

Role of Mental Health in Academic Performance of University Students of Karachi

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Mental health issues are rising in university students at an alarming rate (Beroíza-Valenzuela et al., 2024; Emmerton et al., 2024; McGorry et al., 2025), hence current study aims to examine the role of mental health in the academic performance of university students using a quantitative correlation survey research design. For that data was collected from university students ($N= 200$; Government $n=96$; Private $n=92$; Semi-Government $n= 12$ of Karachi, Pakistan through purposive convenient sampling with equal gender ratio. For data collection Mental Health Continuum Short Form (MHC-SF, Keyes, 2009) and Demographic Information Form were used in which the academic performance of students was measured through their GPA and CGPA. The findings showed no relationship between Mental Health (Emotional, Social & Psychological Wellbeing) and academic performance of university students. Furthermore, there is a significant difference in mental health of both genders where male ($M=54.9$; $SD=12.36$) students had better mental health as compared to female students ($M=47.88$; $SD=12.30$). Male students also had better mental health in all the subdomains i.e., Emotional, Social and Psychological well-being as compared to female students. The current research has important implications for both clinical and educational psychologists.

Keywords: Academic Performance, Mental Health, Gender, Emotional Wellbeing, Social Wellbeing, Psychological Wellbeing, University Students

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University students face academic, social, and personal challenges that impact their emotional, social, and psychological well-being (Awang et al., 2014). Emotional well-being affects stress management and motivation, social well-being influences peer support and engagement, and psychological well-being shapes cognitive abilities and resilience. Understanding this connection is essential for developing effective support systems to enhance students' academic success and overall well-being. Systematic review estimated the 12% to 46% of undergraduates are distressed by mental health issues (Harrer et al, 2019). After the Covid-19 pandemic, the situation has worsened the stress level and stress enhancement among students (De Coninck et al., 2022). Hence it can be seen that mental health problems are arising among university students, and they impact on their different areas of functioning, particularly academic performance, and are needed to be seen.

Stress and strain can adversely affect academic achievement, as measured by GPA, meaning of obtained marks added over subjective courses. University life brings valuable transformations, as students need to make decisions about academic, social interpersonal demands that affect their performance (Jamil, et al., 2024). Most of the relevant research has shown a cross-sectional relationship between an impaired mental health status and poor academic performance (Castaneda et al., 2008; Wickersham et al., 2021). An unstable mental health state can negatively affect students emotionally and mentally, weakening their academic performance.

Arnett (2000) proposed the notion of emerging adulthood where an individual is navigating the transition from adolescents to adulthood. As University undergraduate students represent the same struggle, a specific population that is transitioning from adolescence to

adulthood, experience various changes. To cope with the challenges in their university environment, a lot of students are more likely to experience difficulty managing lifestyle behavior (Harrer et al., 2019; Kayaba et al., 2021) which eventually effect their performance. Hence current study aims to explore the relationship of mental health of university students with their academic performance.

A study at the Jahangirnagar University in Bangladesh revealed concerning mental health statistics among students, with 45% experiencing moderate-to-severe stress and 50% reporting moderate-to-severe anxiety. Additionally, over 44% faced extreme anxiety, while more than half showed signs of moderate depression. Severe depression affected 22% of students, and 7% experienced extreme depression (Jannatul, 2022). A study from 10 universities suggested that one in five students has a current mental health diagnosis and that almost half have experienced a serious psychological issue for which they felt they needed professional help (Abrams, 2022). University students appear to be particularly affected by poor mental health. In 2019, the National Collaborating Centre for Mental Health found that approximately 42.3% of university students self-reported having a mental health problem; depression and anxiety were the most common. Furthermore, the prevalence of mental health issues is higher in university students than in the general population. Consequently, this may affect their academic success, social interactions, and future careers (Hussain et al., 2025). Recent evidence clearly demonstrates that mental-health problems are highly prevalent among university students worldwide, making this population particularly vulnerable during their academic years. The overall body of research highlights that the transition into higher education, combined with academic workload, emerging adult responsibilities, and social pressures, contributes to the heightened prevalence of mental-health issues.

An unstable mental health state can negatively affect students emotionally and mentally, weakening their academic performance. Studies show that since education is foundational for social and personal development, it is crucial to examine the relationship between students' mental health and academic performance (Baker et al., 2021).

The gender differences of mental illness refer to the ways in which feminine or masculine qualities are assigned to different mental illnesses and mental illness symptoms. Stereotypes about men and women are what lead to this. For example, women are thought of as overly emotional, and therefore emotional illnesses such as depression and anxiety are thought to be more feminine. Gendered mental illnesses may be based in the simple reality that women are more likely to experience internalizing mental illnesses such as depression and anxiety whereas men are more likely to experience externalizing mental illnesses such as substance abuse and conduct disorders (Boysen et al., 2014). Women are more likely than men to experience stress and trauma in their lifetime (Klonoff et al., 2000). Women remained the dominant gender in either disorder, with 5.1% women versus 3.6% men, or, 4.6% women versus 2.6% men in each respectively. Population estimates from Pakistan offered a prevalence of 4.2% for depressive and 3.5% for anxiety disorders. The women in Pakistan were found to be having two to three times more anxiety and depressive disorders than their male counterparts, which is similar to the estimates from elsewhere. (Hussain et al., 2017).

Rationale and Significance of the Study

While numerous studies have focused on mental health issues among the elderly population, limited attention has been given to university students particularly those in Karachi who face unique academic and social pressures. This research addresses this gap by exploring how mental health challenges affect the academic performance of university students. As these students are on the verge of entering their professional careers, their mental well-being plays a crucial role in shaping their future success. Understanding this relationship can help universities, policymakers, and mental health professionals develop targeted interventions to

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support students during this critical stage of their lives. As in current culture the academic performance of the university students determines their future career success, therefore an identification of the early predictors of academic performance particularly mental health will help the universities to form policies to address mental health issues at a macro level and consequently improve the academic performance of university students, which will not only help them in developing sound professional careers but also take part in the development of the nation in the longer run.

University life is a developmental period marked by increased academic workload, social transitions, and psychological pressure. These challenges can directly influence students' emotional, social, and psychological well-being, which together constitute mental health. Moreover, post-pandemic changes have further intensified stress, academic demands, and adjustment difficulties among students (De Coninck et al., 2022). This period brings increased demands that can significantly influence students' emotional, social, and psychological wellbeing. Research continues to demonstrate that mental health issues have both direct and indirect effects on students' concentration, motivation, learning abilities, and overall academic success. Despite global recognition of student mental-health challenges, the relationship between mental health and academic performance remains inconsistent and context dependent. Some studies report that mental distress negatively affects academic outcomes, motivation, and engagement, while others show weak or no direct relationship between well-being and GPA, suggesting that factors such as resilience, coping styles, and institutional support may buffer these effects (Busalim et al., 2019). This inconsistency underscores the need for more localized and culturally relevant research, particularly in countries like Pakistan where environmental pressures, family expectations, societal norms, and resource limitations may uniquely shape students' academic and psychological experiences.

Given this rising concern, understanding the association between mental health and academic performance is crucial. Academic performance, commonly operationalized through GPA and CGPA is a key determinant of career opportunities and future success. Yet, in Pakistan, particularly in Karachi, limited empirical work has explored whether students' mental health actually influences their academic outcomes. This study is significant because it addresses a critical research gap by examining how emotional, social, and psychological well-being relate to academic performance. Whether mental health predicts academic achievement among university students. Gender differences in mental health, a notable and culturally important variable in Pakistan.

Hypotheses

- There is a significant relationship between mental health and academic performance of university students.
- There is a significant difference in the mental health of male and female university students.

Method

Research Design

This study employed quantitative correlational research design to examine relationships of mental health with academic performance and to explore gender differences. This design allows researchers to identify statistical relationships between naturally occurring variables without manipulating them (Creswell & Creswell, 2018). Standardized measures and numerical data analysis provide precise evaluation of patterns between students' mental well-being and their GPA or CGPA.

Participants

The study included a total of 200 university students. Among them, 96 were from public sector universities, 92 from private universities, and 12 from semi-government universities. The gender distribution was balanced with 100 males and 100 females, and the age range of participants was between 18 and 25 years. Students represented multiple faculties, including engineering, social sciences, management, medicine, law, and others. The participants were approached through purposive convenient sampling techniques.

Participants were selected based on specific inclusion criteria. They were required to be enrolled in a degree program and be between the ages of 18 and 25. Their most recent GPA or CGPA needed to be announced, and they should not have any diagnosed psychological disorders. Additionally, participants were expected to voluntarily agree to participate in the study. The details of the participants are given below in the table.

Table 1

Showing the Details of Demographic Characteristics of the Participants (N=200)

Variables	<i>f</i>	%	<i>M</i>	<i>SD</i>
Age			23.25	2.66
No. of Family Members			7.10	3.77
GPA			3.68	3.69
CGPA			3.67	3.68
Gender				
Male	100	50.0		
Female	100	50.0		
Birth Order				
First	54	27.0		
Middle	64	32.0		
Last	59	29.5		
Only	23	11.5		
Social Class				
Upper	101	50.5		
Middle	97	48.5		
Lower	2	1.0		
Family Type				
Nuclear	126	63.0		
Joint	61	30.5		
Extended	9	4.5		
Sector of University				
Private	92	46.0		
Government	96	48.0		
Semi-government	12	6.0		
Degree Program				
Undergraduate	81	40.5		
Graduation	98	49.5		
Post-graduation	21	10.5		
Faculty				
Social Sciences	28	14.0		
Management Sciences	12	6.0		
Medical Sciences	38	19.0		
Engineering Sciences	20	10.0		
Others	102	51.0		
Reasons for Choosing Program				
Self Interest	142	71.0		

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Parental Choice	39	19.5
Trend	13	76.5
Others	5	2.5
Satisfaction with Academic Progress		
Not At All Satisfied	52	26.0
Not Satisfied	39	19.5
Neither Satisfied Nor Dis-Satisfied	27	13.5
Satisfied	79	39.5
Satisfied A Lot	2	1.0
Academic Workload		
None	41	20.5
Somewhat	69	34.5
A Lot	90	45.0

Table 1 shows the frequency distribution and the percentages of some of the demographic variables that were considered in the present study. The study aimed to target the true representative sample of the population.

Measures

Informed consent form was provided to all participants, detailing the purpose of the study, procedures, voluntary participation, confidentiality, and withdrawal rights.

Demographic information was obtained through a form that included details such as age, gender, family structure, socioeconomic status, department, degree program, GPA, CGPA, satisfaction level, and academic workload. Academic performance was measured through students' most recent GPA and cumulative CGPA, which are widely recognized indicators of academic achievement.

Mental Health Continuum – Short Form (MHC-SF), 14-item, was used to assess Mental health. This measures emotional, social, and psychological well-being. Each item was rated on a six-point Likert scale, with higher scores indicating better mental health. (Keyes et al., 2008). The MHC-SF demonstrated to have good internal consistency ($\alpha = .91$) and for indigenous population overall mental health continuum ($\alpha = .76$), emotional ($\alpha = .67$), social ($\alpha = .56$) and psychological well-being ($\alpha = .55$) indicate satisfactory internal consistency of MHC-SF (Keyes, 2009; Kousar & Bhutto, 2023)

Procedure

Ethical approval was obtained before starting data collection. Students from various universities were approached and explained the study's objectives, potential risks, and confidentiality safeguards. Participants provided informed consent and subsequently completed the demographic information form, the MHC-SF, and submitted their GPA or CGPA details. The time required to complete the forms was approximately 15–20 minutes. All responses were systematically recorded and later analyzed using SPSS version 27.

Results

Pearson Product Moment Correlation and Independent Sample t-test were used to determine compile the results.

Table 2

Descriptive Statistics and Alpha Reliability Coefficients Study Variables (N=200)

Variables	α	Min	Max	M	SD
GPA	-	2.00	40.00	3.68	3.69
CGPA	-	2.09	40.00	3.67	3.68
Mental Health	0.88	18.00	84.00	51.39	12.79

Emotional Well-being	0.81	3.00	18.00	11.61	3.77
Social Well-being	0.81	5.00	30.00	16.22	5.78
Psychological Well-being	0.79	8.00	36.00	23.55	5.81

Table 2 presents the descriptive statistics and reliability coefficients of the study variables. The reliability analysis demonstrates adequate internal consistency for the Mental Health Continuum–Short Form (MHC-SF). The overall mental health scale showed a good Cronbach's alpha value ($\alpha = .88$), while emotional well-being ($\alpha = .81$), social well-being ($\alpha = .81$), and psychological well-being ($\alpha = .79$) also indicated acceptable reliability. These values suggest that the scales used in the study were reliable and suitable for further analysis. Additionally, the distribution of data indicates normality, fulfilling assumptions for parametric testing.

Table 3

Pearson Product Moment Product Correlations of Academic Performance and Mental Health (N=200)

Variables	MH	EW	SW	PSY
GPA	-0.33	.036	-.121	.025
CGPA	-.024	.039	-.112	.033

Note. MH= Mental Health, EW= Emotional Well-being, SW= Social Well-being, PW= Psychological Well-being

Table 3 shows the Pearson Product Moment Correlation between academic performance (GPA and CGPA) and mental health, including its domains (emotional, social, and psychological well-being). The results indicate that there was no significant relationship of CGPA, GPA with mental health or any of its domains. Therefore, the hypothesis is not supported.

Table 4

Mean, Standard Deviation and t-value for Gender in Academic Performance and Mental Health (N=200)

	Male (n=100)		Female (n=100)		<i>t</i> (df)	<i>p</i>	<i>LL</i>	<i>UL</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Mental Health	54.90	12.36	47.88	12.30	-4.02(198)	.038	-10.46	-3.57

Table 4 presents the mean scores, standard deviations, and t-test results for gender differences in mental health. The results indicate a statistically significant difference between male and female students in terms of mental health. Male students reported higher mean mental health scores compared to female students.

Discussion

The study found no significant relationship between mental health (emotional, social, & psychological well-being) and academic performance among university students. This suggests that academic performance may remain stable despite fluctuations in mental well-being. It was found that some students in the universities are capable of dealing with the increase in stress or difficulties and can maintain their academic performance (Chemers, et al., 2001).

In many university settings, students often develop coping strategies, rely on social or familial support, or prioritize academic tasks despite experiencing emotional strain. Additionally, academic performance may be influenced by factors such as study habits, course structure, assessment patterns, institutional expectations, and grading policies, which can buffer

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the negative effects of poor mental health. Therefore, even when students face emotional or psychological challenges, these external academic pressures and internal coping mechanisms may help them sustain their GPA and overall academic standing.

The findings show that mental health is not related with academic performance, it remains essential for emotional stability, interpersonal functioning, and long-term psychological well-being. Maintaining good mental health supports positive social relationships, effective decision-making, resilience, and overall quality of life, all of which are crucial for students' personal development and future success beyond university achievement (Anthonyamy, 2022).

However, the study revealed significant gender differences, with male students scoring higher on overall mental health and all subdomains. This aligns with research indicating that female students often report higher stress, emotional burden, and social pressures, especially in collectivist cultures (Kayaba et al., 2021). Research shows that some of the most common mental health disorders (such as depression, anxiety, and anorexia nervosa) are more prevalent in women (Johnson et al., 2023).

Female students have higher tendencies of internalizing problems of anxiety and depression, in which problematic feelings are turned inward against the self. This includes both milder and more severe forms of depression, as well as most types of anxiety, including generalized anxiety disorder and phobias. Greater depression means that more women than men live with feelings of profound sadness and loss, serious problems with negative self-concept, and feelings of guilt, self-reproach, and self-blame. Women experience a great loss of energy, motivation, and interest in life more often than men. They more frequently feel that life is hopeless, coupled with a deep sense of helplessness to improve their circumstances. Female students may face compounded pressures related to academic achievement, family obligations, and future career uncertainty, all of which can lead to worse mental health. (Cheng, et al., 2025).

These gender differences may be linked to societal expectations, traditional gender roles, reduced autonomy, and increased emotional and academic demands placed on female students. In many cultural contexts, females experience greater pressure to excel academically while simultaneously managing family responsibilities and social expectations, which may heighten their vulnerability to mental-health concerns. Moreover, females tend to internalize stress more frequently than males, leading to higher reporting of emotional and psychological difficulties also they have to play multiple roles at a time.

Conclusion

The findings revealed no significant relationship between mental health and academic performance. This suggests that fluctuations in students' emotional, social, or psychological well-being do not necessarily translate into differences in their academic outcomes. One possible explanation is that many students may continue to prioritize academic requirements despite experiencing distress, relying on resilience, coping strategies, or external academic pressures to maintain performance. Additionally, academic performance is shaped by numerous factors such as study habits, assessment structure, peer support, institutional expectations, and personal motivation which may buffer or overshadow the influence of mental health. Therefore, academic success does not always reflect a student's internal psychological state.

However, the study identified significant gender differences in mental health, with male students reporting higher well-being across all three subdomains compared to female students. This finding aligns with previous research suggesting that female students are more susceptible to stress, emotional burden, and social pressures, particularly in collectivist cultures where expectations and responsibilities may be gendered. These differences highlight the importance of considering gender when evaluating students' psychological experiences and designing mental-health interventions.

In conclusion, academic performance alone cannot be considered a sufficient indicator of students' psychological well-being. Universities must adopt a more comprehensive approach that promotes both academic growth and mental health to foster healthier, more resilient, and more successful student communities.

Implications of the Study

Overall, the study contributes meaningful evidence to the field of educational and clinical psychology by demonstrating that while mental health may not directly predict academic performance, it remains crucial for students' emotional balance, social functioning, and long-term psychological well-being. The results emphasize the need for universities to address mental-health concerns proactively, not merely for academic improvement but to support students' holistic development. Strengthening counseling services, reducing stigma, promoting well-being programs, and creating supportive learning environments can enhance students' overall quality of life. Furthermore, the gender disparities observed underscore the importance of gender-sensitive mental-health support, ensuring that the unique challenges faced by female students are acknowledged and effectively addressed.

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