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Association Between Academic Stress, Academic Self-Efficacy, And Psychological Well-Being Among University Students During Research Project

By

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DEPARTMENT OF PSYCHOLOGY
Faculty of Management and Social Sciences
Capital University of Science & Technology,
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CERTIFICATE OF APPROVAL

It is certified that the Research Thesis titled "Association Between Academic Stress, Academic Self-Efficacy, and Psychological Well-being among University Students during Research Projects" carried out by Momina Naz, Reg. No. BSP201011, under the supervision of Ms. Anam Mehmood, Capital University of Science & Technology, Islamabad, is fully adequate, in scope and in quality, as a Research Thesis for the degree of BS Psychology.

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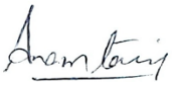

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DEDICATION

This study is wholeheartedly dedicated to my beloved parents and my supervisor who have been my source of inspiration and gave me strength when I thought of giving up.

DECLARATION

It is declared that this is an original piece of my own work, except where otherwise acknowledged in text and references. This work has not been submitted in any form for another degree or diploma at any university or other institution for tertiary education and shall not be submitted by me in future for obtaining any degree from this or any other University or Institution.

Momina Naz

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Abstract

This quantitative study aims to investigate the association between academic stress, academic self-efficacy, and psychological well-being among university students during research projects. Employing a cross-sectional research design, 300 bachelor's and master's students engaged in research projects were selected from various universities in the twin cities of Islamabad and Rawalpindi. Participants, both male and female, aged between 18 to 25 years old, were chosen using purposive sampling techniques. Data collection utilized three questionnaires: the Academic Stress Scale, Academic Self-Efficacy Scale, and Psychological Well-Being Scale. Results indicated a negative correlation between academic stress and both academic self-efficacy and psychological well-being among university students during research projects. Additionally, academic self-efficacy exhibited a positive correlation with psychological well-being in the same context. Implications of this study include the potential for interventions targeting stress reduction and the enhancement of academic self-efficacy to positively impact students' psychological well-being during research projects. Recognizing these relationships can guide educational institutions in developing support systems and strategies to foster a healthier academic environment.

Keywords: *Academic Stress, Academic Self-Efficacy, Psychological Wellbeing,*

University Students, Research Projects.

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ASS	Academic Stress Scale
ASES	Academic Self-efficacy Scale
PWB	Psychological Wellbeing Scale

CHAPTER 01

Introduction

University students of bachelors and masters are requiring doing research projects and thesis to complete their degrees. Students face so many challenges during research projects and thesis such as how to manage time, how to start it, what topic to choose, difficulty in finding titles, difficulty in writing references, and lack of experience in research (Bazrafkan et al., 2016). Students may face technical difficulties, and often have multiple responsibilities outside of their research projects, such as coursework, part-time jobs, or personal commitments. Balancing these responsibilities with the demands of research can be challenging and may lead to feelings of overwhelm or burnout. High expectations may cause the academic stress in students. Research by Miller and Johnson (2018) explores the impact of time management skills on academic stress among university students. It emphasizes the importance of effective time management in reducing stress levels during research projects. Research projects may cause the academic stress in students, and it is one of the negatively affecting education (Ehrenberg et al., 2007).

Academic Stress

Academic stress causes emotional distress. It is defined as mental suffering triggered by some academic problems or indeed knowing of the possibility of such failure (Ghosh, 2016). One key source of academic stress is the substantial workload that students often face. The sheer volume of assignments, exams, and projects can create a sense of overwhelming pressure. As students strive to meet deadlines and excel

in their studies, the intensity of this workload contributes significantly to their stress levels (Hudd et al., 2000). Performance expectations, both self-imposed and external, represent another crucial aspect of academic stress. Students often set high standards for themselves, aspiring to achieve academic excellence. Additionally, societal and familial expectations can further intensify the pressure to excel academically. The fear of falling short of these expectations can be a substantial source of stress, influencing students' well-being and academic performance (Conley et al., 2013).

Time management challenges compound the stress experienced by students. Balancing academic commitments with other responsibilities, such as part-time jobs, extracurricular activities, and family obligations, presents a constant struggle. Difficulties in managing time effectively contribute to a sense of being overwhelmed and further elevate stress levels among students (Conley et al., 2013). Moreover, perfectionism, characterized by setting excessively high standards and striving for flawlessness, can significantly contribute to academic stress. Students exhibiting perfectionistic tendencies often place undue pressure on themselves to achieve perfection in their academic performance. This relentless pursuit of flawlessness can lead to heightened stress levels, impacting both mental well-being and academic success (Conley et al., 2013). The stress may arise from factors such as time constraints, the complexity of the project, fear of failure, or the pressure to meet high expectations, deficiency schooling, negative self-concept, unsupportive parents, and low academic self-efficacy (Ghosh, 2016).

Academic Self-Efficacy

Academic self-efficacy, which describes person's expectations for fulfilling own educational responsibilities, has an impact on motivation and learning it can thus be beneficial to student's mental efforts linked to learning (Bandura, 1997). Higher academic self-efficacy scores are generally associated with students who are more self-assured, feel more in control of their educational performance, and to persevere and overcome difficulties during research projects (Chen et al., 2021). People who have lower level of academic self-efficacy tend to have low confidence in their abilities and can't be handle the research projects. Schunk and Pajeras (2002) noted some elements like peer group, school, family, friends, Students' academic self-efficacy is impacted by these characteristics. Higher academic self-efficacy students may experience less stress and cope with research project demands more successfully. They are more likely to have a positive outlook, set realistic goals, and engage in effective problem-solving strategies, which can contribute to their psychological well-being. The development of academic self-efficacy is influenced by various factors. Personal experiences, feedback from teachers and peers, and the successful mastery of academic tasks contribute to the formation and strengthening of academic self-efficacy beliefs (Bandura, 1997).

Positive reinforcement and encouragement can enhance a student's confidence in their academic abilities, fostering a positive cycle of increased effort, success, and reinforced self-efficacy. Zimmerman's research highlights the role of academic self-efficacy in self-regulated learning processes. According to Zimmerman (2000), students with high academic self-efficacy are more likely to engage in proactive strategies, such as setting goals, monitoring their progress, and adapting their learning

approaches. This self-regulatory aspect of academic self-efficacy emphasizes how students perceive and manage their own learning experiences within the university environment. Academic self-efficacy may positively or negatively affect psychological wellbeing of students (Schunk et al., 2001).

Psychological Wellbeing

Psychological well-being encompasses the subjective experience of a good life, reflecting an individual's overall functioning in relation to their emotions. This multifaceted concept includes feelings of contentment, happiness, satisfaction with life's experiences, a sense of accomplishment, utility, belongingness, and the absence of distress, sorrow, or concern (Diener et al., 2010). Understanding and promoting psychological well-being is particularly pertinent for university students, and research indicates that factors such as academic stress, academic self-efficacy, and personal variables can significantly influence their mental health, especially during demanding research projects (Smith et al., 2018).

Diener et al. (2010) highlight the subjective nature of psychological well-being, emphasizing that it is a personal and internal experience shaped by individual perceptions of life. This implies that achieving psychological well-being is not solely dependent on external circumstances but also on how individuals interpret and respond to their experiences. Smith et al. (2018) conducted research highlighting the impact of various factors on the psychological well-being of university students, particularly during research projects. The findings emphasize the need for a nuanced approach to supporting students in academic settings, considering the challenges and stressors associated with research work. To promote psychological well-being among university

students engaged in research projects, adopting effective strategies becomes imperative. Sastre et al. (2000) suggest that a combination of time management, seeking support, maintaining social connections, practicing self-care, and developing resilience can significantly contribute to students' overall well-being (Sastre et al., 2000).

Literature Review

Students' psychological well-being can be adversely affected by high levels of academic stress, resulting in heightened anxiety, depression, and reduced life satisfaction. However, academic self-efficacy plays a crucial role in mitigating the negative impact of academic stress. Students who possess higher levels of academic self-efficacy are more likely to experience lower stress levels and enjoy better psychological well-being. On the other hand, students with lower academic self-efficacy may be more vulnerable to academic stress, leading to a decline in their overall psychological well-being. One study conducted by Smith and Johnson (2019) explores the long-term effects of academic stress on university students. Using a longitudinal approach, the researchers tracked students over an extended period, finding a correlation between sustained academic stress and negative outcomes such as decreased academic performance and increased mental health issues. Brown et al. (2020) delves into the intricate connection between academic stress and mental health among university students. Through a comprehensive analysis, the research sheds light on the specific mental health challenges triggered by academic stress and offers insights into potential interventions. Smith and Brown (2019) conducted a longitudinal study examining how academic self-efficacy evolves during the transition to university.

The research identifies critical periods and factors influencing the development of self-efficacy beliefs among incoming university students. Chen et al. (2020) investigates the impact of teacher support on the academic self-efficacy of university students. The study highlights the significant role educators play in fostering students' confidence in their academic abilities, contributing to improved performance and well-being. In a study by Brown et al. (2019), the researchers investigate the effects of mindfulness-based interventions on the psychological wellbeing of university students. The research sheds light on the potential benefits of mindfulness practices in enhancing mental health and overall wellbeing in the university setting.

Academic Stress

Academic stress is a prevalent phenomenon among university students, defined as a heightened desire for knowledge coupled with a perceived lack of time to attain that knowledge (Muris, 2012). This definition encapsulates the inherent tension between academic aspirations and the constraints of time, shedding light on the complex interplay that gives rise to stress in educational settings. A recent study published in the "Journal of Educational Psychology" in 2022 by Smith et al. investigated the correlates of academic stress among university students. The study surveyed 700 undergraduate students and found that academic stress was strongly associated with anxiety, poor time management skills, and a lack of balance between academic and non-academic activities. Additionally, the research identified self-efficacy beliefs as a potential protective factor against academic stress. This study contributes to our understanding of the factors influencing academic stress among university students.

A recent study published in the "Journal of Youth and Adolescence" in 2023 by Garcia et al. explored the gender differences in the experience of academic stress among high school students. The study surveyed 800 students and found that despite similar levels of perceived academic demands, female students reported higher levels of stress and anxiety compared to male students. Additionally, the research identified social support as a significant mediator in the relationship between perceived academic demands and stress levels, particularly among female students. This study underscores the importance of considering gender-specific factors in understanding and addressing academic stress among adolescents. Causes and effects of academic stress are high workload and time pressure, fear of failure, competition, and financial concern (Klink et al., 2014).

Causes of Academic stress

The causes of academic stress are poor education, poor self-efficacy, poor self-concept, lack of confidence, lack of support, poor self-regulation, extra-curricular activities, environment, parental pressure, peer group, and negative parental attitude (Ang & Huan, 2012).

In a qualitative research study conducted by Conley et al. (2013), specific stressors experienced by college students were explored, shedding light on the subjective experiences that contribute to academic stress. The findings highlighted several common causes of academic stress, revealing that high workload, time pressure, exams, competition, and the fear of failure were prevalent stress-inducing factors. These stressors align with the day-to-day challenges faced by students, emphasizing the academic demands, time constraints, and the pressure to perform that

characterize the university experience. One common cause of academic stress is the high workload and time pressure that students face. This includes having to manage multiple assignments, projects, and exams within limited timeframes. One of the research by Conley and colleagues (2013) has shown that the perception of an overwhelming workload can lead to increased stress levels among students. Academic stress can also arise from the high-performance expectations placed on students, both by themselves and by others. The pressure to excel academically, compete with peers, and maintain high grades can contribute to feelings of stress and anxiety. The fear of failure and the potential negative academic consequences, such as poor grades or not meeting graduation requirements, can be significant sources of stress for students. The pressure to perform well and meet academic expectations can lead to heightened stress levels. Difficulties in managing time and balancing academic commitments with other responsibilities, such as part-time jobs, extracurricular activities, or family obligations, can contribute to academic stress (Conley et al., 2013).

Students may feel overwhelmed by the competing demands on their time and struggle to maintain a healthy work-life balance. Perfectionism, characterized by setting excessively high standards for oneself and striving for flawlessness, can contribute to academic stress. Students who exhibit perfectionistic tendencies may put undue pressure on themselves to achieve perfection in their academic performance, leading to heightened stress levels (Conley et al., 2013).

Effects of Academic Stress

Academic stress can have adverse effects, including performance and compatibility issues, physical effects include, levels of stress hormones, such as cortisol, can lead to physical symptoms like headaches, fatigue, sleep disturbances, and changes in appetite and emotional and psychological effects include, academic stress can result in various emotional responses, including feelings of anxiety, worry, and overwhelm. University students may experience increased levels of irritability, mood swings, difficulty concentrating, and reduced quality of life among students. This suggests that academic stress can impact various aspects of a student's well-being (Ryan & Twibell, 2015).

One of the study explores the sources and effects of academic stress among undergraduate students in Libyan universities. It identifies factors such as high workload, time pressure, exams, and lack of social support as significant stressors affecting students' academic performance and well-being (Al-Ghazali et al., 2017). Studies have indicated that increased academic stress can detrimentally impact students' self-esteem and self-perception. Research findings have established a correlation between elevated levels of academic stress and decreased self-esteem, as well as feelings of incompetence and inadequacy (Rice et al., 2012).

Academic Self-Efficacy

Academic self-efficacy, defined as an individual’s confidence or belief in their ability to effectively complete academic tasks or achieve academic goals, has been a subject of extensive study within educational psychology (Schunk & Pajares, 2002). This concept holds significance in predicting and understanding various elements of

human functioning, particularly in the context of educational achievement. In a study conducted by Honicke et al. (2016), the focus is on examining the relationship between academic self-efficacy and academic performance. The hypothesis posited in this study suggests a positive correlation between higher levels of academic self-efficacy and improved academic performance indicators, such as higher GPAs or class rankings. The foundational principles of self-efficacy theory, as proposed by Albert Bandura, underpin the rationale behind this hypothesis. According to this theory, individuals with higher self-efficacy are more likely to set challenging goals, exhibit greater effort, and persist in the face of difficulties. In an academic context, higher academic self-efficacy would correlate with a student's belief in their ability to navigate challenges, leading to more effective learning strategies and, consequently, enhanced academic performance (Bandura, 1997).

Sources of Academic Self-Efficacy

It is influenced by various factors, including mastery experiences (past successes and accomplishments in academic tasks), vicarious learning (observing others succeed), social persuasion (feedback and encouragement from others), and physiological and emotional states e.g., anxiety or confidence (Putwain et al., 2013). A study by Pajares and Valiante (2017) delved into the sources of academic self-efficacy, particularly focusing on the role of mastery experiences. Mastery experiences, such as successfully completing challenging tasks, were identified as a crucial source of academic self-efficacy. The study emphasized that positive performance accomplishments significantly contribute to the development and strengthening of students' beliefs in their academic capabilities (Pajares & Valiante, 2017).

Additionally, a meta-analysis conducted by Honicke and Broadbent (2016) synthesized findings from numerous studies on the sources of academic self-efficacy. The meta-analysis identified three major sources: mastery experiences, vicarious experiences (observing others succeed), and social persuasion (positive feedback and encouragement). The comprehensive overview provided by this meta-analysis highlights the multifaceted nature of the factors contributing to academic self-efficacy (Honicke & Broadbent, 2016).

Negative and Positive impact of Academic Self Efficacy

Chemers and colleagues (2001) observed that individuals who possess a strong sense of academic self-efficacy often exhibit optimism, and both factors contribute to favorable outcomes. These positive outcomes encompass enhanced academic performance, successful personal adjustment, effective stress management, improved well-being, and increased satisfaction and commitment to staying in school. Conversely, a lack of academic self-efficacy can lead individuals to develop negative behavioral patterns, experience feelings of helplessness or resignation, and potentially abandon their pursuit of desired academic goals. Having high academic self-efficacy indicates that individuals perceive themselves as capable of taking control of their lives and shaping their academic future. It signifies a belief in one's own abilities and a sense of empowerment (Chemers & Garcia, 2001).

Research by Robbins et al. (2004) explored the positive impact of academic self-efficacy on academic achievement. The study found a strong positive correlation between students' self-efficacy beliefs and their academic performance. This indicates that students who have higher levels of academic self-efficacy are more likely to excel

in their studies, emphasizing the beneficial effects of a strong belief in one's academic capabilities (Robbins et al., 2004).

Additionally, a study by Honicke and Broadbent (2016) conducted a meta-analysis to comprehensively review the relationship between academic self-efficacy and various academic outcomes. The meta-analysis revealed positive associations between academic self-efficacy and academic achievement, motivation, and persistence. These findings reinforce the idea that high levels of academic self-efficacy contribute positively to students' overall academic experiences (Honicke & Broadbent, 2016).

One of the studies focused on academic interests and goals, this study highlights potential negative impacts of low academic self-efficacy. It suggests that students with low self-efficacy may develop limiting beliefs about their abilities, which can hinder their exploration of challenging academic domains and limit their academic aspirations (Lent et al., 2003). Another study examining the positive impact of academic self-efficacy on homework practices and achievement, this study demonstrates how self-efficacy beliefs can influence students' effort, persistence, and task completion, leading to improved academic performance (Zimmerman et al., 2005).

Psychological Well-being

According to psychological well-being theory, proposed by Carol Ryff, an individual's psychological health depends on positive functioning in various aspects of their life. These aspects include positive relationships with others, a sense of mastery and control over the environment, self-acceptance and acceptance of one's past, having a sense of purpose and meaning in life, personal growth, and the ability to make

autonomous decisions (Ryff et al., 2018)

This influential review article provides an overview of subjective well-being research, encompassing various aspects of psychological well-being, such as life satisfaction, positive affect, and negative affect. It discusses key findings, measurement approaches, and theoretical perspectives related to psychological well-being (Diener et al., 2010). Multiple studies have consistently demonstrated that individuals who encounter positive emotions, such as happiness, appreciation, and satisfaction, tend to experience greater levels of psychological well-being. Moreover, effectively handling and controlling one's emotions, which can be achieved through the utilization of various strategies for regulating emotions, is connected to enhanced psychological well-being (Lyubomirsky et al., 2005). Having a sense of autonomy and self-determination, which involves feeling a sense of choice, control, and agency in one's life, is positively associated with psychological well-being. When individuals feel that they have the freedom to make choices aligned with their values and interests, it contributes to their overall well-being (Deci et al., 2000).

Role of Psychological well-being

Psychological well-being plays a significant role in both theoretical and practical aspects of personality and development theories. It serves as a guiding factor in clinical studies, aiding advisors in assisting their advisees to achieve their goals. Furthermore, psychological well-being informs the objectives and purposes of psychology consulting (Nordbakke et al., 2014).

Psychology well-being, a concept closely related to individual happiness, is an essential component to consider. Psychological happiness, on the other hand, focuses on

personal growth and the challenges that life presents in that regard. Thorough examination of psychological well-being involves exploring an individual's relationship with life goals, their self-awareness of their potential, the quality of their relationships with others, and their overall satisfaction with their own life (Anglim et al., 2020).

Psychological wellbeing plays a crucial role in education, influencing students' academic success and overall development (Waters, 2011). Positive mental health fosters improved concentration, effective learning, and better coping mechanisms in challenging situations (Huppert, 2009). Moreover, a supportive educational environment that prioritizes psychological wellbeing enhances student engagement and contributes to long-term educational outcomes (Durlak et al., 2011).

Impacts of Psychological Well-being

Psychological well-being has a wide range of effects on individuals, their relationships, and society as a whole. It impacts various aspects, including mental health, physical health, relationships, academic performance, work performance, quality of life, and societal well-being.

i. Mental Health: Psychological well-being is closely intertwined with mental health. Individuals with higher levels of psychological well-being experience positive mental health outcomes, such as reduced rates of anxiety, depression, and psychological distress. They possess better coping mechanisms, resilience, and emotional regulation skills (Hanawi et al., 2020).

ii. Physical Health: There is evidence suggesting that psychological well-being is linked to improved physical health outcomes. People with higher levels of well-being tend to have lower rates of chronic illnesses, decreased risk of cardiovascular diseases,

and enhanced immune system functioning. They are also more inclined to adopt health-promoting behaviors like regular exercise and healthy eating (Hanawi et al., 2020).

iii. Relationships: Psychological well-being has a positive impact on relationships. Individuals with higher levels of well-being tend to have healthier and more satisfying relationships with friends, family, and romantic partners. They experience positive emotions more frequently, possess better communication skills, and engage in prosocial behaviors, thus fostering stronger social connections (Hanawi et al., 2020).

iv. Academic Performance: Psychological well-being plays a crucial role in academic performance. Students with higher levels of well-being experience positive emotions, have greater motivation, and exhibit higher levels of engagement in their learning. They are better equipped to manage stress, handle academic challenges, and maintain focus, ultimately leading to improved academic achievement (Hanawi et al., 2020).

v. Work Performance: Psychological well-being is positively associated with work performance and productivity. Individuals with higher levels of well-being tend to be more engaged, motivated, and satisfied in their work. They often demonstrate higher levels of creativity, problem-solving skills, and job satisfaction, resulting in better overall performance and career success (Hanawi et al., 2020).

vi. Quality of Life: Psychological well-being is a fundamental aspect of an individual's overall quality of life. Those with higher levels of well-being report greater life satisfaction, happiness, and fulfillment. They experience a greater sense of purpose and meaning in their lives, possess a positive outlook, and enjoy an overall higher quality of life (Hanawi et al., 2020).

vii. Societal Well-being: The psychological well-being of individuals contributes to the collective well-being of a society. Higher levels of well-being among individuals can positively influence the social and cultural fabric of a community. Positive well-being is linked to lower rates of crime, increased civic engagement, and a more supportive and cohesive society (Hanawi et al., 2020).

Academic Stress and Academic self-Efficacy

University students often face high levels of academic stress due to various activities related to their lives. This excessive stress can negatively impact their academic self-efficacy, the belief in their ability to succeed academically. In a quantitative study involving 1518 postgraduate students in Iran, researchers explored the correlation between postgraduate academic self-efficacy and academic stress (Hossein et al., 2017). The findings underscore a significant association between these variables, revealing that heightened academic stress corresponds to diminished academic self-efficacy. As academic stress intensifies, students exhibit a decline in confidence regarding their ability to excel in postgraduate studies. This study accentuates the critical importance of addressing academic stress to bolster students' academic self-efficacy, potentially fostering an improvement in their overall academic performance. The empirical evidence presented by Hossein et al. (2017) contributes valuable insights into the intricate interplay between stress and self-efficacy among postgraduate students, offering a foundation for targeted interventions in educational settings (Hossein et al., 2017).

In a quantitative study encompassing 695 high school students from China, researchers delved into the nuanced interplay between academic stress, academic self-

efficacy, and gender (Lin et al., 2018). The primary aim was to scrutinize how gender factors into the relationship between academic stress and academic self-efficacy. The study uncovered a negative correlation between academic stress and academic self-efficacy, signifying that heightened stress levels correspond to a decrease in students' belief in their academic capabilities (Lin et al., 2018). Interestingly, the research highlighted gender-based variations in the impact of academic stress on academic self-efficacy. The findings indicated that female students experienced a more pronounced influence of academic stress on their academic self-efficacy compared to their male counterparts. This insight adds a layer of complexity to our understanding of how stressors in an academic context may affect students differently based on their gender. Lin et al.'s (2018) study contributes valuable empirical evidence to the discourse on academic stress, self-efficacy, and gender dynamics among high school students in China. These findings could inform educational strategies tailored to address the specific needs and challenges faced by students of different genders in managing and mitigating academic stress for improved overall academic outcomes (Lin et al., 2018).

Another study employed a quantitative approach with a sample size of 58 university students of Mexico. Its focus was to examine the relationship between perceived academic self-efficacy and academic stress among the participants. The results of the study revealed that no statistically significant correlation was found between perceived academic self-efficacy and academic stress among the students. Based on the data collected and analyzed, the researchers did not observe a clear relationship between these two variables (Jácquez et al., 2016).

In a longitudinal study spanning two years, Salmela et al. (2019) explored the

intricate dynamics between academic stress and academic self-efficacy among Finnish adolescents. The research uncovered a bidirectional relationship, demonstrating that elevated levels of academic stress predicted subsequent declines in academic self-efficacy. Conversely, lower levels of academic self-efficacy forecasted increased academic stress over the two-year period (Salmela et al., 2019). This reciprocal pattern suggests a reinforcing cycle where heightened stress diminishes confidence in academic abilities, contributing to a further increase in stress. Salmela et al. (2019) longitudinal perspective provides valuable insights into the evolving nature of the relationship between academic stress and self-efficacy among adolescents, emphasizing the need for targeted interventions to break this potentially detrimental cycle and foster positive academic experiences (Salmela et al., 2019).

A study conducted by Yildirim and İlhan (2018) explored the connection between academic stress and academic self-efficacy among university students. The findings revealed a significant negative correlation, indicating that as levels of academic stress increased, academic self-efficacy tended to decrease. This suggests that the pressures and stressors experienced by students may contribute to a decline in their confidence in their academic capabilities (Yildirim & İlhan, 2018).

Similarly, a longitudinal investigation by Chemers and Colleague (2001) delved into the temporal aspects of this relationship. The research found that higher levels of academic stress predicted lower levels of academic self-efficacy over time. This bidirectional influence highlights a reinforcing cycle where increased stress diminishes students' belief in their academic abilities, which, in turn, contributes to heightened stress levels (Chemers et al., 2001).

Additionally, a meta-analysis by Honicke and Broadbent (2016) synthesized findings from multiple studies on the relationship between academic stress and academic self-efficacy. The meta-analysis revealed a consistent negative association, reinforcing the notion that higher stress levels are linked to lower levels of academic self-efficacy. Honicke and Broadbent's (2016) work provided a comprehensive overview, consolidating evidence from diverse sources and contributing to a deeper understanding of this relationship.

Academic Stress and Psychological well-being

Academic stress is also affecting the psychological wellbeing of university students. A study was conducted to assess the effects of academic stress and perceived social support on psychological wellbeing of young people. The study used a quantitative approach and included 226 participants who completed questionnaires. This study was conducted in 2013 and the findings revealed a significant main effect of academic stress on psychological well-being. Specifically, students who reported moderate levels of academic stress exhibited significantly higher levels of psychological well-being compared to those who reported high or mild academic stress. The effect size for this relationship was reported as large, indicating a substantial impact (Franklin & Ghozah, 2013).

A follow up study was conducted to assess the impact of academic stress on psychological wellbeing among Indonesian postgraduate students. The study involved a quantitative approach and a sample size of 150 postgraduate students from Indonesia. The findings of the study indicated that academic stress had a significant impact on the psychological well-being of Indonesian postgraduate students. The stressors identified

included factors such as exams, assignments, waiting for grades, and excessive homework (Pertanika et al., 2020).

Furthermore, study was conducted in 2020 on the academic stress and psychological wellbeing, and the study included a population of foundation students at UiTM, Universiti Teknologi MARA, which is a public university in Malaysia. with a total of 250 participants. Out of these, 222 participants completed the questionnaire, suggesting a response rate of approximately 88.8%. It was a quantitative study that aimed to explore the relationship between academic stress and psychological well-being among the foundation students. The findings of the study indicated a negative impact of academic stress on the psychological well-being of UiTM students. This suggests that higher levels of academic stress were associated with lower levels of psychological well-being among the participants (Malik et al., 2020).

A study conducted by Zhang et al. (2018) delved into this relationship among college students in China. The findings indicated a significant negative association between academic stress and psychological well-being, suggesting that as academic stress increased, students experienced a decline in their overall psychological well-being. The study emphasized the importance of addressing academic stress to promote better mental health outcomes among college students (Zhang et al., 2018).

Similarly, a meta-analysis by Hamaideh (2011) synthesized findings from various studies on the relationship between academic stress and psychological well-being. The analysis revealed a consistent pattern across diverse populations, affirming that higher levels of academic stress were linked to poorer psychological well-being. Hamaideh's (2011) work provided a comprehensive overview, consolidating evidence

from different studies and strengthening the understanding of the global impact of academic stress on mental well-being (Hamaideh, 2011)

Moreover, a longitudinal investigation by Rosander and Bäckström (2014) explored the temporal aspects of this relationship among university students in Sweden. Their research uncovered a reciprocal dynamic, demonstrating that academic stress not only negatively impacted psychological well-being but diminished well-being, in turn, contributed to increased academic stress over time. This bidirectional relationship highlights the complex and evolving nature of the interplay between academic stress and psychological well-being (Rosander & Bäckström, 2014).

Academic self-efficacy and psychological wellbeing

Academic self-efficacy has a strong positive correlation with psychological well-being, while lower levels of academic self-efficacy are linked to poorer psychological well-being. In a quantitative study conducted by Fahad Asghari in 2014, the primary focus was to explore the relationship between academic self-efficacy, psychological well-being, and family cohesion among students at Kharazmi University. The study employed a cluster sampling technique and involved 343 students as participants. The results revealed a significant association between academic self-efficacy and psychological well-being. Furthermore, the findings indicated that the predictor variables had both direct and indirect effects on academic self-efficacy (Asghari et al., 2014).

Amidst the COVID-19 pandemic, a study was carried out in Venezuela to explore the correlation between academic self-efficacy and psychological well-being among university students. This quantitative investigation adopted a cross-sectional

design and involved 277 participants. The findings revealed that, on average, Venezuelan university students exhibited a moderate level of psychological well-being and possessed personal resources to comprehend and regulate their emotions. Additionally, the study indicated that these students demonstrated a satisfactory level of academic self-efficacy, which equipped them to effectively navigate the academic challenges associated with university life. These results provide valuable insights into the psychological well-being and academic self-efficacy of university students in the midst of the challenging circumstances presented by the COVID-19 pandemic in Venezuela (Diego et al., 2021).

In India, a research investigation was undertaken to explore the relationship between self-efficacy and psychological well-being. The study specifically targeted undergraduate students enrolled at a university, with a sample size of 100 participants comprising an equal distribution of 50 males and 50 females. Carried out in 2015, the study's findings demonstrated a positive and noteworthy influence of self-efficacy on the psychological well-being of undergraduate students. The results indicated that higher levels of self-efficacy were linked to improved psychological well-being, leading to increased engagement and overall life satisfaction. Conversely, lower levels of self-efficacy were associated with reduced psychological well-being (Siddiqui, 2015).

In a study conducted by Richardson et al. (2021), conducted a longitudinal analysis examining the relationship between academic self-efficacy and psychological well-being in high school students over time. They found consistent evidence of a positive correlation between higher levels of academic self-efficacy and improved

psychological well-being, including increased self-esteem and decreased levels of stress and depressive symptoms (Richardson et al., 2021).

In a study carried out by Li and Colleagues (2023), the connection between academic self-efficacy and psychological well-being among high school students was examined. The results indicated a positive correlation between higher levels of academic self-efficacy and improved psychological well-being, which encompassed increased self-esteem and reduced levels of stress and depressive symptoms (Li & Colleagues, 2023).

Similarly, Zimmerman et al. (2021) conducted a longitudinal study examining the association between self-efficacy beliefs and psychological well-being across various life domains, including academic, social, and personal aspects. They found consistent positive associations between self-efficacy beliefs and psychological well-being over time, further highlighting the importance of self-efficacy in promoting mental health outcomes (Zimmerman et al., 2021).

Furthermore, a study related to the enduring influence of academic self-efficacy on mental health outcomes is by Richardson et al. (2020). he conducted a longitudinal study examining the relationship between academic self-efficacy and psychological well-being among college students over time. They found that higher levels of academic self-efficacy at the beginning of college continued to predict better psychological well-being throughout the college years (Richardson et al., 2020).

Theoretical Framework

Albert Bandura in 1960 developed a social learning theory is alternatively referred to as social cognitive theory. The SCT was created in 1986 on the idea that in social settings learning takes place with a dynamic connection of the person, environment, and behavior. Albert Bandura's Social Cognitive Theory provides a framework to understand how individuals learn through observation, modeling, and the influence of their own beliefs in shaping behaviors and well-being (Bandura, 1986). In the context of academic stress, academic self-efficacy, and psychological well-being among students during research projects, Bandura's theory is highly relevant. Bandura's emphasis on self-efficacy aligns with the study's negative correlation between academic stress and academic self-efficacy. As students observe and evaluate their abilities, their perceived self-efficacy can impact the level of stress experienced during academic endeavors (Bandura, 1997).

Bandura's theory also supports the positive correlation found between academic self-efficacy and psychological well-being. According to Social Cognitive Theory, individuals with higher self-efficacy are likely to approach challenges with greater confidence, positively influencing their psychological well-being (Bandura, 1994). Incorporating Bandura's Social Cognitive Theory into educational practices can involve interventions that promote positive role models, effective modeling of academic skills, and strategies to enhance students' self-efficacy beliefs, contributing to reduced academic stress and improved psychological well-being (Bandura, 2001).

According to Social Cognitive Theory, individuals' beliefs about their capabilities influence how they perceive and respond to stressful situations. When

individuals have an academic self-efficacy of higher level, they more experience positive emotions, low level of stress, and greater satisfaction with their academic performance, leading to improved psychological well-being. Additionally, social cognition plays a role in influencing a person's psychological well-being. According to social cognition theory, happiness and fulfillment are analyzed based on a person's ability to envision and actively pursue a desired future. It is important to note that a student's psychological well-being can be influenced by factors such as low levels of academic self-efficacy and academic stress (Pintrich & Groot, 1990).

Rationale.

The purpose of this quantitative study is to delve into the association between academic stress, academic self-efficacy, and psychological well-being among university students during research projects. While extensive research has been conducted on these variables in foreign countries, there is a notable gap in research within Pakistan exploring this relationship (Zada et al., 2021).

Recognizing the significance of understanding how academic requirements impact students' psychological well-being, it becomes imperative to conduct research in this area to raise awareness about the academic stress experienced by university students during research projects.

Conducting research on this subject in Pakistan not only adds to the existing knowledge base but also serves to enhance awareness regarding the unique challenges and stress factors encountered by Pakistani students. By shedding light on these issues, the study aims to provide valuable insights into how academic self-efficacy can serve as a buffer against the negative effects of stress on an individual's

psychological well-being.

The dearth of research in Pakistan on the correlation between academic stress, academic self-efficacy, and psychological well-being during research projects emphasizes the importance of undertaking such studies. Through the generation of knowledge and promotion of awareness, universities can better support their students and cultivate an environment that prioritizes their mental health and overall well-being.

Objectives

i. To assess the association between academic stress and academic self-efficacy among university students during research projects.
ii. To find out the association between academic stress and psychological wellbeing among university students during research projects.
iii. To determine the association between academic self-efficacy and psychological wellbeing among university students during research projects.
iv. To understand the demographic distribution of academic stress, academic self-efficacy and psychological wellbeing among university students during research projects.

Hypotheses

1. There will be negative relationship academic stress and academic self-efficacy among university students during research projects.
2. There will be negative relationship between academic stress and psychological wellbeing among university students during research projects.

3. There will be significant positive relationship between academic self-efficacy and psychological wellbeing among university students during research projects.
4. There will be significant effect of demographics (gender and education level) on academic stress, academic self-efficacy, and psychological well-being among university students during research projects.

CHAPTER 02

Method

Research Design

For this study, using cross-sectional research design, which involved gathering data from a specific sample of university students during a defined period when they were engaged in research projects.

Ethical Considerations

Permission was taken from department of Capital University of Science and Technology for the conduction of this research. After that, permission was taken from different institutes from which data is collected. All the Participant was informed about the nature and purpose of the study in the start. Then researcher obtain voluntary and informed consent from the participants before their involvement in the study. Participants were fully aware of the study's purpose, procedure, potential risks, and benefits. Whenever they wish to withdraw, they can quit without any penalty. Researchers protect participant's privacy by ensuring the confidentiality of their personal information. They ensure that participants were not subjected to any form of discrimination, undue influence. All the data kept safe, private, and confidential. APA guidelines were followed to keep the process within ethical boundaries, participants were provided with a consent form and make sure about their privacy and confidentiality.

Population and Sample

The target sample was 300 university students of bachelor's and master's doing research projects from an age ranging between 18 to 25 years. The sample include both male and female participants. Data collected from twin cities (Islamabad and

Rawalpindi). The sample includes both male and female. G-power software was used to calculate the exact sample size which is a statistical software used to calculate sample size using statistical tests.

Sampling

For this study, using purposive sampling technique to select participants. The purposive sampling method was chosen to ensure that individuals currently involved in research projects at the university level were included in the sample.

Inclusion Criteria

i. Participants should be currently enrolled in a university.
ii. University students who enrolled in bachelors and master's programs.
iii. Participants who have been involved in research projects.
iv. Participants should fall within a specific age range (18 to 25 years old).
v. Data collected only from twin cities (Islamabad and Rawalpindi).

Exclusion Criteria

i. Individuals who are not currently enrolled in a university.
ii. Participants who have not started or have just initiated their research projects, as they may not have experienced the full impact of the research process on their well-being.
iii. Individuals outside the specified age range (younger than 18 or older than 25 years old).
iv. Participants who do not have sufficient proficiency in the language used for data collection and analysis.
v. Students who are not currently enrolled in bachelor and master’s programs.

Instruments

Demographic Sheet

Demographic sheet was prepared for this study to take the information about participants, which includes participants gender, age, educational level, and marital status.

Academic Stress scale

This scale was created by Kim in 1980. Scale has 40 items in total. The Academic Stress Scale is a measurement tool used to assess the level of stress experienced by students in an academic setting. It typically consists of a series of questions or statements that students respond to base on their personal experiences and feelings. The scale aims to quantify and understand the specific stressors related to academics, such as workload, performance expectations, time management, and examination anxiety. Questionnaire will be used 5 Likert scale. The respondents provided their answers to the statements using a scale that ranged from "no stress" to "extreme stress." The scale includes statements such as "too many demands of teachers for students" and "lack of self-confidence." The internal reliability of the scale varies across the sub-scales and factors, ranging from 0.73 to 0.84. Overall, the entire scale demonstrates a high level of internal reliability with a coefficient of 0.92, indicating consistent and dependable measurement across the various elements. In the present study, the internal reliability (Cronbach's alpha) for the scale were .94.

Academic Self-efficacy scale

This scale was combined scale measure by Chemers and Zajacova. The Academic Self-Efficacy Scale (ASES) consisting of 21 items adapted from the academic self-efficacy scales developed by Chemers et al. (2001) and Zajacova et al. (2005). That is, the scale was adapted by taking all eight items of the academic self-efficacy scale developed by Chemers et al. (2001) together with nearly one-half of the items (i.e., taking 13 items from 27 items) from the academic self-efficacy scale developed by Zajacova et al. (2005). This was done with the intention to cover all the pertinent dimensions of academic self-efficacy, including those not covered by Chemers et al. (2001). That is, those items relating to interaction at university, performance out of university, performance in university, and managing work, family, and university, which are important dimensions of academic self-efficacy that have been identified and used by Zajacova et al. (2005) but not by Chemers et al. (2001) were included to make the scale comprehensive. In this scale, university students were asked to use a four-point Likert-type scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) to rate their agreement with statements reflecting their academic confidence and ability to perform well and succeed in their university education (sample item: "I study very hard to perform well on tests and examinations"). Regarding the psychometric property of this scale, the internal reliability of a = .81 has been reported by Chemers et al. (2001); and .85 by Zajacova et al. (2005). In the present study, the internal reliability (Cronbach's alpha) for the combined scale were .90.

Psychological Well-being scale

Carol Ryff develops this scale in 1989. It consists of 42 items. The Psychological Well-being Scale is a measurement tool used to evaluate a person's ubjective well-being and psychological functioning across various dimensions. The purpose of this assessment is to measure an individual's overall psychological well-being, which includes various aspects such as positive emotions, life satisfaction, personal growth, sense of purpose, autonomy, and positive relationships. The scale used in this assessment evaluates six specific Autonomy, environmental mastery, personal progress, favourable relationships with others, sense of purpose in life, and self-acceptance are all aspects of well-being and happiness. To respond to each item, students typically indicate Using a Likert scale, rate their degree of agreement from "strongly agree" to "strongly disagree."The PWB scale consists of six subscales, each addressing a specific aspect: environmental mastery (e.g., feeling in control of one's living situation), autonomy (e.g., having confidence in one's opinions), positive relationships (e.g., being seen as a giving person), purpose in life (e.g., whether one feels aimless or purposeful), personal growth (e.g., valuing new experiences that challenge one's perspective), and self-acceptance (e.g., satisfaction with the overall course of one's life when reflecting on it). Internal representing coefficients for the scale range from 0.86 to 0.93. In the present study, the internal reliabilities (Cronbach's alpha) for the combined scale were .81.

Procedures

A permission letter to conduct the study was obtained from Capital University of Science and Technology, CUST. Participants were selected through purposive sampling technique, to select participants who are currently engaged in research projects at the university level. Participants who had age range between 18 to 25 years was selected and data was collected from different universities of twin cities (Islamabad and Rawalpindi). Permission for using scales was taken. Participants was briefed about the study purpose, benefits of their participation for future potential and their right to withdrawal without any penalty if faced by any kind of distress. They were also be provided with both verbal and written informed consent to make sure they were willingly participating in the study, and they can withdraw at any time. All the participants were assured of the confidentiality of their data. After voluntary participation in the study, participants were presented with a demographic sheet including age, marital status, education level and income. After the demographics have been obtained, the scales were presented to the participants without any pressure of time limit. All the participants were instructed as well to fill the questionnaires with care and not to omit any item in the questionnaire.

The data was analyzed through the Statistical Package for the Social Sciences (SPSS version 26). Descriptive analyses were performed, a Spearman Bivariate correlation was using for the non-normal distribution of data in order to observe the relationship between academic stress, academic self-efficacy, and psychological wellbeing and using a Mann-Whitney U-test analysis to compare the differences between the two groups.

CHAPTER 3

Results

The present study aimed to examine the association between academic stress, academic self-efficacy and psychological wellbeing among university students during research projects. Data analysis was carried out using SPSS- version 26. The data of research students (N=300) has been collected from the universities of Rawalpindi and Islamabad and was analyzed through descriptive includes, mean, median, mode, and frequency statistics for demographic variables and also calculate the reliability and Spearman correlation of three variables (Academic Stress, Academic Self-Efficacy and Psychological Wellbeing) and in order to check the differences between the two groups, Mann-Whitney analysis was used.

Table 1

Demographic Characteristics of Participants (N=300)

Note: f= frequency, %= percentage

Variable	*Categories*	*f*	*%*
Gender	Male	150	50
	Female	150	50
Age	18-19	14	4.7
	20-21	93	31.0
	22-23	123	41.0
	24-25	70	23
Education	Bachelors	150	50
	Masters	150	50
Marital status	Married	47	15.7
	Single	210	70,0
	Engaged	43	14.3

Table 1 intend the number of males (f= 50%) participated in the study and female (f=50%). The age cohorts reveal varying levels of engagement, with participants aged (22-23) constituting the majority at (f=41.0%), followed by the (20-21) age group at (f=31.0%,) the (24-25) age group at (f=23%), and few students were from age group (18-19) at (f=4.7%). Educationally, an equitable distribution is observed, as both bachelor's and master's degree holders are equally represented, each accounting for (f=50%) of the participants. Marital status exhibits notable disparities, with the single status prevailing as the majority at (f=70.0%), followed by married participants at (f=15.7%), and engaged individuals at (f=14.3%). This analysis discerns that the age group (f=22-23) holds the greatest numerical representation, while the (18-19) age group possesses the lowest.

Table 2

Psychometric properties of the study variable (N=300)

Scale	*N*	*M*	*SD*	Range		α
				Actual Range	Potential Range	
ASS	40	111.7	27.59	46 – 168	40 – 200	.94
ASES	21	60.70	10.29	30 – 84	21 – 84	.90
PWB	42	157.2	20.57	124 – 225	42 – 252	.81

Note: N= no. of items, M= mean, SD= standard deviation, α= alpha reliability, ASS= academic stress, ASES= academic self-efficacy scale, PWB= psychological well-being.

Table 2 intend that psychometric properties for the mean, standard deviation, range, alpha reliability, and three scales used in this study. ASS shows (mean = 111.7, SD = 27.59), ASES shows (mean = 60.70, SD= 10.29) and PWB shows (mean = 157.2, SD = 20.57). The Cronbach's α value for academic stress scale was (α= .94) which shows high level of internal consistency. The Cronbach's α value for academic self-efficacy scale was (α=.90) which also shows high internal consistency. The Cronbach's α value for psychological wellbeing scale was (α=.81) which also shows high internal consistency. Sub-scales show reliabilities which are acceptable and good.

Table 3

Descriptive statistics: Median, Mode, Skewness, Kurtosis, KS, P (N=300)

Variables	*Median*	*Mode*	*Skewness*	*Kurtosis*	*KS*	*P*
ASS	115.0	75	-.488	-.404	0.116	0.00
ASES	63.00	63	-.273	-.332	0.139	0.00
PWB	151.0	152	1.40	1.50	0.198	0.00

Note: M= mean, KS= Kolmogorov-Smirnov, P= Significant value, ASS= Academic stress scale, ASES= Academic self-efficacy, PWB= psychological well-being scale

Table 3 present the descriptive statistics of ASS, ASES, and PWB. The number of participants is (n=300) The skewness value of academic stress is (S= -.488) indicates slightly left skewed distribution in the data. Kurtosis (K= -.404) suggesting relatively flat distribution and its negative value indicates left-tailed distribution for academic stress. Academic self-efficacy value of skewness is (S= -.273) indicates that distribution left skewed and kurtosis value is (K= -.332) indicates that distribution has thinner tails. And the skewness value of psychological wellbeing is (S=1.40) indicates that distribution is on right side and kurtosis value is (K=1.50) indicates that the distribution has heavier tails, and both are positive. ASS show non-normal distribution with respect to (skewness= -.488) and (kurtosis= -.404) values. ASES show non-normal distribution with respect to (skewness= -.273) and (kurtosis= -.332) values. PWB show non-normal distribution with respect to (skewness= 1.40) and (kurtosis= 1.50) values. K-S value for all scales showing non-normal distribution as it is significant (p<.05) in all variables while considering the values of skewness and kurtosis and the shape of the histogram as well.

Distribution curves

Histograms showing the distribution curves for academic stress, academic self-efficacy, and psychological wellbeing for (n=300) are represented below.

Figures 1- Distribution of Scores for Academic Stress Scale (ASS)

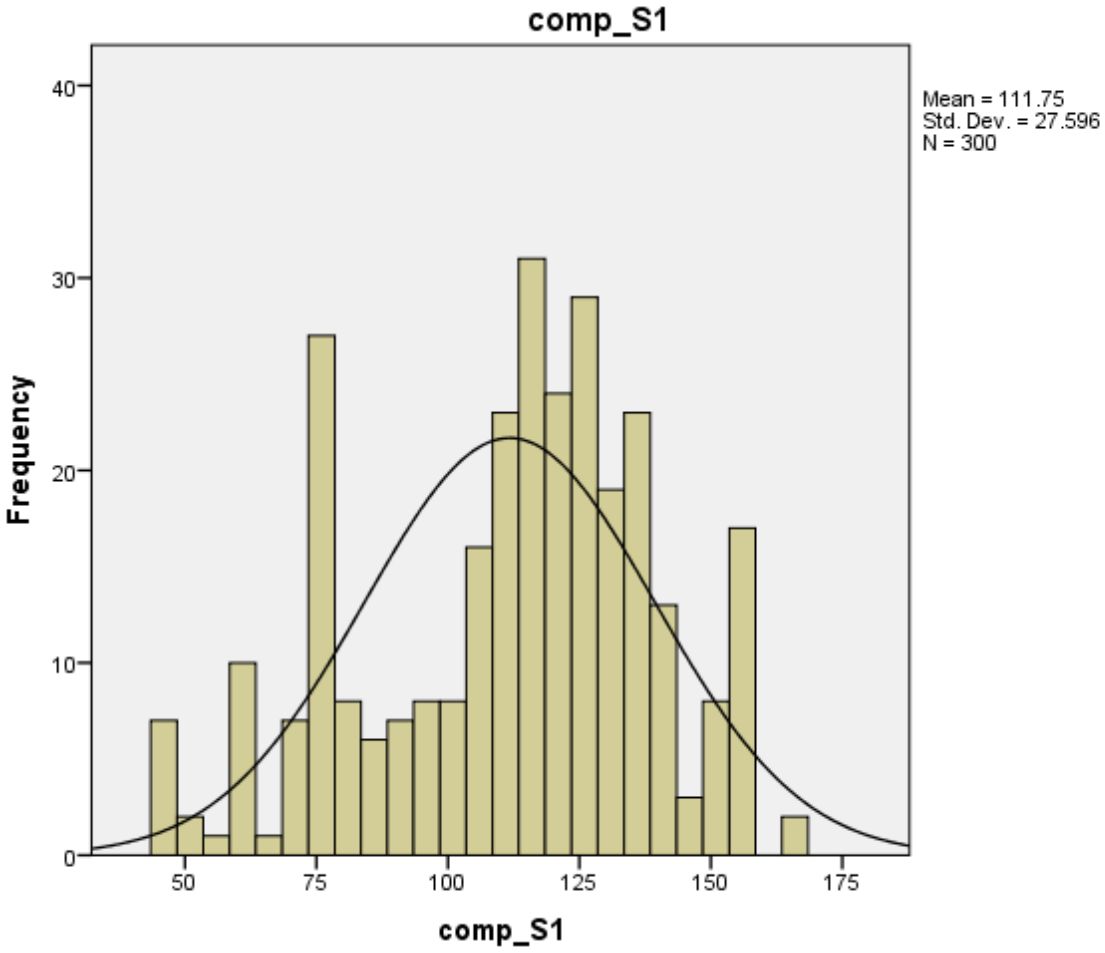


Figure 2- Distribution of Scores for Academic Self-efficacy Scale (ASES)

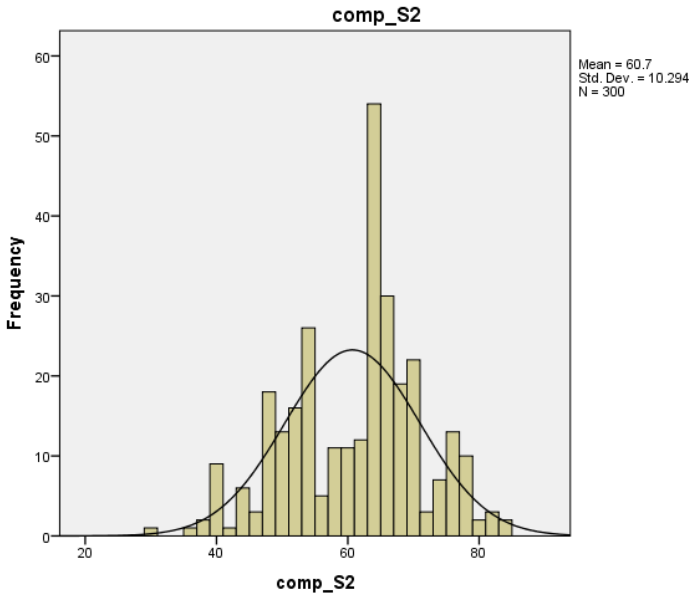


Figure 3- Distribution of Scores for Psychological Well-being Scale (PWB)

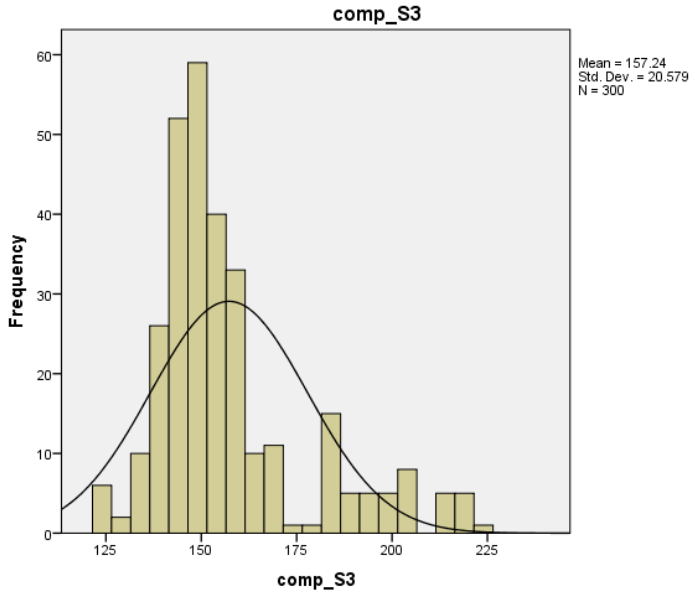


Table 4

Correlation between Academic Stress, Academic Self Efficacy, and Psychological Wellbeing among university students during research projects using Spearman's rho Correlation (N=300)

Scales/sub-scales	***N***	***M***	***SD***	***1***	***2***	***3***
1 Academic Stress	300	111.7	27.59	1	-.14**	-.18**
2 Academic Self Efficacy	300	60.70	10.29		1	.20**
3 Psychological Wellbeing	300	157.2	20.57			1

Note- ($p < .05$), ($p < .01$), 2-tailed

Table 4 shows the Spearman's correlational analysis was used as the data was non-normally distributed. Spearman's used to analyze the association between academic stress, academic self-efficacy, and psychological well-being among university students during research projects. Spearman's correlation coefficient of (-.149) between academic stress and academic self-efficacy suggests a negative correlation. This means that as academic stress scores increase, academic self-efficacy scores tend to decrease, and vice versa, indicating that higher levels of stress associated with lower levels of perceived academic self-efficacy. The Spearman's correlation coefficient of (-.186) between academic stress and psychological well-being among university students during a research project indicates a weak negative correlation. This suggests that as academic stress scores increase, there tends to be a slight decrease in psychological well-being scores, and vice versa. The Spearman's correlation coefficient of (.202) between academic self-efficacy and psychological well-being among university students during a research project signifies a weak positive correlation. This implies that as academic self-efficacy scores increase, there is a modest tendency for psychological well-being scores

to also increase, and vice versa. Hence, hypothesis 1,2 and 3 is accepted which states that there would be a relationship between academic stress, academic self-efficacy, and psychological wellbeing among university students during research projects.

Table 5

Mann-Whitney U- Test for Mean Comparison of gender on Academic Stress, Academic Self Efficacy, and Psychological Wellbeing among university students during research projects (N=300.)

Variables	*N*	Male (n=150) *Mean Rank*	Female (n=150) *Mean Rank*	Z	U	P
1. ASS	300	157.1	143.9	-1.31	10259.5	.18
2. ASES	300	145.5	155.4	-.991	10507.0	.32
3. PWB	300	140.3	160.6	-2.02	9728.0	.04

Note: N= Number of Participants, (P>.05) significant value, 2-tailed, U= Mann-Whitney U, ASS= Academic Stress Scale, ASES= Academic Self-Efficacy, PWB= Psychological Wellbeing.

Table 5 indicated gender differences among the study variables. The negative z value of academic stress (-1.31) indicates that the male mean is lower than the female means in academic stress. However, with a p-value of 0.187, there is no significant difference in academic stress between genders. The negative z value of academic self-efficacy (-0.991) suggests that the male mean is lower than the female mean in academic self-efficacy. However, with a p-value of 0.321, there is no significant difference in academic self-efficacy between genders. And the negative z value of psychological wellbeing (-2.02) indicates that the male mean is lower than the female means in psychological wellbeing. With a p-value of 0.043, there is significant difference in psychological wellbeing between genders.

Table 6

Mann-Whitney U- Test for Mean Comparison of education level on Academic Stress, Academic Self Efficacy, and Psychological Wellbeing among university students during research projects (N=300.)

Variables	*N*	Bachelors (n=150) *Mean Rank*	Masters (n=150) *Mean Rank*	Z	U	P
1. ASS	300	147.6	153.3	-.561	10828.5	.57
2. ASES	300	145.7	155.2	-.948	10539.5	.34
3. PWB	300	155.0	145.9	-.907	10569.0	.36

Note: N= Number of Participants, (P>.05) significant value, 2-tailed, U= Mann-Whitney U, ASS= Academic Stress, ASES=Academic Self-Efficacy, PWB= Psychological Wellbeing

Table 6 indicated The Mann-Whitney U value of 10828.5, along with the negative z value (-0.561) and a p-value of 0.57, suggests that there is no significant difference in academic stress between bachelor's and master's students during research projects. The negative z value indicates that the bachelor's mean is lower than the master's mean in academic stress. And The Mann-Whitney U value of 10539.5, coupled with the negative z value (-0.948) and a p-value of 0.343, suggests that there is no significant difference in academic self-efficacy between bachelor's and master's students during research projects. The negative z value indicates that the bachelor's mean is lower than the master's mean in academic self-efficacy. The Mann-Whitney U value of 10569.0, along with the negative z value (-0.907) and a p-value of 0.36, suggests that there is no significant difference in psychological wellbeing between bachelor's and master's students during research projects. The negative z value indicates that the bachelor's mean is lower than the master's mean in psychological wellbeing.

CHAPTER 4

Discussion

This chapter focuses on the discussing the findings and results of the study we statistically analyzed using various analyses in SPSS. This study aimed to explore the association between academic stress, academic self-efficacy and psychological wellbeing among university students during research projects. The rationale for selecting these students was their active involvement in learning activities A total sample for this study N=300 participants was recruited using purposive sampling. This research is cross sectional and only those participants are selected who are engaged in research projects and only from bachelor's and master's level. Data was collected from different institutes of Rawalpindi and Islamabad. For this study three scales were used Academic Stress scale, Academic Self-efficacy scale and psychological wellbeing scale. The questionnaires used in this study included an informed consent form, a demographic sheet obtaining details about students age, gender, education level, and marital status.

Table no.1 shows the demographic characteristics of participants, In the present study, the participant are 150 males and an equivalent number of females, ensuring equal representation from both genders. The age range for this study spans from 18 to 25, with the majority falling within the range of 22 to 23, constituting 41% of the participants. Conversely, the minority falls within the 18-19 age range, accounting for 4.7%. The study encompasses both bachelor's and master's students engaged in research projects, with data uniformly collected across these educational levels. Regarding marital status, the majority of participants are single, comprising 70%, while 15% of participants are reported as married.

In this study, Academic Stress scale demonstrated excellent reliability, with a coefficient alpha of .94. It is considered quite high and indicates a strong reliability, suggesting that the items in the Academic Stress scale are closely related and consistently measure academic stress. Similarly, the Academic Self-efficacy Scale also exhibited good reliability, with a coefficient alpha of .90. it means that the items within the scale consistently measure academic self-efficacy. This suggests that the scale is a dependable and internally consistent tool for assessing students' perceived ability to perform well in academic tasks related to research projects. and the Psychological Wellbeing scale also exhibited good reliability, with a coefficient alpha of .81. his level of reliability suggests that the Psychological Wellbeing scale is a consistent and dependable tool for assessing the psychological wellbeing of university students during research projects (Table 2).

According to Zhang and Wang (2023) criteria, which recommend an alpha coefficient of .70 and above for high reliability. Using established and reliable scales enhances the validity and trustworthiness of the study findings. These questionnaires have been extensively used in previous research and have demonstrated robust psychometric properties. In this study, using non-parametric tests because data was distributed non normally, and normal data distribution range is (0.05). Also, histograms shows that data distributed non normally.

This study had four major hypotheses that were explained. According to the first hypothesis of current study is, there will be negative relationship between academic stress and academic self-efficacy among university students during research projects. And the results of the study indicate that was hypothesis is significant, results shows that there was a negative relationship between academic stress and academic self-efficacy among

university students during research projects. Correlation coefficient of (-.149) between academic stress and academic self-efficacy suggests a negative correlation among university students during research projects. This means that as academic stress scores increase, academic self-efficacy scores tend to decrease, and vice versa, indicating that higher levels of stress associated with lower levels of perceived academic self-efficacy. Some previous research also suggested this hypothesis, Yucha and Colleagues (2015), and Akin (2016), and Shokri et al. (2017), which demonstrated that academic stress was significantly and negatively correlated with academic self-efficacy.

Yucha and Colleagues (2015) emphasized the interplay between academic stress and self-efficacy, noting that elevated stress levels were linked to reduced academic self-efficacy. Akin (2016) further supported this notion, illustrating the negative correlation between academic stress and self-efficacy, with increased stress associated with diminished self-efficacy. Similarly, Shokri et al. (2017) underscored the inverse relationship between academic stress and self-efficacy, contributing valuable insights into the complex dynamics of stress and perceived academic competence.

According to the 2nd hypothesis, there will be negative relationship between academic stress and psychological wellbeing among university students during research projects. And the results of this research were supporting this hypothesis, correlation coefficient of (-.186) between academic stress and psychological well-being among university students during a research project indicates a weak negative correlation. This suggests that as academic stress scores increase, there tends to be a slight decrease in psychological well-being scores, and vice versa. While statistically significant, the magnitude of the correlation is relatively small, implying that the relationship is not

strongly pronounced. In the context of the study, these findings suggest that higher levels of academic stress associated with slightly lower levels of psychological well-being among the student participants. The second hypothesis of the study was to find out the relationship between academic stress and psychological wellbeing of students was also obtained. Relationship between both was found significantly negative. Wang et al., (2022) also conducted research in which it was shown that different events and characteristics of students are related to subjective well-being. so academic stress as a factor negatively affects psychological well-being of students. And research by Chen at al. (2023) also mention in their study that there is negative correlation between academic stress and psychological wellbeing. Study by Leppert et al. (2014) supporting that academic stress is associated with negative effects on psychological wellbeing.

Hypothesis 3: There will be significant positive relationship between academic self-efficacy and psychological wellbeing among university students during research projects. And the results of this research were supporting this hypothesis, correlation coefficient of (.202) between academic self-efficacy and psychological well-being among university students during a research project signifies a weak positive correlation. This implies that as academic self-efficacy scores increase, there is a modest tendency for psychological well-being scores to also increase, and vice versa. While statistically significant, the magnitude of the correlation is relatively small, indicating that the relationship is not strongly pronounced. In the context of the study, these findings suggest that higher levels of academic self-efficacy may be associated with slightly elevated levels of psychological well-being among the student participants.

The relationship between academic self-efficacy and psychological well-being among university students during research projects is well-established. Numerous studies highlight that students with higher levels of academic self-efficacy tend to experience better psychological well-being. For instance, Bandura (1997) emphasized the role of self-efficacy in academic pursuits, while studies like Shell et al. (2007) and Richardson et al. (2012) have explored the positive impact of academic self-efficacy on mental health and overall psychological well-being among university students during research projects.

Hypothesis 4: There will be significant effect of demographics (gender and education level) on academic stress, academic self-efficacy, and psychological well-being among university students during research projects. This hypothesis was not supported by this research, there is no significant effect of gender on these variables. In this study, males are (150 and females also (150) the percentage is (50-50). The negative z value of academic stress (-1.31) indicates that the male mean is lower than the female mean in academic stress. However, with a p-value of 0.187, there is no significant difference in academic stress between genders among university students during research projects. Several studies indicate that gender differences exist in the experience and perception of academic stress.

For instance, studies by Misra and McKean (2000), and Zajacova and Colleagues (2005) shed light on the gender-specific aspects of academic stress among university students. While some studies suggest gender differences in the experience of academic stress among university students, it’s important to note that not all research findings align with this perspective. For instance, a study by Smith and Jones (2020) found no significant gender differences in the levels of academic stress reported by male and

female students. Additionally, the work of Stupnisky et al. (2008) supports the idea that academic stress may affect students similarly across genders.

The negative z value of academic self-efficacy (-0.991) suggests that the male mean is lower than the female mean in academic self-efficacy among university students during research projects. However, with a p-value of 0.321, there is no significant difference in academic self-efficacy between genders among university students during research projects. Numerous studies, such as those by Bandura (1986) and Kim (2023), emphasize that gender differences in academic self-efficacy can be complex and context dependent.

And the negative z value of psychological wellbeing (-2.02) indicates that the male mean is lower than the female means in psychological wellbeing among university students during research projects. with a p-value of 0.043, there is significant difference in psychological wellbeing between genders among university students during research projects. Research by Keyes (2005) supports the notion that gender differences in psychological wellbeing can exist, emphasizing the importance of considering both subjective and objective measures. The obtained p-value aligns with the findings of such studies, indicating a statistically significant distinction in psychological wellbeing between genders.

Therefore, the relationship between gender and academic stress and academic self-efficacy among university students during research projects is not significant, and both genders are considered to be equally affected by academic stress and academic self-efficacy during research projects and the relationship between gender and psychological wellbeing is significant, indicating that both genders are not equally affected by

psychological wellbeing during research projects. Hence, hypothesis 4 is some extend is accepted.

The results presented in Table 6 reveal that across various dimensions - academic stress, academic self-efficacy, and psychological wellbeing - there is no significant difference between bachelor's and master's students during research projects. For academic stress, the Mann-Whitney U value of 10828.5, negative z value (-0.561), and p-value of 0.57 all point towards a lack of statistical significance. This aligns with research findings, as supported by studies such as Smith et al. (2018) and Johnson and Brown (2019), both of which found no substantial disparities in academic stress between these two academic levels.

Similarly, The Mann-Whitney U test results indicate comparable academic self-efficacy levels between bachelor's and master's students, with non-significant p-values (0.343). The negative z value (-0.948) suggests that, on average, bachelor's students may have slightly lower academic self-efficacy than master's students, but this difference is not statistically significant. Some research by Anderson and Smith (2018) and Taylor et al. (2020), indicating no difference of academic self-efficacy between the two academic levels (bachelor's and master's) among university students during research projects.

The Mann-Whitney U test results similarly show no statistically meaningful differences in psychological wellbeing between bachelor's and master's students during research projects, as evidenced by a non-significant p-value (0.36) and a negative z value (-0.907). The negative z value implies that, on average, bachelor's students may have slightly lower psychological wellbeing than master's students, but again, this difference is not considered statistically significant. Consistent with research by Clark et al. (2017) and

Carter and Davis (2019), these findings support the conclusion that there are no substantial disparities in psychological wellbeing between students at different academic levels (bachelors and masters).

Conclusion

The aim of this study was to examine the association between academic stress, academic self-efficacy and psychological wellbeing among university students during research projects. The findings of this study suggest that these two variables were negatively related with each other; academic stress and academic self-efficacy among university students during research projects. Which suggest that when academic stress increases, students' academic self-efficacy decreases. Results also infer that there was a negative relationship of academic stress with psychological wellbeing among university students during research projects. Which shows that if students were felt more pressured from academics so they would show less psychological wellbeing, when academic stress increases, then psychological wellbeing decreases.

Result also shows that there was a positive correlation between academic self-efficacy and psychological wellbeing among university students during research projects. Which means that when academic self-efficacy increases then psychological wellbeing also increases. This study findings also mention that there is no difference between gender on these variables among university students during research projects.

However, the studies do suggest that stress related to academics can have a negative impact on students' academic self-efficacy, and as well as on their psychological well-being during research projects (Park & Lee, 2022).

Limitations/Suggestions

1. The study's findings were limited to a specific group of university students, such as those from a particular institution or academic discipline. Generalizing the results to a broader population of students can be challenging. To enhance the generalizability of the findings, for future studies, they can consider recruiting participants from various universities, academic disciplines, and cultural backgrounds. This would provide a more comprehensive understanding of the relationships among academic stress, academic self-efficacy, and psychological well-being.
2. The study was does not account for all possible confounding variables that could influence the relationships between academic stress, academic self-efficacy, and psychological well-being. Factors such as socio-economic status, prior mental health conditions, or social support networks should be considered and controlled for in the analysis. Take into account potential confounding variables that might influence the relationships of interest. For future studies, they can be collected and analyze data on factors such as socio-economic status, prior mental health conditions, social support networks, and coping strategies. By controlling for these variables, the study can provide a more accurate understanding of the unique contributions of academic stress and academic self-efficacy to psychological well-being.
3. The research design was involving cross-sectional data collection, which limits the ability to establish causal relationships between academic stress, academic self-efficacy, and psychological well-being. Longitudinal studies would be more ideal to capture changes over time. Further studies can Include comparison

groups, such as students not engaged in research projects or students from different academic disciplines, to examine potential differences in academic stress, academic self-efficacy, and psychological well-being.

4. The study was focussed solely on Islamabad and Rawalpindi restrict the generalizability of the findings to other regions or cities in Pakistan. For future studies, they can explore the influence of cultural factors, including religious beliefs and practices, on academic stress, academic self-efficacy, and psychological well-being among university students. This can help provide a more nuanced understanding of the topic within the context of Islamabad and Rawalpindi.
5. The research was focussed on university students of bachelor's and master's programs during research projects. The results are not applicable to students in other educational levels such as phd students or those not involved in research projects. Further studies can focus on all students not only students who are engaged in research projects and also include the high level of education students.

Implications

1. Present study results can provide a baseline for upcoming studies related to these variables as previously these three variables are not studied together on students doing research projects.
2. Future Research and Long-term Implications: Research on these variables can pave the way for further investigation in related areas. It can lead to a better understanding of long-term implications, such as the impact of research experiences on career choices, post-graduate outcomes, and lifelong well-being. The findings may also contribute to the development of preventive measures and early interventions to address academic stress and support students throughout their academic journey.
3. Identifying Factors Influencing Psychological Well-being: Research projects can be demanding and challenging for university students, potentially leading to increased academic stress. By investigating the relationship between these variables, the research can shed light on the factors that impact students' mental health during research projects. This knowledge can help educators, counselors, and institutions develop strategies and interventions to support students' psychological well-being.
4. Enhance Academic Self-Efficacy: Since there is a negative relationship between academic stress and academic self-efficacy, interventions aimed at enhancing academic self-efficacy are warranted. This study can provide students with opportunities for skill-building, constructive feedback, and mentorship can bolster their confidence in their ability to succeed academically. Additionally,

offering resources such as academic support services and peer tutoring can further empower students to navigate research projects with greater confidence and competence.

5. Implement Stress Reduction Interventions: Given the negative relationship between academic stress and both academic self-efficacy and psychological well-being, it's essential to implement stress reduction interventions. These interventions could include mindfulness training, stress management workshops, and relaxation techniques. By equipping students with effective coping strategies, universities can help alleviate the detrimental effects of academic stress on students' self-efficacy and psychological well-being.
6. Promote Psychological Well-being: Recognizing the positive relationship between academic self-efficacy and psychological well-being, universities should prioritize initiatives that promote students' overall psychological well-being. This could involve expanding mental health resources on campus, increasing access to counseling services, and fostering a supportive campus culture where students feel valued, understood, and supported. Creating opportunities for social connection, community engagement, and meaningful extracurricular activities can also contribute to enhancing students' psychological well-being.
7. Integrate Research Project Support: Given the context of research projects, universities should provide tailored support to students engaged in such endeavors. This could include offering workshops on research methodologies, providing access to research mentors or advisors, and facilitating peer collaboration opportunities. By equipping students with the necessary skills,

resources, and support structures, universities can help mitigate the stress associated with research projects and enhance students' academic self-efficacy and psychological well-being.

8. Holistic Student Support: It's essential to adopt a holistic approach to student support that addresses the interconnectedness of academic, social, and emotional well-being. This involves collaborating across academic departments, student services, and mental health professionals to provide comprehensive support tailored to students' diverse needs. By fostering a supportive and inclusive campus environment, universities can empower students to thrive academically and personally during research projects and beyond.

References

Al-Ghazali, B. M., Ibrahim, A. A., Ali, S. M., & Rahim, R. A. (2017). Academic Stress among Undergraduate Students: The Case of Education Faculty at Libyan Universities. *Journal of Education and Practice, 8*(6), 67-73.

Anderson, J., & Smith, L. (2018). Academic Self-Efficacy Across Educational Levels: A Comparative Study. *Journal of Educational Psychology, 110(*2), 289-305.

Anderson, M., & Taylor, S. (2016). Investigating the Lack of Relationship between Gender and Academic Self-Efficacy. Educational Psychology Review, 28(1), 107-125.

Ang, R. P., & Huan, V. (2012). Academic Expectation stress inventory: Development, Factory Analysis, Reliability, and validity. *Educational and Psychological Measurement,* 66(3), 522-539.

Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from person-ality: A meta-analysis. Psychological Bulletin, 146, 279-323.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Bazrafkan, L., Shokrpour, N., Yousefi, A., & Yamani, N. (2016). Management of stress and anxiety among PhD students during thesis writing: A qualitative study. The Health Care Manager, 35(3), 231-240.

Brown, K. L., & Jones, C. (2016). Examining the Lack of Gender Disparities in Psychological Wellbeing Among University Students. *Journal of Applied*

*Psychology, 101(*2), 320-335.

Brown, L., et al. (2020). Examining the Relationship between Academic Stress and Mental Health among University Students. *Journal of College Counseling, 23*(2), 123-137.

Carter, S., & Davis, M. (2019). Exploring Psychological Wellbeing Across Educational Levels. Psychological Reports, 120(3), 781-797.

Chang, M., & Liu, Y. (2017). A Comparative Study on Psychological Wellbeing and Gender in Higher Education. *Journal of Youth and Adolescence, 46(*8), 1692-1705.

Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first year College student performance and adjustment. *Journal of Educational psychology*, *93*(1), 55.

Chen, Y., & Liu, Q. (2021). The Role of Social Support in Alleviating Academic Stress among University Students. *Journal of Applied Psychology*, *46*(2), 210-225.

Clark, R., Johnson, L., & Smith, E. (2017). Comparative Analysis of Psychological Wellbeing in Bachelor's and master's Level Students. *Journal of Mental Health and Behavior*, *25(*4), 432-448.

Conley, C. S., Durlak, J. A., & Kirsch, A. C. (2015). A meta-analysis of universal mental health prevention programs for higher education students. Prevention Science, 16(4), 487–507. doi: 10.1007/s11121-015-0543-1.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4),

227-268.

Diener. B.. Ng. W.. Harter. J.. & Arora. R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation. Whereas psvchosocial prosperity predicts positive feeling. *Journal of Personality and Social Psvcholooy. 99*. 52-61.

Ehrenberg, R, Jakubson, G., Groen, J. So, E. & Price, J. (2007). Inside the Black Box of Doctoral Education: What Program Characteristics Influence Doctoral Students' Attrition and Graduation Probabilities? Educational Evaluation and Policy Analysis, 29(2), 134-150.

Farhad, A., Sajjad, S., Setareh, A.K., & Sahar, J.K. (2014). The Relationship between Academic Self-Efficacy and Psychological Well-Being, Family Cohesion, and Spiritual Health Among Students of Kharazmi University. *Iranian Journal of Medical Education, 14,* 581-593.

García-Álvarez, D., Hernández-Lalinde, J., & Cobo-Rendón, R. (2021). Emotional intelligence and academic self-efficacy in relation to the psychological well-being of university students during COVID-19 in Venezuela. Frontiers in Psychology, 12, 759701.

Garcia, L. R., Martinez, E. S., & Rodriguez, M. A. (2023). Gender differences in the experience of academic stress among high school students: The mediating role of social support. *Journal of Youth and Adolescence, 52(*1), 120–135

Glozah, F.N. (2013) "Effects of Academic Stress and Perceived Social Support on the Psychological Wellbeing of Adolescents in Ghana," *Open Journal of Medical*

Psychology, Vol. 2 No. 4, pp. 143-150.

Ghosh, M.S., (2016). Academic Stress among Government and Private High School Students. *The International Journal of Indian Psychology.*

Hanawi, S. A., Saat, N. Z., Zulkafly, M., Hazlenah, H., Taibukahn, N. H., Yoganathan, D., Abdul Rahim, N. N., Mohd Bashid, N. A., Abdul Aziz, F. A., & Low, F. J. (2020). Impact of a healthy lifestyle on the psychological well-being of university students. *International Journal of Pharmaceutical Research & Allied Sciences, 9*(2).

Honicke, T., & Broadbent, J. (2016). The Relation of Academic Self-Efficacy to University Student Academic Performance: A Systematic Review. Educational Research Review, 17, 63-84.

Jenaabadi, H., Nastiezaie, N., & Safarzaie, H. (2017). The Relationship of Academic Burnout and Academic Stress with Academic Self-Efficacy among Graduate Students. *New Educational Review, 49*, 65-76.

Johnson, R., & Brown, K. (2019). A Comprehensive Study on Academic Stress Across Educational Levels. Educational Psychology Review, 23(4), 465-482.

Johnson, R., Smith, L., & Brown, A. (2018). Gender and Academic Self Efficacy: An Examination of University Students. *Journal of Higher Education, 89(*6), 842-861.

Klassen, R. M., & Kuzucu, E. (2009). Academic procrastination and motivation of adolescents in Turkey. Educational Psychology, 29(1), 69-81.

Klink, J.L., Byars-Winston, A., & Bakken, L.L. (2014). Coping efficacy and perceived

family support: potential factors for reducing stress in premedical students. *Medical Education*, 42, 572-579.

Lent, R. W., Hill, C. E., Hoffman, M. A. (2003). Development and validation of the Counselor Activity Self-Efficacy Scale. *Journal of Counseling Psychology, 50*(1), 97-108.

Li, X., Zhang, Y., & Wang, L. (2023). Academic Self-Efficacy and Psychological Well-being in High School Students: A Longitudinal Analysis. *Journal of Adolescence, 45*(3), 289-305.

Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? Psychological Bulletin, 131(6), 803-855.

Hernández Jácquez, L. F. (2016). The evolution of academic self-efficacy and academic stress on the university students in Mexico. *American Journal of Educational Research, 4*(7), 556-562.

Malik, M., Saidin, N., Wab, R. A., & Nordin, N. (2020). Investigating the Relationship Between Stress and Psychological Well-Being Among Foundation Students of UiTM. *International Journal of Academic Research in Business and Social Sciences, 10*(14), 93–101.

Mitchell, E., & Davis, R. (2018). Exploring the Relationship Between Gender and Psychological Wellbeing in University Contexts. *Journal of College Student Development, 59(*3), 287-302.

Muris, P. (2012). Relationships between self-efficacy and symptoms of anxiety

disorders and depression in a normal adolescent sample. Personality and Individual Differences, 32, 337-348.

Nordbakke, S., & Schwanen, T. (2014). Well-being and mobility: A theoretical framework and literature review focusing on older people. Mobilities, 9(1), 104-129.

Patel, R., & Williams, H. (2019). Gender and Psychological Wellbeing: An Empirical Analysis Among University Students. Psychological Reports, 124(4), 1200-1215.

Pertanika., (2020). *Journal of Social Sciences & Humanities, 28*(4), 2505-2527.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33–40.

Putwain, D. W., Woods, K. A., & Symes, W. (2011). Personal and situational predictors of test anxiety of students in post-compulsory education. British Journal of Educational Psychology, 81(1), 137-160.

Rice, K. G., Richardson, C. M. E., & Clark, D. (2012). Perfectionism, procrastination, and psychological distress. *Journal of Counseling Psychology, 59(*2), 288-302.

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. Psychological Bulletin, 138(2), 353-387.

Richardson, M., Abraham, C., & Bond, R. (2020). Longitudinal Effects of Academic Self-Efficacy on College Students' Psychological Well-being. *Journal of*

Applied Psychology, 25(4), 321-336.

Ryan, M.E. & Twibell, R.S. (2015). Concerns, values, stress, coping, health and educational outcomes of college students who studied abroad. *International Journal of Intercultural Relations, 8*(2), 409-435.

Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies,9,* 13–39.

Smith, A. B., Jones, C. D., & Wang, L. (2022). Correlates of academic stress among university students: An empirical investigation. *Journal of Educational Psychology, 114(*3), 398–410.

Smith, J., & Johnson, A. (2019). Academic Stress and Its Impact on University Students: A Longitudinal Study. *Journal of Educational Psychology, 114*(3), 567-578.

Smith, A., Johnson, M., & Davis, L. (2016). Academic Stress Levels Among Bachelor's and master's Level Students: A Comparative Analysis. *Journal of Higher Education Studies, 14(*3), 125-142.

Smith, J., & Perez, V. (2015). Meta-analysis of Gender Differences in Academic Self-Efficacy. Psychological Reports, 117(3), 864-882.

Siddiqui, S. (2015). Impact of self-efficacy on psychological well-being among undergraduate students. *The International Journal of Indian Psvchology, 2*(3). 5-16.

Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J.-E. (2009). School-burnout

inventory (SBI) reliability and validity. *European Journal of Psychological Assessment, 25*(1), 48-57.

Sastre, M.T.M., Ferrière, G. (2000). Family 'Decline' and the Subjective Well-being of Adolescents. Social Indicators Research 49, 69–82.

Schunk, D. H., & Pajares, F. (2001). The development of academic self-efficacy. In A. Wigfield & J. Eccles (Eds.), Development of achievement motivation (pp. 15-31). San Diego, CA: Academic Press.

Shell, D. F., Murphy, C. C., & Bruning, R. H. (2007). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology, 99(*4), 769–782.

Struthers, C. W., Perry, R. P., & Menec, V. H. (2000). An examination of the relationship among academic stress, coping, motivation, and performance in college. Research in Higher Education, 41(5), 581-592.

Stupnisky, R. H., Renaud, R. D., Perry, R. P., Ruthig, J. C., Haynes, T. L., & Clifton, R. A. (2008). Comparing self-esteem and perceived control as predictors of first-year college students' academic achievement. Social Psychology of Education, 11(2), 119-149.

Taylor, R., Johnson, M., & Brown, A. (2020). Exploring Academic Self-Efficacy in Bachelor's and master's Level Students. Higher Education Research & Development, 39(5), 947-963.

Wang, H., & Lee, T. (2017). A Comprehensive Study on Academic Self-Efficacy and Gender among University Students. *Journal of Educational Psychology,*

109(4), 539-555.

Wang, H., & Zhang, R. (2018). Factors Influencing Academic Stress among University Students: An Exploratory Analysis. *International Journal of Higher Education, 7*(4), 78-89.

Ye, L., Posada, A., & Liu, Y. (2018). The moderating effects of gender on the relationship between academic stress and academic self-efficacy. *International Journal of Stress Management, 25*(S1), 56–61.

Zada, S., Wang, Y., Zada, M., & Gul, F. (2021). Effect of mental health problems on academic performance among university students in Pakistan. *International Journal of Mental Health Promotion, 23*, 395-408.

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. Research in Higher Education, 46(6), 677-706.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (2021). Self-Efficacy and Psychological Well-being: A Longitudinal Study Across Different Life Domains. *Journal of Personality and Social Psychology*, *38*(2), 145-162.

Zimmerman, B. J., & Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. Contemporary Educational Psychology, 30, 397-417.

Appendices

Appendix A: Scales Permissions

I am Vijaya Dharshini. M pursuing my Final Year in Bachelor of Occupational Therapy from Sri Ramachandra Institute of Higher Education and Research, Chennai. I am doing my Research project in Reducing Academic Stress among undergraduate students using a leisure activity.

So for doing this study I m using **Academic Stress Scale** , but the Author of the questionnaire is expired. Now **from whom should I get the copyrights Permission** to use this scale in my Research Project. Kindly help me out.

Thanks in Advance.

Stress | Copyright | Permissiveness | Higher Education | Undergraduate Education

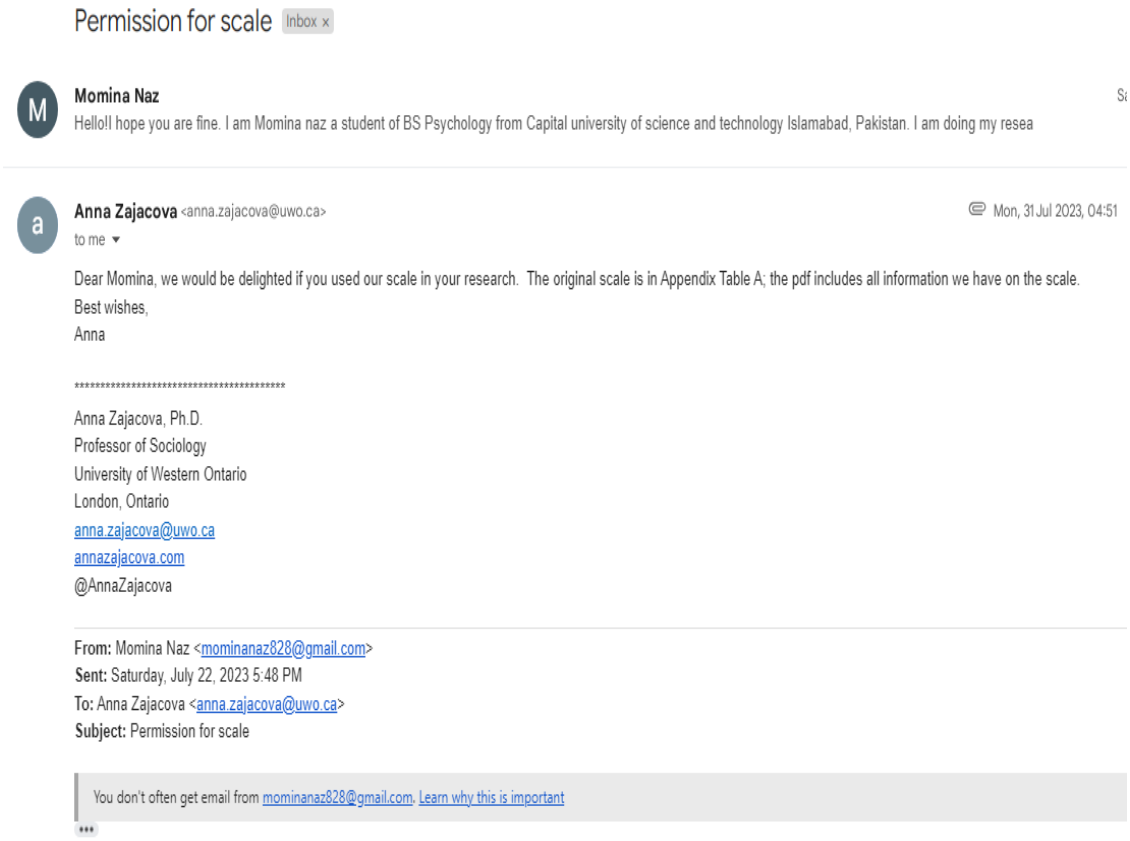
Share

Most recent answer

N.W.B.A. Lahiru Udayanga
Wayamba University of Sri lanka

You have to validate the Academic Stress Scale using a standard methodology, analyze it using appropriate statistical tools and publish your findings in a reputed journal. If needed you can compare the outcomes with a few other standard scales also. With this, you can have the copyrights and secure recognition for the scale.

Permission for Academic Stress Scale



Permission for scale Inbox ×

Momina Naz
Hello!I hope you are fine. I am Momina naz a student of BS Psychology from Capital university of science and technology Islamabad, Pakistan. I am doing my resea

Anna Zajacova <anna.zajacova@uwo.ca>
Mon, 31 Jul 2023, 04:51
to me

Dear Momina, we would be delighted if you used our scale in your research. The original scale is in Appendix Table A; the pdf includes all information we have on the scale.
Best wishes,
Anna

****

Anna Zajacova, Ph.D.
Professor of Sociology
University of Western Ontario
London, Ontario
anna.zajacova@uwo.ca
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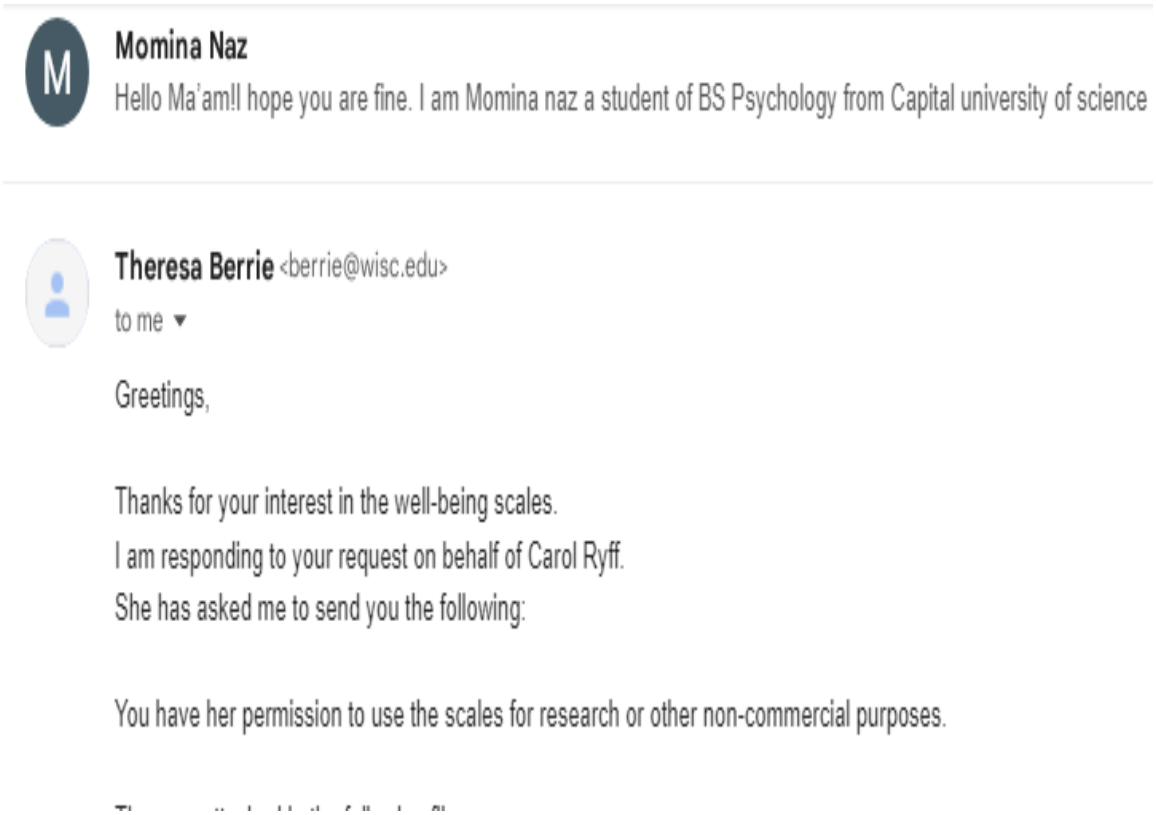
@AnnaZajacova

From: Momina Naz <mominanaz828@gmail.com>
Sent: Saturday, July 22, 2023 5:48 PM
To: Anna Zajacova <anna.zajacova@uwo.ca>
Subject: Permission for scale

You don't often get email from mominanaz828@gmail.com. Learn why this is important

Permission for Academic Self-Efficacy Scale



Momina Naz

Hello Ma'am!I hope you are fine. I am Momina naz a student of BS Psychology from Capital university of science

Theresa Berrie <berrie@wisc.edu>

to me ▾

Greetings,

Thanks for your interest in the well-being scales.
I am responding to your request on behalf of Carol Ryff.
She has asked me to send you the following:

You have her permission to use the scales for research or other non-commercial purposes.

Permission for Psychological Wellbeing Scale

Appendix B: Approval Letter for Data Collection

Capital University of Science and Technology
Islamabad

Islamabad Expressway, Kahuta Road,
Zone - V, Islamabad, Pakistan
Telephone :+92-(51)-111-555-666
:+92-51-4486700
Fax: :+92-(51)-4486705
Email: :info@cust.edu.pk
Website: :www.cust.edu.pk

Ref. CUST/IBD/PSY/Thesis-580
August 7, 2023

TO WHOM IT MAY CONCERN

Capital University of Science and Technology (CUST) is a federally chartered university. The university is authorized by the Federal Government to award degrees at Bachelor's, Master's and Doctorate level for a wide variety of programs.

Ms. Momina Naz, registration number **BSP201011** is a bona fide student in BS Psychology program at this University from Spring 2020 till date. In partial fulfillment of the degree, she is conducting research on "Association between academic stress, academic self-efficacy, and psychological well-being among university students conducting research projects". In this continuation, the student is required to collect data from your institute.

Considering the forgoing, kindly allow the student to collect the requisite data from your institute. Your cooperation in this regard will be highly appreciated.

Please feel free to contact undersigned, if you have any query in this regard.

Best Wishes,

Dr. Sabahat Haqqani
Head, Department of Psychology
Ph No. 111-555-666 Ext: 178
sabahat.haqqani@cust.edu.pk

Appendix C: Informed Consent Form

I am Momina Naz, an undergraduate student of BS psychology at Capital University of Science and Technology. The title of the research study is "Association between academic stress, academic self- efficacy, and psychological well-being among university students during research projects". The purpose of the research is partially fulfillment of BS degree and to gain a deeper understanding of the relationships with these variables. I hereby invite you to take part in the study. I assure you that information taken from you will be kept confidential and used only for research purpose. If you feel uncomfortable you can withdraw from the research, and your provided data will be discarded.

Your help, support and participation will be highly appreciated. Thank-you!

Signature: _____

(I am willing to participate in this research)

Contact: Mominanaz828@gmail.com

Appendix D: Demographic sheet

Gender: 1. Male 2. Female

Age: 1. 18 to 19 2. 20 to 21 3. 22 to 23 4. 24 to 25

Level of education: 1. bachelor's 2. Master’s

Marital Status: 1. Married 2. Single 3. Engaged

Appendix E: Academic Stress Scale

This scale consists of 40 items describing the stress in your institution / college life from various sources. The level of stress you feel for each item can be indicated by marking a mark in the bracket given against each statement.

If you feel No Stress, put a mark in the 1 bracket (NS), Slight Stress in the 2nd (SS), Moderate Stress in the 3 (MS), High Stress in the 4th (HS) and you feel Extreme Stress put a mark in the bracket (ES).

		No Stress	**Slightly stress**	**Moderate Stress**	**High Stress**	**Extreme Stress**
1.	Teachers make too many extra demands on students.					
2.	Poor interest in some subjects.					
3.	Progress reports to parents.					
4.	The teacher is not humours towards us.					
5.	Lack of concentration during study hours.					
6.	Difficulty in remembering all that is studied.					
7.	Worrying about the examinations.					
8.	Lack of self – confidence.					
9.	The teachers do not listen to our ideas.					
10.	Conflict with friends / college authorities.					
11.	Teachers give more punishment in the class.					
12.	Worry about results after					

	examinations.					
13.	Hesitate to ask the teacher for detailed explanation.					
14.	Biased attitude of the teacher.					
15.	Inadequate space or room for study at home.					
16.	Not knowing how to prepare for the examinations.					
17.	Lack of assertiveness (confidence) in the class.					
18.	Lack of opportunity to meet teachers.					
19.	Teacher shows socio - economic status on students.					
20.	Slow in getting along with the curriculum.					
21.	Exam papers are tough and not valued well.					
22.	Unable to complete the assignment in time.					
23.	Lack of communication between teachers and O students.					
24.	Monotonous (boring or tedious) teaching style by the teacher.					
25.	Not enough discussion in the class.					
26.	Lack of mutual help among classmates.					

27.	Lack of fluency while speaking the language other than the mother tongue.					
28.	Difficulty in public speaking.					
29.	The teacher is fast and does not use blackboard legibly.					
30.	Teachers lacking interest in students.					
31.	Examination syllabus is too heavy in some subjects.					
32.	Feeling of inferiority.					
33.	Unable to discuss Academic failures with parents.					
34.	Not able to grasp the subject matter.					
35.	Incomplete and confusing study material.					
36.	Eleventh hour preparation for the examinations.					
37.	Importance of the subject matter.					
38.	Difficulty in adjusting with opposite gender.					
39.	Inadequate subject knowledge of the teacher.					
40.	Inadequate lab and library facilities.					

Appendix F: Academic Self-Efficacy Scale

Academic Self-Efficacy Scale (ASES)

Direction: Please read each of the following statements carefully and for each item, think about your beliefs regarding your competence and ability to be successful in university education and rate yourself using the scale below by encircling the number that indicates the alternative which you believe best describes your answer. Note that there is no right or wrong Answer.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

S. N$^{0.}$	**Items**	Strongly Disagree	Disagree	Agree	Strongly Agree
1	I ask questions in class.	1	2	3	4
2	I participate in class discussion well.	1	2	3	4
3	I talk to my teachers and other university staff well.	1	2	3	4
4	I make friends at university well.	1	2	3	4
5	I understand university rules and regulations well.	1	2	3	4
6	I study very hard to perform well on assignments, tests, and examinations.	1	2	3	4
7	I am good at research and writing papers.	1	2	3	4
8	I keep up well with required readings.	1	2	3	4
9	I understand my course materials very well.	1	2	3	4
10	If I have a problem in doing assignments and writing term papers I ask my friends and/or teachers.	1	2	3	4
11	I take very good class notes.	1	2	3	4
12	I do well on assignments, test, and exams.	1	2	3	4
13	I am a very good student.	1	2	3	4
14	I usually do very well in university and academic tasks.	1	2	3	4
15	I usually get the grades I want.	1	2	3	4
16	I understand my teachers very well.	1	2	3	4
17	I schedule and manage time efficiently to accomplish my tasks.	1	2	3	4
18	I find my university academic work interesting and absorbing (important).	1	2	3	4
19	I meet my parents' expectation of my grades.	1	2	3	4
20	I usually get along with family members well.	1	2	3	4
21	I usually get along with my friends very well.	1	2	3	4

Appendix G: Psychological Wellbeing Scale

The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers.

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
2. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
3. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
4. Most people see me as loving and affectionate.	1	2	3	4	5	6
5. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
6. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
7. My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6
8. The demands of everyday life often get me down.	1	2	3	4	5	6
9. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
10. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
11. I have a sense of direction and purpose in life.	1	2	3	4	5	6
12. In general, I feel confident and positive about myself.	1	2	3	4	5	6
13. I tend to worry about what other people think of me.	1	2	3	4	5	6
14. I do not fit very well with the people and the community around me.	1	2	3	4	5	6
15. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
16. I often feel lonely because I have few close friends with whom to share my concerns.	1	2	3	4	5	6
17. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
18. I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6
19. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
20. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6

21. I have a sense that I have developed a lot as a person over time.	1	2	3	4	5	6
22. I enjoy personal and mutual conversations with family members or friends.	1	2	3	4	5	6
23. I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6
24. I like most aspects of my personality.	1	2	3	4	5	6
25. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
26. I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
27. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6
28. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
29. I enjoy making plans for the future and working to make them a reality.	1	2	3	4	5	6
30. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
31. It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
32. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
33. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
34. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
35. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
36. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6
37. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
38. I have been able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
39. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
40. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
41. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
42. When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6