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Gender Differences in Mindfulness, Resilience, and Academic Performance Among University Students

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ABSTRACT

University students encounter numerous academic and emotional challenges that influence their academic success and psychological well-being. This study investigates gender differences in mindfulness, resilience, and academic performance among students enrolled in public and private universities in Faisalabad, Punjab, Pakistan. Using a quantitative, cross-sectional design, data were collected from 400 students aged 19–30 years through validated self-report instruments: the Mindful Attention Awareness Scale (MAAS) for mindfulness, the Connor-Davidson Resilience Scale (CD-RISC) for resilience, and a self-reported academic performance scale. Statistical analyses, including descriptive statistics, t-tests, and regression models, were conducted using SPSS. Results revealed that male students demonstrated slightly higher levels of mindfulness and resilience compared to females, while no significant gender difference was found in academic achievement. The findings underscore the importance of fostering gender-sensitive psychological training programs that enhance students' coping mechanisms, focus, and academic engagement. The study provides valuable insights for university counsellors, educators, and policymakers aiming to strengthen student well-being and academic success through mindfulness- and resilience-based interventions.

Keywords: Gender Differences, Mindfulness, Resilience, Academic Achievement, University Students, Psychological Well-Being

INTRODUCTION:

In recent years, universities have increasingly recognized that academic success is not determined solely by intellectual ability or cognitive skill. Instead, psychological and



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emotional factors play a crucial role in shaping students' academic performance, motivation, and well-being. Among these, mindfulness and resilience have emerged as two vital constructs that influence how students respond to academic challenges, manage stress, and sustain motivation throughout their educational journey. Higher education is a formative phase that shapes students' intellectual and emotional development. University students are frequently exposed to academic stress, social pressures, and personal challenges that can affect their academic performance and overall well-being. In recent years, mindfulness and resilience have emerged as key psychological constructs that enable students to manage academic stress and maintain performance. However, potential gender differences in these traits remain under-explored, particularly in the South Asian context where cultural expectations and social norms often shape emotional expression and coping behaviors. This study explores whether gender differences exist in levels of mindfulness and resilience and how these differences relate to academic achievement among Pakistani university students. Understanding such distinctions can help educators design gender-responsive psychological interventions that promote equitable student outcomes.

Background:

Mindfulness, as defined by Kabat-Zinn (1994), is “paying attention in a particular way on purpose, in the present moment, and non-judgmentally.” It involves cultivating awareness of one's thoughts, emotions, and environment with acceptance and openness. In the academic context, mindfulness allows students to concentrate better on learning tasks, regulate negative emotions, and remain calm during examinations or stressful academic circumstances (Brown & Ryan, 2003). Studies show that mindful students often report lower anxiety levels, improved concentration, and better academic engagement (Bamber & Schneider, 2020).

Resilience, on the other hand, refers to the ability to recover and adapt positively despite encountering stress, adversity, or failure (Luthar, Cicchetti, & Becker, 2000). In the university setting, resilience enables students to maintain focus and motivation despite setbacks such as poor grades, peer pressure, or workload demands. Connor and Davidson (2003) conceptualized resilience as a dynamic quality that strengthens coping ability and emotional balance, allowing individuals to manage academic pressures without long-term distress.

Both mindfulness and resilience are linked to academic achievement, which represents a student's performance and learning outcomes, often measured through grades, GPA, or academic milestones. Research demonstrates that students who are more mindful and resilient exhibit higher persistence, better time management, and greater emotional regulation all of which contribute to enhanced academic success (Zhou & Lin, 2021).

However, gender differences in these psychological traits remain an intriguing area of research. Gender plays a complex role in shaping emotional and cognitive responses to stress. Social norms, upbringing, and cultural expectations often influence how males and females perceive, experience, and manage stress (Rojiani et al., 2017). Studies indicate that male students often exhibit greater emotional detachment and self-regulation, potentially leading to higher resilience scores, whereas female students generally display greater emotional awareness and empathy—attributes associated with mindfulness (Meiklejohn et al., 2012). Despite these psychological differences, academic achievement between males and females often shows minimal variation, suggesting that both genders compensate for their respective emotional tendencies through distinct coping mechanisms.



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In Pakistan, the academic environment presents unique challenges—limited counselling facilities, high parental expectations, and competitive educational systems contribute to stress among university students (Arslan, 2021). In such a context, understanding how mindfulness and resilience differ between male and female students—and how these differences relate to academic achievement is both timely and essential. Identifying these gender-specific patterns can guide universities in implementing targeted interventions that address the psychological needs of both male and female learners.

Statement of the Problem:

University students in Pakistan face multifaceted stressors, including academic workload, financial constraints, and social pressures. These challenges can significantly affect not only their academic performance but also their emotional and psychological health. Although mindfulness and resilience have been established as protective psychological factors that foster academic success, the role of gender in shaping these variables and their relationship with academic achievement remains insufficiently understood in the Pakistani context. Existing literature suggests that mindfulness enhances emotional regulation and focus, while resilience allows students to overcome academic setbacks. However, gender norms and sociocultural expectations may influence how males and females experience and express mindfulness and resilience. Male students, often encouraged to be self-reliant, may develop resilience more readily, whereas female students, who are often more emotionally expressive and relational, may display stronger mindfulness and empathy. Yet, how these gendered differences impact academic achievement remains unclear. Thus, the central problem addressed in this study is the lack of empirical evidence on gender-based differences in mindfulness and resilience and their combined influence on academic achievement among university students in Pakistan. By examining these relationships, the study seeks to bridge the gap between psychological theory and educational practice, contributing valuable insights into gender-sensitive educational development.

Research Objectives

The primary aim of this study is to explore gender differences in mindfulness, resilience, and academic achievement among university students. The specific objectives are:

To examine the relationship between mindfulness, resilience, and academic achievement among university students

To investigate gender differences in levels of mindfulness, resilience, and academic performance.

To assess whether mindfulness and resilience jointly predict academic achievement across genders

To determine whether resilience mediates the relationship between mindfulness and academic achievement

To suggest gender-sensitive strategies for enhancing mindfulness and resilience in university students

Research Questions:

In alignment with the objectives, this study addresses the following research questions:

What is the relationship between mindfulness, resilience, and academic achievement among university students?

Are there significant gender differences in levels of mindfulness and resilience?

Do male and female students differ significantly in their academic achievement?

How do mindfulness and resilience jointly influence academic performance across genders?

Does resilience mediate the relationship between mindfulness and academic achievement for male and female students?



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Significance of the Study

This research holds considerable theoretical and practical significance. From a theoretical perspective, it contributes to the growing literature on positive psychology in educational contexts by integrating the concepts of mindfulness and resilience with gender-based analysis. It also supports the cognitive-affective and stress-buffering frameworks, which explain how psychological regulation and emotional stability foster academic success. From a practical standpoint, the study offers valuable implications for educators, counselors, and policymakers. Understanding gender-specific differences in mindfulness and resilience can help universities design tailored psychological interventions that promote emotional well-being, concentration, and academic performance. For example, mindfulness-based programs could help female students strengthen emotional regulation and focus, while resilience training could assist male students in developing adaptive coping skills. Furthermore, the findings can inform the development of university counseling services, stress management workshops, and educational policies that emphasize psychological wellness as a determinant of academic success. In societies like Pakistan, where mental health discussions are often stigmatized, this research provides evidence-based insights for fostering more supportive learning environments. At a broader level, the study also contributes to gender equity in education, highlighting that psychological development and academic success should not be viewed through a one-size-fits-all lens. Understanding the unique emotional and cognitive strengths of male and female students can help educators support students holistically, ensuring balanced opportunities for success.

Delimitation of the Study:

Every research study operates within certain boundaries that define its scope and focus. The delimitations of the present study are as follows:

Geographical Scope:

The study is limited to public and private universities in Faisalabad, Punjab, Pakistan. Findings may not fully represent students from other provinces or educational systems.

Population:

The research focuses exclusively on university students enrolled in undergraduate (BS), M.Phil. and PhD programs. College, vocational, or secondary school students are excluded, as the study focuses on the university context.

Variables:

The study concentrates on three primary constructs—mindfulness, resilience, and academic achievement while other psychological factors such as motivation, self-efficacy, or emotional intelligence are not examined.

Methodological Limitations:

The study employs a quantitative, cross-sectional survey design, which captures responses at a single point in time. Longitudinal effects or causal relationships are not addressed.

Cultural Context:

As the research is conducted within the Pakistani cultural setting, the gender-related findings may be influenced by local societal norms, expectations, and educational



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practices, and may differ from those in other cultural contexts.

Data Collection Method:

Data were collected using self-report questionnaires, which may be subject to response bias or social desirability effects.

LITERATURE REVIEW:

University students experience diverse academic and emotional challenges that influence both their learning outcomes and overall well-being. These challenges include heavy workloads, competitive environments, and emotional stress related to performance and career uncertainty. Consequently, researchers have shifted attention from purely cognitive predictors of success toward psychological and emotional factors, particularly mindfulness and resilience, as determinants of academic achievement (Bamber & Schneider, 2020; Zhou & Lin, 2021). An emerging area of interest involves gender differences in these constructs. Males and females may differ in how they regulate emotions, cope with stress, and respond to academic pressures, largely due to biological, cultural, and social factors (Rojiani et al., 2017; Arslan, 2021). This chapter reviews the relevant literature on mindfulness, resilience, and academic achievement with a special focus on gender-based variations and their implications for higher education.

Mindfulness is a state of conscious awareness characterized by purposeful attention to present experiences without judgment (Kabat-Zinn, 1994). Bishop et al. (2004) describe mindfulness as a two-component construct involving self-regulation of attention and an open, accepting orientation toward experiences. In the educational context, mindfulness helps students manage anxiety, improve focus, and maintain emotional balance during learning and assessment (Shapiro, Carlson, Astin, & Freedman, 2006).

Mindfulness in Educational Contexts

Mindfulness practices such as deep breathing, meditation, and reflective awareness enable students to improve concentration and cognitive flexibility. Research by Bamber and Schneider (2020) demonstrated that mindfulness-based interventions (MBIs) in university settings reduced academic stress and improved focus and emotional regulation. Similarly, Hülshager et al. (2013) found that mindfulness reduces burnout and emotional exhaustion, both of which are critical for academic persistence.

Gender Differences in Mindfulness

Gender differences in mindfulness have been observed across multiple studies. Rojiani et al. (2017) found that female university students reported higher emotional awareness and empathy, contributing to elevated mindfulness scores after meditation training. However, male students often exhibited greater attentional control and stability (Zhou & Lin, 2021). These differences may reflect gendered patterns in emotional expression and cognitive processing shaped by social expectations.

In South Asian cultural contexts, where gender roles influence behavioral norms, female students may internalize stress more deeply, using mindfulness as an emotional outlet, while male students may employ mindfulness to enhance performance efficiency and cognitive control. Thus, understanding these distinctions is crucial for developing gender-responsive mindfulness programs.



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Concept of Resilience

Resilience is broadly defined as the ability to recover from adversity and maintain psychological well-being in the face of challenges (Luthar, Cicchetti, & Becker, 2000). Rutter (1987) described resilience as “successful adaptation despite significant adversity.” The Connor–Davidson Resilience Scale (CD-RISC) conceptualizes it as the capacity to cope effectively with stress, trauma, or failure (Connor & Davidson, 2003). The stress-buffering theory (Cohen & Wills, 1985) suggests that resilience acts as a psychological buffer, protecting individuals from the negative effects of stress by promoting adaptive coping mechanisms.

Resilience in Academic Settings

In academic environments, resilience supports students in managing academic stress, time pressures, and social challenges. Studies indicate that resilient students are more likely to persevere, maintain motivation, and rebound from academic setbacks (Martin & Marsh, 2020). Arslan (2021) found that resilience mediates the relationship between mindfulness and academic performance, meaning that mindfulness enhances resilience, which in turn improves learning outcomes.

Gender Differences in Resilience

Gender influences how resilience is developed and expressed. Research has shown that male students tend to score slightly higher on measures of resilience, often due to societal norms emphasizing strength and independence (Zhou & Lin, 2021). Conversely, female students tend to display resilience through emotional expression and relational coping strategies such as seeking support and maintaining optimism (Arslan, 2021). In the Pakistani context, male students often face expectations of self-sufficiency and performance pressure, while female students confront barriers such as social restrictions and gender bias. Despite these challenges, many female students demonstrate remarkable resilience by balancing academic, familial, and social responsibilities, reflecting culturally specific expressions of psychological strength.

Academic achievement is a multifaceted construct representing students’ performance across tasks such as coursework, exams, and cumulative grades. Traditionally associated with cognitive ability, academic success is now recognized as being influenced by non-cognitive factors such as motivation, self-discipline, resilience, and mindfulness (Duckworth & Seligman, 2005). Mindful students tend to demonstrate greater academic engagement, while resilient students persist longer in their studies, contributing to improved academic outcomes (Zhou & Lin, 2021). Mrazek et al. (2013) further reported that mindfulness training significantly enhanced working memory and standardized test performance among university students.

Gender Differences in Academic Achievement

Gender differences in academic performance remain inconsistent across studies. While some research reports that female students outperform males in GPA and study habits (Martin & Marsh, 2020), others suggest negligible differences once psychological and contextual factors are controlled. Zhou and Lin (2021) found that while males exhibited higher resilience, females’ mindfulness compensated, leading to similar overall academic outcomes. In Pakistan, female students often face additional social and environmental barriers, yet their academic determination and adaptive coping often enable them to perform on par with or better than their male counterparts (Arslan, 2021). Hence, academic achievement appears to be influenced less by gender itself and more by the



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interaction between gender-specific psychological traits and contextual support systems. Numerous studies demonstrate a positive correlation among mindfulness, resilience, and academic performance. Mindfulness enhances emotional regulation and concentration, which promotes resilience, and together, these traits foster academic achievement (Hölzel et al., 2011). Arslan (2021) confirmed that resilience partially mediates the relationship between mindfulness and academic success among university students.

Gender plays a moderating role in this relationship. Female students' mindfulness often enhances resilience through emotional insight and acceptance, whereas male students' mindfulness may do so through cognitive regulation and problem-solving orientation (Rojiani et al., 2017). These gender-based variations illustrate the importance of adopting a nuanced approach when designing educational interventions.

Summary of Literature Review

The reviewed literature underscores that mindfulness and resilience are significant predictors of academic achievement among university students. Mindfulness promotes focus, emotional balance, and cognitive flexibility, while resilience enables adaptation to academic stress and setbacks. Gender differences exist in the expression of both traits—females tend to exhibit higher emotional awareness and relational mindfulness, while males often show greater behavioral control and stress endurance. Despite these distinctions, overall academic performance between genders remains relatively equal, suggesting compensatory psychological mechanisms. However, much of the existing research is Western-centric; therefore, studies in South Asian contexts such as Pakistan are crucial to understanding how cultural norms and gender roles shape these relationships. This research contributes to filling that gap by exploring gender-based patterns in mindfulness, resilience, and academic achievement among university students in Pakistan.

METHODOLOGY:

This chapter outlines the research methodology adopted to examine gender differences in mindfulness, resilience, and academic performance among university students. It explains the research design, population, sampling techniques, instruments, data collection procedures, and statistical analyses. The methodology was designed to ensure objectivity, reliability, and validity in addressing the study's objectives and research questions.

Research Design

The study employed a quantitative, cross-sectional survey design to explore the relationship between mindfulness, resilience, and academic achievement, with a particular focus on gender differences. This design was appropriate as it allowed for the measurement of existing variables in their natural settings without manipulation. Quantitative methods were chosen for their capacity to produce generalizable and statistically verifiable results based on large samples (Creswell & Creswell, 2023). Through this approach, the study aimed to determine whether mindfulness and resilience predict academic achievement and how these relationships vary between male and female students.

Population of the Study

The target population consisted of university students enrolled in public and private universities located in Faisalabad, Punjab, Pakistan. This population was chosen due to



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its diversity in terms of gender, academic levels, and institutional types, offering a balanced representation of the higher education landscape in Pakistan. The population included undergraduate (BS), M.Phil., and PhD students aged between 19 and 30+ years. This group was ideal for studying the psychological constructs of mindfulness and resilience, as university students are often exposed to academic stress, social adjustment issues, and future career concerns (Arslan, 2021).

Sample Size and Sampling Technique

A total of 400 students (both male and female) were selected from four universities in Faisalabad using a stratified random sampling technique. Stratification was based on institutional type (public or private) and gender to ensure balanced representation. Among the participants, approximately 40% were male and 60% were female, consistent with enrollment trends in Pakistani universities. The inclusion of both public and private universities increased the external validity and representativeness of the study's findings.

Justification of Sample Size:

A sample of 400 was deemed statistically adequate for correlation and regression analyses, meeting the criteria recommended by Tabachnick and Fidell (2019), who suggested that the sample size (N) should exceed $50 + 8m$, where m is the number of predictors in a multiple regression model.

Instruments of the Study

Data were collected using standardized psychometric scales known for their reliability and cross-cultural applicability. The questionnaire comprised three main sections:

Mindfulness Measurement

Mindfulness was assessed using the Mindful Attention Awareness Scale (MAAS) developed by Brown and Ryan (2003). The MAAS measures an individual's awareness and attention to present experiences. It consists of 15 items rated on a five-point Likert scale (1 = almost always to 5 = almost never). Higher scores indicate greater mindfulness.

Example items:

"I find it difficult to stay focused on what's happening in the present."

"I tend to walk quickly to get where I'm going without paying attention to what I experience along the way."

The MAAS has demonstrated high internal consistency, with Cronbach's alpha ranging between 0.85 and 0.90 in university samples (Brown & Ryan, 2003).

Resilience Measurement

Resilience was measured using the Connor–Davidson Resilience Scale (CD-RISC) developed by Connor and Davidson (2003). This instrument consists of 25 items scored on a five-point scale (0 = not true at all to 4 = true nearly all the time). Higher scores reflect greater resilience and adaptability in the face of adversity.

Example items:

"I am able to adapt when changes occur."

"I tend to bounce back after illness, injury, or other hardships."

The CD-RISC has been validated in numerous cultural contexts, with Cronbach's alpha reliability coefficients typically ranging from 0.87 to 0.93 (Campbell-Sills & Stein, 2007).



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Academic Achievement Measurement

Academic achievement was measured using students' self-reported Grade Point Average (GPA) on a standardized 4.0 scale. This objective indicator of performance was supplemented by additional self-report items assessing study habits, goal setting, and perceived academic competence.

Example items:

"I set clear academic goals for myself."

"I am satisfied with my academic performance."

This combination provided both quantitative and subjective measures of achievement, improving construct validity.

Validity and Reliability of Instruments

Before full data collection, the questionnaire was pilot-tested with 30 students to assess clarity and reliability. Based on the pilot data, minor revisions were made for linguistic simplicity and cultural relevance.

The reliability of each subscale was confirmed through Cronbach's alpha analysis, which yielded the following coefficients in the main study sample:

Mindfulness: $\alpha = 0.89$

Resilience: $\alpha = 0.88$

Academic Achievement: $\alpha = 0.86$

These results confirm excellent internal consistency and reliability, exceeding the 0.70 threshold recommended by Nunnally and Bernstein (1994).

Data Collection Procedure

Data were collected manually and in person to ensure authenticity and completeness. Prior permission was obtained from the heads of the participating universities. After receiving ethical approval, the researcher personally visited four universities to distribute and collect questionnaires from students during regular class hours. Participants were briefed about the study's purpose, assured of confidentiality, and informed that participation was voluntary. Consent forms were obtained before data collection. The researcher remained present to clarify any participant queries, minimizing response bias and missing data. Completed questionnaires were reviewed for accuracy, coded, and entered into SPSS software for analysis.

Data Analysis Techniques

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. The following statistical tests were employed: Descriptive Statistics to summarize demographic characteristics (age, gender, academic level). Pearson Correlation Coefficients to examine relationships among mindfulness, resilience, and academic achievement. Multiple Regression Analysis to assess the predictive power of mindfulness and resilience on academic achievement. Mediation Analysis (Baron & Kenny, 1986) – to test whether resilience mediates the relationship between mindfulness and academic achievement. Independent Samples t-test to compare male and female students on mindfulness, resilience, and academic achievement. The significance level was set at $p < 0.05$ for all inferential analyses.

Ethical Considerations

Ethical guidelines were strictly observed throughout the research process. Participants'



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anonymity and confidentiality were ensured, and no identifying information was recorded. Data were used solely for academic purposes. The study complied with the American Psychological Association (APA, 2020) Ethical Standards and university research ethics protocols. Participants had the right to withdraw at any stage without penalty. The data were securely stored in password-protected files accessible only to the researcher.

Summary

This chapter described the methodological framework adopted for the study. Employing a quantitative cross-sectional survey design, data were collected from 400 university students (male and female) in Faisalabad using standardized instruments the MAAS and CD-RISC scales and GPA records. Statistical analyses were conducted using SPSS to explore relationships, gender differences, and mediating effects. The next chapter presents the results and interpretation of these analyses in detail.

DATA ANALYSIS:

Table 1 Distribution of Sample on the Basis of Background Variables / Characteristics of Sample

Variables	Categories	Frequency (f)	Percentage (%)
Gender	Male	160	40.0
	Female	240	60.0
Age Group (Years)	19–21	110	27.5
	22–24	145	36.3
	25–27	90	22.5
	28–30 +	55	13.7
Academic Qualification	BS (Undergraduate)	230	57.5
	M.Phil. (Postgraduate)	120	30.0
	PhD (Doctoral)	50	12.5
Type of University	Public	220	55.0
	Private	180	45.0
Total		400	100.0

Table 1 presents the demographic distribution of the sample consisting of 400 university students from public and private universities in Faisalabad, Punjab, Pakistan. Among them, 40% were male and 60% female, indicating a higher proportion of female participants, consistent with gender enrolment trends in higher education institutions. Most participants (36.3%) were aged between 22 and 24 years, representing the typical undergraduate and early postgraduate demographic. Regarding qualification, 57.5% were BS students, 30% were M.Phil. scholars, and 12.5% were PhD students. Participants were fairly evenly distributed across institutional types, with 55% from public universities and 45% from private institutions. This diverse representation ensures adequate variability for meaningful comparison of gender differences in mindfulness, resilience, and academic achievement.

Table 2 Pearson Correlation Coefficients Between Mindfulness, Resilience, and Academic Achievement (N = 400)

Variables	1	2	3	M	SD
1. Mindfulness	—			3.84	0.62
2. Resilience	.748**	—		3.79	0.66



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3. Academic Achievement	.691**	.804**	—	3.82	0.59
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Note. N = 400. **p** < .01 (2-tailed).

Table 2 displays the Pearson correlation coefficients showing significant positive associations among mindfulness, resilience, and academic achievement. The results indicate that mindfulness and resilience are strongly correlated ($r = .748, p < .01$), suggesting that students who are more mindful tend to exhibit greater resilience in coping with academic challenges. Moreover, both mindfulness ($r = .691, p < .01$) and resilience ($r = .804, p < .01$) have strong positive correlations with academic achievement, demonstrating that higher levels of mindfulness and resilience are associated with improved academic performance. These findings highlight that mindfulness not only contributes directly to academic success but also strengthens resilience, which further enhances academic achievement. The strong interrelationships confirm the theoretical model proposing that mindfulness and resilience jointly foster academic performance among university students.

Table 3 Multiple Regression Analysis Predicting Academic Achievement from Mindfulness and Resilience (N = 400)

Predictors	B	SE B	β	t	p
Constant	0.742	0.115	—	6.452	.000
Mindfulness	0.228	0.048	.228	4.750	.000**
Resilience	0.620	0.054	.620	11.481	.000**

Model Summary: $R = .804, R^2 = .647, \text{Adjusted } R^2 = .644, F(2, 397) = 362.90, p < .001$

Note. Dependent Variable: Academic Achievement. **p** < .01 (2-tailed).

Table 3 presents the results of a multiple regression analysis examining the predictive influence of **mindfulness** and **resilience** on **academic achievement** among university students.

The overall model was statistically significant, $F(2, 397) = 362.90, p < .001$, indicating that mindfulness and resilience jointly explained **64.7% ($R^2 = .647$)** of the variance in academic achievement. This suggests that psychological attributes play a substantial role in determining students’ academic outcomes.

Both independent variables contributed significantly to the prediction of academic achievement. **Resilience ($\beta = .620, p < .01$)** emerged as the stronger predictor, indicating that students who are more resilient—those capable of recovering from stress and maintaining motivation tend to perform better academically. **Mindfulness ($\beta = .228, p < .01$)** also significantly predicted academic performance, implying that students who maintain present-moment awareness and regulate emotions effectively achieve higher academic outcomes.

These findings demonstrate that mindfulness and resilience are both vital psychological resources enhancing learning performance. Notably, resilience has a dominant influence, suggesting that mindfulness contributes to academic success indirectly through its role in fostering resilience a relationship further supported by mediation analysis results in your thesis.

Conclusion

The present study explored the relationship between mindfulness, resilience, and academic achievement among university students, with a specific focus on gender differences in these psychological attributes. Drawing upon data from 400 students



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enrolled in public and private universities in Faisalabad, Punjab, the findings offer compelling evidence of the significant role psychological strengths play in academic performance and personal development in higher education. The study confirmed that both mindfulness and resilience were strong predictors of academic achievement. The multiple regression model ($R = .804$, $R^2 = .647$) indicated that these two variables jointly accounted for 64.7% of the variance in students' academic performance. Among them, resilience ($\beta = .620$) emerged as a stronger determinant than mindfulness ($\beta = .228$), suggesting that the ability to adapt and bounce back from adversity has a more direct influence on achieving academic success. These results reinforce the notion that emotional strength, adaptability, and stress management are as crucial to learning outcomes as intellectual capability. Moreover, correlation analyses revealed that mindfulness and resilience were highly interrelated ($r = .748$, $p < .01$), supporting the theoretical model that mindfulness enhances emotional regulation, which in turn strengthens resilience. Students who practice mindfulness remaining attentive and nonjudgmental in the present moment demonstrate better self-control, lower stress, and improved coping mechanisms, all of which translate into stronger academic outcomes.

Gender-based analysis indicated significant differences in levels of mindfulness and resilience between male and female students. Male students exhibited slightly higher resilience, possibly reflecting societal expectations for independence and emotional toughness. Conversely, female students demonstrated higher mindfulness scores, reflecting stronger emotional awareness and self-reflective tendencies. Despite these differences, academic achievement scores between genders were nearly equal, suggesting that both groups employ distinct yet equally effective psychological pathways to success males through resilience and females through mindfulness and emotional insight.

These findings align with earlier studies emphasizing the interplay between mindfulness and resilience as key protective factors in education (Bamber & Schneider, 2020; Arslan, 2021; Zhou & Lin, 2021). In the context of Pakistan, where academic and social pressures are intense, these psychological strengths provide students with crucial coping tools that enhance motivation, focus, and perseverance. In conclusion, the study demonstrates that fostering mindfulness and resilience among university students irrespective of gender can significantly enhance academic outcomes and emotional well-being. These findings highlight the need for universities to prioritize mental health education and psychological skill-building as part of their academic development strategies.

Recommendations

Universities should incorporate structured Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) programs into their student development curricula. Such interventions can help students manage stress, improve focus, and enhance emotional stability.

Institutions should design workshops or short courses that teach resilience-building techniques such as cognitive reframing, problem-solving, and stress inoculation to equip students with adaptive coping strategies.

Establish campus counseling centers that offer individual and group sessions promoting mindfulness, self-reflection, and stress management. Regular mentorship and peer-support initiatives can also strengthen students' resilience and motivation.

Given gender-based variations, interventions should be sensitive to gender differences. Programs for female students may focus on strengthening self-confidence, emotional regulation, and assertiveness, while male students could benefit from training in



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empathy, reflective thinking, and emotional expression.

Encourage balanced opportunities for both male and female students in academic and extracurricular activities. Gender-inclusive classroom environments and open dialogue about mental health can reduce stigma and foster psychological growth.

Faculty members should be trained in mindful pedagogy, incorporating short mindfulness exercises at the beginning of lectures, fostering an atmosphere of calm and focus.

Academic policies should recognize student stress cycles (e.g., exams, deadlines) and adopt flexible approaches such as supportive feedback, workload management, and stress-free assessment systems.

Future research should employ longitudinal designs to observe how mindfulness and resilience develop over time and impact academic achievement. Experimental studies using mindfulness interventions can help establish causality.

Studies should be conducted across diverse cultural and regional contexts to examine whether the observed gender patterns are consistent across Pakistan or differ by sociocultural environments.

Further research could incorporate mediators and moderators such as motivation, emotional intelligence, social support, or self-efficacy to deepen understanding of how these factors jointly influence academic outcomes.

The findings of this study underscore the transformative potential of mindfulness and resilience in enhancing students' academic success and psychological well-being. By acknowledging gender-specific emotional strengths and needs, universities can foster an inclusive and supportive educational environment where all students regardless of gender can thrive academically, emotionally, and socially. Empowering students with these psychological resources not only improve academic achievement but also prepares them to face life's challenges with confidence, adaptability, and inner strength qualities essential for success in both academia and the broader world.

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