and research methods described in Chaps. 2, 3, and 4 provide guidance regarding how to look for development signs in

midlife and older age. Chapters 5, 6, 7, 8, and 9 describe the specific developmental features that occur in the physical, cognitive, social, emotional and personality spheres among middle-aged and older adults. These chapters provide information on what to expect as changes in midlife and older age in several life domains, as well as what can constitute outcomes for developmental interventions. For example, it can help decide what emotional or social skills, cognitive competences, physical strengths, and personality features one should help to improve among middle-aged and older people.

2. *What does individual development mean in later life?*

   Individual development can be defined either from a theoretical point of view or based on testimonials from middle-aged and older individuals. From a positive psychology perspective, development in midlife and older age means enhancing developmental assets in all life domains (e.g., cognitive capacities, emotional regulation, social networks and skills, openness to new experiences as a personality trait, physical strength, etc.) and increasing individual strengths (e.g., self-efficacy, gratitude). Promoting development in midlife and older age also means using positive ageing theories to define standards and outcomes of developmental growth as well as understand the developmental processes that happen across these later life stages (see Chaps. 1, 2, and 3). Chapter 2 examines different theories (e.g., biological, sociological, psychological) that explain ageing and how it is related to development. Since understanding development implies measuring it in midlife and older age, Chap. 3 deals with how to operationalize change (e.g., set criteria, developmental milestones, identify processes) and what quantitative and qualitative methods to use in order to measure personal growth.

3. *What factors influence development in middle and older age?*

   The various chapters of the present book inform on the multitude of factors that can either facilitate or hinder development in midlife and older age. In what concerns change facilitators, positive views on ageing (i.e., associating ageing with growth, learning new things, making plans for the future, etc.) constitute an important strength that can foster development within all realms. Self-efficacy, optimism, forgiveness, gratitude, humour, hopeful thinking, curiosity, and love of learning represent other important individual strengths that can enable growth in midlife and older age. Several developmental assets (e.g., cognitive skills, wisdom, creativity, physical strength, social competences and networks, emotional regulation, openness to new experiences as a personality trait, etc.) can prove useful when promoting personal growth among middle-aged and older individuals. In addition, several social roles such as the one of grandparents (see Chap. 15) can either nurture or impede development among middle-aged and older adults.

   Regarding potential barriers for development, for instance in terms of physical improvement in midlife and older age, a negative body image can act as a barrier towards change (e.g., it can act as a barrier towards physical activity, personality growth, social network enlargement, etc.). Also, negative views on ageing (i.e., associating ageing with loss and decline) can be demotivating when attempting change in any life domain (e.g., cognitive training, emotional regulation, etc.). Lack of social skills or networks (see Chap. 7), loneliness (see Chap.

19), anxiety (Chap. 17), depression (Chap. 18), pain and lack of coping skills to deal with it (Chap. 16), suicide ideation (see Chap. 19) or bereavement (see Chap. 20) can act as barriers towards development in midlife and older age. Ageism (Chap. 10) represents an important barrier that needs to be addressed when aiming to boost development in midlife and older age.

4. *How can one foster development among middle-aged and older individuals?*

   Most chapters of the present handbook entail concrete ideas on how to foster development in midlife and older age by applying positive psychology principles. Positive psychology as a discipline evolved to provide a balance in the field of psychological interventions, namely focus on enhancing strengths rather than reducing deficits and disorders (Seligman & Csikszentmihalyi, 2000). This implies that positive psychology sets several intervention outcomes concepts such as health and wellbeing and does not just focus on reducing negative emotions (e.g., depression, anxiety, anger, etc.) or illness. Also, it deals with how to use strengths (e.g., optimism, hope, gratitude, etc.) for optimal functioning (Davis et al., 2016; Gallagher & Lopez, 2018). Positive psychology interventions (PPIs) are evidence-based activities aimed at increasing positive emotions as well as promoting thought patterns and behaviours that encourage flourishing (Parks & Biswas-Diener, 2014; Sin & Lyubomirsky, 2009). This means that such activities are designed with personal development (i.e., flourishing) in mind.

In the present handbook, I promote the idea that one can use individual strengths (e.g., self-efficacy, hopeful thinking, optimism, gratitude, etc.) and developmental assets (e.g., social skills, critical thinking, emotional regulation abilities, physical strength, openness to new experiences as a personality trait, etc.) to foster development in all life domains among middle-aged and older individuals. The handbook entails several theoretical models (e.g., the SOC model, active ageing policy framework, the intervention mapping framework, the behaviour change wheel, the COM-B model) that can be used to design developmental interventions at individual, group, or community level (Baltes & Baltes, 1990; Bartholomew et al., 2011; Lassen & Moreira, 2014; Michie et al., 2011, 2014). Additionally, several positive psychology principles are described and positive exercises (Ho et al., 2014; Lyubomirsky et al., 2005; Lyubomirsky, 2008) are suggested concerning ways to increase individual strengths (e.g., gratitude, forgiveness, kindness, optimism, etc.), to promote development in midlife and older age. For instance, Chap. 4 sets the stage by describing frameworks (e.g., the intervention mapping approach, the active ageing policy, positive psychology framework) and theoretical models (e.g., the COM-B model) (Baltes & Baltes, 1990; Bartholomew et al., 2011; Lassen & Moreira, 2014; Michie et al., 2011, 2014), that can be useful when designing positive psychology interventions to foster growth in midlife and older age. In addition, each chapter in section II and section III of the present book comprises a part dedicated to providing practical guidance in response to the "how to intervene" question concerning fostering development in midlife and older age for several life domains: physical (e.g., Chaps. 5, 12, and 16), cognitive (e.g., Chap. 6), social (e.g., Chaps. 7, 10, 14, and 15), emotional (e.g., Chaps. 8, 11, 13, 17, 18, 19, and 20) and personality (e.g., Chap. 9).

Further Exploration of Development from a Positive Psychology Viewpoint

As new generations continue to age and develop, they face different challenges concerning their personal flourishing, encounter novel barriers, and identify innovative facilitators of individual change. The millennials will age in different ways and under distinct circumstances compared to the baby boomers. Nevertheless, this makes the field of ageing and development fascinating, as it constantly raises novel research questions and stimulates the search for innovative research methods to answer these.

One interesting research area is represented by studying development among middle-aged individuals and older people by making use of data from *social media channels* (e.g., Facebook, Instagram, TikTok, Twitter, Discussion Forums, Blogs, etc.). Social media can provide interesting, widely accessible data regarding the ways that older people relate to ageing and development, as well as what other age groups think about ageing or older people. For instance, Levy et al. (2014) examined ageing stereotypes on Facebook and showed how this platform promotes negative ageing stereotypes and potentially strengthens ageist attitudes. Other researchers looked at how older individuals themselves use Facebook to alleviate their loneliness (Aarts, 2018; Sinclair & Grieve, 2017) or explored the motives of older individuals for using social media platforms such as Facebook and Instagram (Sheldon et al., 2021). Findings form the latter study show that older individuals tended to rely on Facebook and Instagram to compensate for lack of daily social activity and face-to-face interactions during the Covid-19 pandemic (Sheldon et al., 2021).

Nowadays, institutions such as hospitals, insurance companies, pharmacies, and nursing homes provide their services and information online and use social media to communicate with an ageing target audience. Research can therefore address how these institutions represent themselves online, how they communicate with older individuals about their services, or how older individuals perceive these online services (e.g., online medical consultations, searching for medical information online, looking for health testimonials from other older adults on social media, etc.). For instance, one study looked at how nursing homes represented themselves on Instagram (Carlstedt, 2019). Results pointed out that the Swedish nursing homes included in the study depicted nursing home life as fun, friendly, and active, displaying several activity options, friendly relations with the staff, and promising older adults they can continue their lives as before. Topics such as boredom, frailty, or death were absent from these Instagram accounts concerning nursing home life. The author concludes that while such representations challenge the negative stereotypes about nursing homes, they may conceal the problems that still exist in these institutions (Carlstedt, 2019).

Making use of social media channels is considered normal for currently ageing generations, and research findings point out that older people are increasingly using social media for various purposes (Dellatto, 2019; Leist, 2013). Sharing information about one's daily life on Instagram or TikTok is as common as writing letters to

friends might have been for previous ageing generations. Also, sharing opinions on Twitter, blogs, and vlogs represents a way to express one's personality, individuality, and ideas. Thus, for example, to examine representations of ageing or ageing stereotypes, one can explore what individuals post on Twitter (Døssing & Crăciun, 2022). In our study on stereotypes of ageism on German Twitter during the Covid-19 pandemic, we started out from the findings of previous studies that pointed out a rise in ageism during the corona pandemic (Døssing & Crăciun, 2022). Findings provided support to the idea that social media has a polarizing effect in what concerns opinions about ageing and older people and can contribute to both hostile and benevolent ageism (Døssing & Crăciun, 2022; Levy et al., 2014). In addition, results raise the issue of considering the negative effects of benevolent ageism when using chronological age as a criterion for health-related policies (Døssing & Crăciun, 2022). Also, the study provides an illustration of how people express opinions about ageing and older people on social media in response to existing policies concerning older individuals (e.g., in this case Covid-19-related policies targeting the protection of older people, the favoured access of older people to vaccination).

All in all, previous research points out that even people in their 60s and 70s have discovered the benefits of social media, especially during the Covid-19 pandemic times when, due to social isolation policies, they needed to stay at home. Furthermore, even before the corona pandemic, older individuals have become granfluencers on Instagram giving advice on fashion and lifestyle (Brown, 2022). Also, research shows that some older people are frequent users of TikTok (Ng & Indran, 2022), and some are content creators on TikTok and have a large number of followers (Ng & Indran, 2022). For instance, Ng and Indran (2022) looked at how older people use TikTok to engage in discourses about old age. Findings pointed out three main themes, namely defying ageing stereotypes, making light of age vulnerabilities and triggering ageism (Ng & Indran, 2022). Also, results pointed out how older people engaged in discourses on ageing by being active users of TikTok (e.g., placing their own videos not just watching videos of others).

Thus, all in all, research on ageing and development can make use of social media data in order to understand the ageing population and to design interventions that make use of technology (e.g., apps) to promote development in all areas of life (e.g., cognitive training exercises, relaxation techniques, etc.). The fact that this is not yet popular among researchers and practitioners may reflect negative ageing stereotypes (e.g., older people have difficulties using modern technology, social media is only for young people, etc.).

The present generations grew up with mottos such as embracing diversity and a do-it-yourself philosophy, valuing activity and independence. Thus, they should be integrated as active participants in developmental research and interventions. *Participatory research* with older and middle-aged adults can provide various answers concerning how they develop in several life domains, what barriers they encounter and what motivates and helps them improve. Participatory research aims to give participants a voice and provide them with knowledge concerning the research process, as well as how to use findings to improve their lives (Levac et al., 2019). Participatory research principles include reciprocity, mutual benefits,

capacity building, participants' involvement across all research stages, and acknowledgement of power differentials between researchers and participants, respecting ethical principles and taking concrete action towards positive social change (Levac et al., 2019; Belone et al., 2016; Blair & Minkler, 2009; Creswell et al., 2007). Thus, participatory research involves features that can contribute to the personal development of middle-aged participants. For instance, their individual strengths, such as self-efficacy and views on ageing may change by feeling empowered within the research project. Participatory research was already used successfully with older adults (Levac et al., 2019; Annear et al., 2014; Barnes et al., 2013). Concerning developmental intervention research, middle-aged and older people can become coresearchers and part of the intervention team, designing and evaluation intervention components (e.g., for cognitive training, emotional regulation enhancement, personality growth, etc.). In addition, one can integrate social media and technology into participatory research projects. For example, middle-aged and older people can make photos or videos about their strengths and about the evolution of their developmental process. In one study, Baker and Wang (2006) used photovoice to explore the experiences of older adults with chronic pain. Such a research design can be adapted to include social media testimonials. All in all, *qualitative research* on developmental topics (e.g., interviews with older people or middle-aged adults) and longitudinal qualitative designs (see also Crăciun, 2022; Flick, 2022; Creswell et al., 2007) can shed light into how individuals develop over time, what strategies they apply to develop, and what are their goals, their wishes, or their fears concerning development in midlife and older age. *Mixed methods designs* can also prove extremely useful when trying to understand what helps middle-aged and older individuals to develop in all life domains and which interventions work. As mentioned above, qualitative and mixed methods designs can integrate several sets of data and different perspectives on development (e.g., middle-aged individuals, older people, professionals, young people, etc.).

The last decades have brought about a rising interest in using positive ageing principles to explore later decades of life, life-long development, and especially older individuals (Ho et al., 2014; Baltes & Smith, 2003; Carstensen, 2009; Carstensen et al., 2011; Nakamura, 2011). However, more research is needed concerning the *middle-aged group*. Often, midlife, is forgotten between the extremes of development (e.g., childhood studies) and decline (e.g., the very old). Thus, more research should explore the potential for development in midlife by using positive psychology principles. Finally, bringing *more positive psychology* topics into the developmental research agenda can move the field forward in what concerns development in midlife and older age. For example, one can explore what motivates individuals to improve in several life domains in midlife and older age (e.g., cognitive, social, emotional, physical and personality), investigate difficult topics (e.g., death preparation, pain, bereavement, divorce, depression, dementia, etc.) from a positive psychology perspective and address more optimistic subject matters in relation to midlife and older age (e.g., wellbeing, happiness, love, friendship, etc.) or taboo topics (e.g., fulfilled sexuality, late parenthood, etc.).

How Is This Book Useful and to Whom?

The present book constitutes a general handbook that introduces people to the idea of development in midlife and older age by employing a positive psychology perspective. This does not mean that is focuses only on positive aspects (e.g., positive emotions, positive attitudes towards ageing; health behaviours, etc.), but examines a balance between negative and positive aspects (e.g., reducing negative emotions while enhancing positive ones). One of the premises of positive psychology is that we all possess individual strengths that we can use to enhance our wellbeing. The present handbook assumes that we can identify and put these individual strengths (e.g., optimism, humour, self-efficacy, gratitude, etc.) to use, in order to boost our developmental assets in several life domains, such as the physical one (e.g., stay physically active in older age), cognitive (e.g., enhance decision-making skills in older age), social (e.g., enlarge our intergenerational social networks), emotional (e.g., train emotional regulation skills) and personality (e.g., enhance openness to new experiences and optimism in older years). The intervention ideas represent a mix of enhancing strengths (e.g., health, optimism, self-efficacy, gratitude, etc.), boosting developmental assets (e.g., wisdom, pain management skills, emotional regulation abilities, social skills, social networks, etc.), and promoting positive emotions (e.g., increase happiness, wellbeing), as well as reducing negative emotions (e.g., depression, anxiety, loneliness, etc.) and addressing problems in several developmental areas (e.g., reducing pain sensations, reducing suicidal ideation, dealing with death preparations and bereavement issues, dealing with grey divorce or empty nest syndrome, etc.). All in all, the present handbook has several practical applications, such as:

1. Learning about what development in midlife and older age means. For example, after reading the book, we can understand our parents and grandparents better and reflect on our own developmental assets and potential.
2. Think about development from a positive psychology viewpoint. For example, focus on our growth and boosting our developmental assets as compared to preventing decline and loss.
3. Know positive psychology strategies that we can integrate in our daily routines to make personal development a habit. In addition, we can use these strategies to assist other people (e.g., our parents, grandparents, friends, colleagues, etc.) on their self-development journey.

The present handbook adds to the literature on the applications of positive psychology by focusing specifically on middle-aged and older adults and their personal development in all life domains. Also, most interventions in the literature concentrate on successful, positive, or active ageing, while the present book connects ageing with development and focuses mainly on the latter. It brings a contribution by helping people understand development in midlife and older age from a positive psychology perspective and get some ideas about how to intervene to boost their developmental potential.

On a personal level, it helps young people to think about the later stages in life and maybe get closer to the older persons in their lives (e.g., their grandparents, parents, make older friends). When I teach about development in middle and late life, most of the students in my class say that they never thought about older people continuing their development or about certain topics such as happiness, love relations or sexuality as being connected to old age. In this sense, handbooks such as the present one, bring a contribution through education for changing negative ageing stereotypes that are often implicit (e.g., thinking that older people have stopped developing, believing older people cannot learn new things, etc.). It is my hope that middle-aged and older individuals will also read this handbook and realize the rich developmental potential they possess and take concrete actions to use it in their daily lives to improve their overall functioning and wellbeing.

Researchers and practitioners can also get inspiration from the present book. As mentioned in various chapters, several domains are quite new in the field of development in midlife and older age (e.g., personality change in late adulthood, neuroplasticity studies, online dating in older age, fulfilled sexuality in older years, etc.), and there are still many research gaps to be closed in this area. In case of practitioners, the handbook provides numerous ideas for designing developmental interventions targeting middle-aged and older adults. These interventions can be at individual level (e.g., personal counselling for personality development, improving health communication, etc.), relationships (e.g., how to improve love or sexual relations in midlife and older age, how to cope with divorce in midlife, how to connect to grown-up children, etc.), group (e.g., how to integrate older people at the workplace and enhance their productivity; how to manage all midlife responsibilities effectively, etc.), or community level (e.g., designing health policy for middle-aged and older people; creating age-friendly environments, etc.).

The book is structured like a journey. First, we start with imagining the developmental changes we can achieve (e.g., who we want to be in our later years) and planning our personal growth. Just as when we go on a road trip, we require a map (i.e., theoretical models that explain what to do, to reach our developmental aims), testimonials of people who "have been there" (e.g., findings from qualitative studies of people who experienced growth in different life domains in their older age) and other orientation tools (e.g., measurement instruments that give us an idea where we are on our developmental journey). Next follows the exploration itself where we examine our developmental potential. Thus, the second part refers to understanding and exploring changes that happen in midlife and older age and what improvement possibilities there are. Third, we can reflect on our experiences and decide what we want to change and develop in various areas of our lives. Therefore, the third part of the book deals with describing potential challenges of midlife and older age and providing possible evidence-based solutions for personal growth. Nevertheless, like on any journey, some questions remain unanswered and some corners unexplored. For instance, when reading the present book, one friend asked me how the different examples and intervention solutions can be adapted to the cultural specificity of a certain social context where one is developing in midlife and older age. This valuable question is connected yet to others, such as "how much does our development

depend on us and how much on the social circumstances where we are ageing?" or "to what extent is personal development a luxury for some individuals, since, unfortunately, not all people share the same internal and external resources for growth?". While answering these important questions is beyond the scope of the present handbook, I want to state here the relevance of asking them. For each chapter, readers can try to answer such questions for themselves and reflect on what can be done to improve equal opportunities for personal development in midlife and older age in all developmental areas. From a developmental assets and positive psychology perspective, one can regard personal growth as a shared responsibility. As individuals, we are free to develop and have the responsibility to do so. In addition, while we develop, we also share this journey with others. We improve by helping others change (e.g., see chapter on social development, chapter on love relations, chapter on grandparenthood), and we also constantly learn from other how to be the best versions of ourselves. All the above considered, the best way to boost development in research and practice is to start with ourselves, to use a positive psychology outlook to get to know ourselves better (e.g., identify our strengths), and to implement positive psychology principles in our daily lives as developing individuals.

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Index

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