

ACADEMIC OUTCOMES AND MENTAL HEALTH DISORDERS: A CROSS-SECTIONAL STUDY ON ANXIETY AND DEPRESSION IN UNDERGRADUATES

Omer Mahmood Mumtaz^{*1}, Sarwat Nazir², Zahbia Roohani³, Farah Rana⁴,
Ayesha Saqib⁵, Rizwana Raheel⁶, Aneeqa Saleem⁷

^{*1}Department of Pharmacy, Minhaj University Lahore, Pakistan/ Punjab University College of Pharmacy

^{2,3,4,5,7}Pharmacy Department Minhaj University Lahore, Pakistan

⁶Department of Pharmacy, Minhaj University Lahore, Pakistan/ Faculty of Pharmaceutical & Allied Health Sciences, LCWU

^{*1}omermehmood.pharma@mul.edu.pk

DOI: <https://doi.org/10.5281/zenodo.17198843>

Keywords

Depression, cross-sectional study, psychological

Article History

Received: 03 May, 2025

Accepted: 16 July, 2025

Published: 25 August, 2025

Copyright @Author

Corresponding Author: *

Omer Mahmood Mumtaz

Abstract

Background

Anxiety and depression are serious public health problems that have long-lasting effects. Depression is a frequent illness that affects a person's capacity to carry out daily tasks. Undergraduate students may encounter a stressed state that can happen at varied periods or levels and has a negative impact on academic success, psychological well-being and physical wellness. This research aims to study the impact of depression and anxiety on the academic performance of undergraduates.

Methodology

A three-month descriptive cross-sectional study was conducted. Sample size was 513 (M=171, F=342) Data collection was done based on the questionnaires including the DASS-21 scale as the study instrument. Data analysis was done through SPSS.

Result

The results of this cross-sectional study indicated that 148 students felt that they were over reacting to simple situations and 122 were experiencing trembling. About 28% students complained about feeling panic. While assessing the academic scale, the results indicated that 96(18.7%) respondents were not able to actively participate in every discussion. About 21.83% found it difficult to start project as assigned. And 100 respondents were not able to enjoy curricular activities. The study also revealed that there was no statistical significance or association between study faculty and depression, indicating that both medical and non-medical students were equally engaged in this practice. However, p-value showed that there was a significant association of social class, gender and residence with depression.

Conclusion

In conclusion, this descriptive quantitative study conducted in Universities of Pakistan indicated that depressed students can have issues regarding their academic performance. It revealed that about 25% of the students (sample size=513) had depressive thoughts and 20% of them were having problems in their academics. Further research can focus on understanding some other risk factors for

depression, and in exploring the major effects of depression on students' academics. In this way, we can work towards minimizing the anxiety related issues among students, depressive mindsets related to the exams and ensuring the academic credibility of undergraduates.

INTRODUCTION

Mental disorders are the leading cause of the burden of disease and impairment in the world; according to estimates about five of the ten most important contributing factors to the impairment among general population are due to mental disorders (Niaz et al., 2004). A survey performed in developing as well as developed countries showed that greater than 25% of the people develop one or more mental disorder during the course of their life (Almeida-Filho et al., 1998). Among these problems anxiety and depression are the most common public health issues.

1.1 Anxiety

Anxiety derives from the Latin word “*angere*”, which means “to cause distress” (Sharma et al., 2015). Anxiety is a condition of unease, worry, and nervousness brought on by the expectation of a dangerous situation, whether real or imagined. It frequently affects how well the body and mind works (Khan et al., 2007). According to several studies, one out of fourteen people fulfill the diagnostic criteria for anxiety (Yang et al., 2021). Muscle tightness, irritability, exhaustion, and cognitive problems are all common symptoms of anxiety (Akram et al., 2017). Common stressors in college students include increased academic responsibilities, being on your own in a new environment, changes in personal relationships, changes in social circles, and exposure to new individuals, concepts, and temptations (Kumaraswamy, 2013). Students often become anxious while being evaluated by their teachers, during a test or performing publicly. According to a theory proposed by (Huberty, 2009) test anxiety at times can cause marked poor performance, and the low self-esteem resulting from this anxiety can further cause loss of interest in putting efforts to perform their academic tasks. The learning process of students can be inhibited by anxiety as it utilizes all the reserves of working memory.

1.2 Depression

Depression is a word derived from Latin word *deprimere*; where *de* means “down” and *primere* means “to press”, so depression literally means to “press down”. It is a state of feeling “sad”, “blue” or simply “down” (Simpson, 1989). Depression significantly affects a person's ability to carry out routine work (Greenberg et al., 1993). The fundamental feature of depression is a loss of positive affect, which shows itself as a variety of symptoms, such as sleep disruption, a lack of self-love, anxiety, lack of focus and disinterest in daily activities. Middle to late adolescence is the most typical age when depression symptoms first arise or a first severe depressive episode occurs.

According to an estimate, among the student's population an average of 25% present the symptoms of depression (Sharma & Kirmani, 2013). For university students depression is one of the most pervasive issues.

1.3 Anxiety and depression

Anxiety and depression are serious public health problems that have long-lasting effects. Adolescent depression and anxiety are also linked to an increased risk of substance abuse and suicide (de Castro et al., 2023). One of the most difficult times in a person's life can be while they are a university student since they are part of a unique group of people going through a crucial transitory stage where they are transitioning from adolescence to adulthood. Without realizing they are depressed, they may skip classes, skip crying all the time, or isolate themselves (Sarokhani et al., 2013).

According to estimates, about one third of students—a rate that may be higher than that of the general population—are likely to be dealing with moderate to severe depression at any given time.

According to several cross-sectional studies, students who are more worried perform worse. However, given that continuous studies have not

revealed a correlation between high anxiety and subsequently inferior academic achievement; that linkage may just reflect students' worries about their studies. (Awadalla et al., 2020).

1.4 Undergraduates

According to studies, starting college might be stressful or difficult. This is due to the fact that university students must adapt to a changing social environment, lifestyle, and educational system.

Throughout the semester, they are assessed (Elias et al., 2011).

Undergraduate education is a sensitive time in a person's life, and many people consider this time crucial for creating systems and intervention techniques that could help avoid or lessen mental health issues. Psychological morbidity in undergraduate students represents a neglected public health problem and holds major implications for campus health services and mental policy making (Al-Qaisy, 2011).

1.5 Depression in Undergraduates

Undergraduate students may encounter a stressed state that can happen at varied periods and levels and frequently has a negative impact on academic success, psychological well-being, and physical wellness. However, in some severe situations, the effects linger for a long time, and suicide attempts may eventually happen. There is evidence in the literature that undergraduate students utilize antidepressants. Due to the pressure of their academics, Pakistani pharmacy students self-medicate with antidepressants at a very high rate (Naser et al., 2021).

1.6 Academic Performance

The general academic performance can be assessed from how a student completes assignments, homework, performance in written and oral tests, and attentiveness in work, writing in class and evaluation of grades (Sharma et al., 2015). Academic performance at university can be viewed as the result of two sets of factors: one set has its origins in the individual—each student's particular socioeconomic background and aptitude—and the other set has its roots in the school attended—being connected to the educational systems and modes of

knowledge transfer that are organized within schools (Win & Miller, 2005). Numerous other factors, such as gender, age, the teaching staff, the students' education, the father's or guardian's socioeconomic status, the students' residential area, the school's medium of instruction, tuition trends, the amount of time students spend studying each day, and whether they live in dorms or on campus, have an impact on students' academic growth and learning performance (Ali et al., 2013). Anxiety has been shown to be associated with good performance in some studies and poor performance in others, whereas depression is continuously linked with poor performance (Lane et al., 2005). According to research by Hysen-begasi and colleagues, students with a history of depression performed worse academically, but if their depression had been treated, this link vanished. (Awadalla et al., 2020). To this end, numerous studies all over the world have looked into the social and psychological factors that affect students' academic performance, ranging from socioeconomic status to inability to manage course load to personality, anxiety, stress, and depression (Muhammed et al., 2018).

A lot of research based studies were done in other cities of Pakistan like Sialkot and Gujranwala to determine the relationship between the depression and academic performance, but there was a research gap in Lahore on this topic.

This study, however, is specifically conducted among university students of Lahore, Pakistan; to observe the effect of depression and anxiety on the academic performance.

2.0 AIMS AND OBJECTIVES

- The purpose of this study was to examine the impact of depression and anxiety on academic performance among university students.
- This study was designed to determine whether students suffering with anxiety and depression symptoms lower academic performance.
- Another purpose was to determine the extent up to which signs of depression or anxiety occur among adolescents of different backgrounds.
- It was done to determine the prevalence of anxiety and depression in university students of Lahore, Pakistan.

3.0 METHODOLOGY:

3.1 Ethics Approval:

The Human Ethical Committee University College of Pharmacy, University of Punjab, Lahore, approved the study. All the participants were informed beforehand that the study is being conducted for the research purposes. The students participated voluntarily and confidentiality was assured.

3.2 Study Design:

We conducted a descriptive, cross sectional study for our project. Medical and Non-Medical students from different universities of Lahore were recruited in this study. We developed an online questionnaire using Google Forms and later printed forms were also distributed among the students with their consent. The whole study took an approximate of three months from February to April 2023.

3.3 Study Population:

Our sample size was 513. Participants included 416 Medical students and 97 Non-Medical students.

Inclusion Criteria: It contains all the students who were studying in undergraduate and master degree programs in the different universities of Lahore. There was no discrimination on the basis of gender, race, religion or social class. All those students who willingly volunteered to fill the questionnaire or online forms were included in the study.

Exclusion Criteria

The students from Primary, Middle and Secondary level of education were excluded from this study.

3.4 Study Instrument

The questionnaire was developed based on extensive literature review. We utilized DASS-21

Scale in our study. All the questions were mandatory. In the beginning, there was demographics portion (Gender, age, residence, marital status, social class, living status, maternal and paternal education).

Section II comprised of Depression and Anxiety scales, while Section III was for the evaluation of Academic Performance. The items of the scale are rated on a four point scale from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). The subscale scores were calculated by summing up all the scores in the end. Higher scores indicate higher level of depression and anxiety.

3.5 Data Collection:

Firstly, a questionnaire was formulated, and it was subsequently distributed to students who expressed their willingness to complete the forms. Out of the total number of participants employed for research, which amounted to 513 individuals, all of them successfully filled out the forms. Among these, 416 were medical participants, while the remaining 97 were non-medical. The demographic information gathered compose of several variables, including age, gender, marital status, paternal educational social class, maternal education, living status, and more.

3.6 Data Analysis:

The data collected was initially entered into Microsoft Excel. From there, it was transferred to SPSS (Statistical Package for the Social Sciences) Window version 26 for further analysis. Various calculations were performed in MS Excel to analyze the challenges reported by participants. Specifically, the average (mean) and standard deviation of responses were calculated to assess the central tendency and dispersion of the data, respectively. These statistical measures were used to gain insights into the challenges reported by the participants.

4.0 RESULTS

Table 1: Demographics of study participants

CHARACTERESITICS	FREQUENCY n=513 (%)

Gender	Male	
	Female	171(33.3)
		342(66.6)
Age	<19	125(24.3)
	19-22	276(53.8)
	23-26	92(17.9)
	>27	20(3.89)
Residence	Urban	415(80.8)
	Rural	98(19.1)
Marital status	Single	483(94.1)
	Married	30(5.84)
Social class	Upper	20(3.89)
	Middle	472(92.0)
	Lower	21(4.09)
Living Status	Day scholar	332(64.7)
	Hostellite	181(35.2)
Maternal Education	Middle Level	46(8.9)
	Secondary Level	83(16.17)
	Higher secondary	124(24.17)
	Graduation	260(50.6)

Paternal Education	
Middle Level	34(6.6)
Secondary Level	68(13.2)
Higher secondary	154(30.0)
Graduation	257(50.09)

Table 1 shows that the majority of 342 cases (66%) were females; the majority of the participants 276 (53.8%) belong to the age group 19-22. The highest percentage 415 cases (80.8%) were from urban and 98 cases (19.9%) were from rural areas. The majority of the respondents belong to middle class

472 (92%). Highest number of students was day scholars 332 (64.7%). Maternal education of majority of students 260 (50.6%) and Paternal education of maximum respondents 257 (50.9%) was up to graduation.

Table 2: Depression Anxiety Stress Scale

STATEMENTS	STRONGLY DISAGREE n (%)	DISAGREE n (%)	AGREE n (%)	STRONGLY AGREE n (%)
Found it hard to wind down	190(37.03)	182(35.47)	111(21.62)	30(5.84)
Was aware of dryness of mouth	138(26.90)	180(35.08)	122(23.78)	73(14.23)
Couldn't experience positive feelings	165(32.16)	172(33.52)	120(23.39)	56(10.9)
Experience breathing difficulty	191(37.23)	170(33.13)	107(20.8)	45(8.77)
Found it difficult to initiative	138(26.90)	182(35.47)	125(24.36)	68(13.25)

Tended to overreact	126(24.56)	163(31.77)	148(28.84)	76(14.81)
Experience trembling	166(32.35)	156(30.40)	122(23.78)	69(13.45)
Was using a lot of nervous energy	91(17.73)	168(32.74)	174(33.91)	80(15.59)
Was worried to panic	124(24.17)	170(33.13)	144(28.07)	75(14.61)
Had nothing to look forward to	163(31.77)	170(33.13)	109(21.24)	71(13.84)
Found myself getting agitated	152(29.62)	168(32.74)	133(25.92)	60(11.69)
Found it difficult to relax	113(22.02)	194(37.81)	130(25.34)	76(14.8)
Felt downhearted and blue	146(28.46)	181(35.28)	108(21.05)	78(15.20)
Was intolerant of anything	129(25.14)	194(37.81)	125(24.36)	65(12.67)
Was close to panic	146(28.46)	155(30.21)	137(26.70)	75(14.61)
Was unable to become enthusiastic	144(28.07)	166(32.35)	139(27.09)	64(12.47)
Felt I wasn't worth much	178(34.69)	147(28.65)	114(22.22)	74(14.42)
I felt I was touchy	172(33.52)	157(30.60)	128(24.95)	56(10.91)

Was aware of the action of my heart	124(24.17)	175(34.11)	146(28.46)	68(13.255)
Felt scared without any reason	159(30.99)	180(35.08)	121(23.58)	53(10.33)
I felt life was meaningless	199(38.79)	157(30.60)	93(18.1)	64(12.47)

Table 2 indicates that 111(21.62%) of the respondents agreed that they found it hard to wind down.

122(23.78%) of the students were aware of the dryness of mouth while 120(23.39%) couldn't experience any positive feeling. 107(20.8%) of the respondents had difficulty in breathing and 125(24.36%) found it difficult to initiative. 148(28.84%) students agreed that they tended to overreact in situations and 122 (23.78%) agreed that they experienced trembling. 174(33.91%) were using a lot of nervous energy and 144(28.07%) were worried to panic. 109(21.24%) felt they had nothing to look forward to while

133(25.92%) found themselves getting agitated. 130(25.34%) respondents found it difficult to relax and 108(21.05%) felt down hearted and blue. 125(24.36%) students agreed that they were intolerant of anything and 137(26.70%) felt close to panic. 139(27.09%) students were unable to become enthusiastic and 114(22.22%) felt that they weren't worth much. 128(24.95%) respondents were rather touchy while 146(28.46%) were not aware of the action of their heart. 121(23.58%) students felt scared without any reason and 93(18.1%) responded that they felt life was meaningless.

Table 3: Academic Performance Scale

STATEMENTS	STRONGLY DISAGREE n (%)	DISAGREE n (%)	NEUTRAL n (%)	AGREE n (%)	STRONGLY AGREE n (%)
Made myself ready for all subjects	51(9.94)	89(17.34)	170(33.31)	130(25.34)	73(14.2)
Pay attention to every discussion	35(6.822)	83(16.17)	147(28.65)	172(33.52)	76(14.81)
Want to get good grades	23(4.48)	42(8.18)	121(23.58)	140(27.29)	187(36.45)

Actively participated in every discussion	34(6.62)	96(18.7)	182(35.47)	134(26.12)	67(13.06)
Start projects as assigned	63(12.2)	112(21.83)	162(31.57)	115(22.47)	61(11.89)
Enjoy homework and activities	59(11.50)	100(19.49)	142(27.68)	145(28.26)	67(13.06)
Insert more effort into difficult assignments	31(6.04)	74(14.4)	123(23.97)	176(34.30)	109(21.24)
Problem solving is my hobby.	47(9.16)	55(10.72)	140(27.29)	181(35.28)	90(17.54)

Table 3 indicates that 89(17.34%) students disagreed about making themselves ready for all subjects while 83(16.17%) were unable to pay attention to every discussion. 42(8.18%) students didn't want to get good grades. While 96(18.7%) respondents did not actively participate in every

discussion. 112(21.83%) found it difficult to start project as assigned. 100(19.49%) were not able to enjoy homework and activities. 74(14.4%) couldn't insert more effort into difficult assignments. And 55(10.72%) students did not consider problem solving as their hobby.

Table 4: Association of nervous energy utilization with Socio-Demographic Status

Characteristics	Association of nervous energy utilization with Socio demographic status				
	Strongly Disagree (n=91)	Disagree (n=168)	Agree (n=174)	Strongly Agree (n=80)	p-value
Age	27(29.67)	33(19.64)	48(27.58)	17(21.25)	0.10
	44(48.35)	93(55.35)	93(53.44)	46(57.5)	
<19	12(13.18)	36(21.42)	30(17.24)	14(17.5)	
19-22	8(8.79)	6(3.57)	3(1.72)	3(3.75)	
23-26					

>27					
Gender					
Male	40(43.9)	53(3.54)	61(35.05)	17(21.25)	0.01
Female	51(56.04)	115(68.45)	113(64.94)	63(78.75)	
Area of Residence					
Urban	73(80.30)	125(74.40)	152(87.35)	68(85)	0.01
Rural	18(19.78)	43(25.59)	22(12.64)	12(15)	
Social Class					
Middle	87(95.60)	155(92.26)	163(93.67)	67(83.75)	0.04
Upper	1(1.09)	5(2.97)	8(4.59)	6(7.5)	
Lower	3(3.29)	8(4.76)	3(1.72)	7(8.75)	
Study faculty					
Medical	69(75.93)	140(53.33)	145(83.33)	62(77.5)	0.32
Non-medical	22(24.17)	28(16.66)	29(16.66)	18(22.5)	
Living status					
Day scholar	65(71.42)	100(59.52)	118(67.81)	49(61.25)	0.17
Hostellite	26(28.57)	68(40.47)	56(32.18)	31(38.75)	

Marital Status					
Single	83(91.20)	158(94.04)	165(94.82)	77(96.25)	0.52
Married	8(8.79)	10(5.95)	9(5.17)	3(3.75)	

Table 4 presents the association between “nervousness” and various “socio-demographic characteristics”. The p-values indicate the statistical significance of these associations. The table shows the distribution of respondents who felt nervous across different age groups. P-value of 0.10 suggests that there is no significant association between age and nervous energy.

The table also investigates the association between the nervousness and the area of residence (rural or urban). The p-value of 0.01 indicates a statistically significant association, suggesting that individuals living in urban areas are more likely to feel

nervous and depressed than compared to those in rural areas.

The table examines the association between nervous energy utilization with social class (upper, middle, lower). The p-value of 0.04 suggests a statistically significant association, indicating that individuals from the middle social class are more likely to be in a nervous state than compared to those from the upper or lower classes.

The table compares the feeling of nervousness between respondents of both genders (male, female). The p-value of 0.01 suggests a statistically significant association, indicating that females are more likely to be nervous as compared to males.

Table 5: Association of Curricular involvement with Socio-Demographic Status

Characteristics	Association of curricular involvement with socio-demographic status					
	Strongly Disagree n=35(%)	Disagree n=83(%)	Neutral n=147(%)	Agree n=172(%)	Strongly Agree n=76(%)	p-value
Age						0.004
<19	6(17.14)	20(24.09)		52(30.23)	21(27.63)	
19-22	21(60.00)	37(44.57)	26(17.68)	91(52.90)	39(51.32)	
23-26	7(20.0)	22(26.50)	88(59.86)	24(13.95)	8(10.52)	
>27	1(2.81)	4(4.81)	31(21.08) 2(1.36)	5(2.90)	8(10.52)	

Gender	Male	9(25.75)	30(36.14)	44(29.93)	61(35.46)	27(35.52)	0.646
	Female	26(74.28)	53(63.85)	103(70.06)	111(64.52)	49(64.47)	
Area of Residence				120(81.63)			
	Urban	30(85.71)	71(85.54)	27(18.36)	135(17.48)	62(81.57)	0.672
	Rural	5(14.28)	12(14.48)		37(21.51)	14(18.42)	
Social Class							
	Middle	33(94.28)	73(87.95)	140(95.23)	154(89.53)	72(94.72)	0.178
	Upper	2(5.71)	5(6.02)	5(3.40)	8(4.6)	0(0.00)	
	Lower	0(0.00)	5(6.02)	2(1.36)	10(5.81)	4(5.22)	
Study faculty							
	Medical	32(91.42)	63(75.89)		144(83.72)	55(72.36)	0.067
	Non-medical	3(8.57)	20(24.09)	122(82.99)	28(16.27)	21(27.63)	
				25(17.00)			

Living status						
Day scholar	27(77.14)	53(63.85)	91(61.90)	106(61.62)	55(72.36)	0.234
Hostellite	8(22.8)	30(36.14)	56(38.09)	66(38.38)	21(27.63)	
Marital Status				163(94.67)		0.013
Single	30(85.71)	76(91.56)	145(98.63)	9(5.232)	69(90.78)	
Married	5(14.28)	7(8.43)	2(1.36)		7(9.21)	

Table 5 shows the association of curricular involvement with socio-demographic characteristics of the respondents. The statistical significance of this association is indicated by the p-value represented in the table. The table represents the individuals with different socio-demographics and the impact of these characteristics on their academic performance. The table explores the association between age and academic performance. The p-value of 0.004 suggests that there is a significant association between age and curricular activities. The p-value of 0.646 suggests that there is no statistically significant association between gender and curricular and involvement. The table explores the academic performance of students with different areas of residence (rural and urban) and the p-value of 0.672 shows that there is no significant association between them. The association of social class (upper, middle or lower) has also been investigated in the table. The p-value of 0.178 indicates that there is no significant association between social class and curricular activities. The faculty of study (medical, non-medical) has no significant association with academic performance as it has a p-value of 0.067. The p-value of 0.013 suggests that there is a statistically significant

association between marital status and academic performance.

5.0 DISCUSSION:

This descriptive quantitative cross sectional study was done to focus on the impact of depression and anxiety on the academic performance of undergraduates in Pakistan. The data was collected randomly so that there were no biases. The results of the study had shown that 66% of the participants were female and 34% were male. This study also reported that 94% of the participants were single and 92% belonged to the middle class.

According to estimates, depression impacts the life of about 350 million people around the globe (Pillania et al., 2013). Another study has stated that about 53.43% of students in Pakistan present the symptoms of depression (Alvi et al., 2010). A study on depression in university students reported that depression prevalence ranged between 6 and 54% among university students (Wagner et al., 2022). Our study results show that 120(23.39%) students agreed that they couldn't experience any positive feeling which is in line with the previous literature, that shows 47 out of 54 students described a negative incident associated with a negative emotion (Doulougeri et al., 2016).

It further explored that 107(20.8%) of the respondents had difficulty in breathing, this corresponds with the findings identified in (Leander et al., 2014) study that all respiratory symptoms such as wheezing, breathlessness and nightly symptoms were more common at a statistically significant level in participants who had depression and anxiety even after adjusting for confounders.

There was a huge prevalence of nervous exhaustion as 174(33.91%) students agreed that they were using a lot of nervous energy. Our findings indicate that 93(18.15%) students agreed that they felt life was meaningless this affirms (Yalom & Leszcz, 2020) approach that having no meaning in life can lead to extreme disappointment and significant despair. 23.78% of the students complained about dry mouth in the depressive state.

The results also show a huge prevalence among the students who oppose regarding their ability to start the projects when assigned, as about 112(21.83%) students disagreed about it. The study also shows that 100(19.49%) students disagreed regarding enjoying curricular activities.

A study supported the hypothesis that depressed students tended to be deficient in problem solving ability. They had an idea of the problem and target, but they lacked the action oriented strategies to resolve those problems. (Marx et al., 1991). Our results indicate that 55 (10.72%) students disagreed that problem solving was their hobby.

According to a study, the physiological and emotional responses to various stressors like deadlines, too many test activities, and heavy workload were more pronounced in anxious than in non-anxious students. They tended to lack the concentration and focus they needed to cope up with these problems (Saravanan et al., 2014). Our study results also indicate that 83 (16.17%) students disagreed that they were able to pay attention to every discussion.

Mental health is a key factor in determining a student's school performance as well as his academic potential. If mental health issues go unnoticed, students will be unable to reach their academic potential ultimately. Our results indicate that 89 (39.62%) students disagreed to make themselves ready in all subjects.

Numerous other variables, including the population investigated, socio-demographic parameters (sex, age) (Kaplan et al., 2008), the diagnostic method, and sampling methods (Weissman et al., 1996) and socio-economic factor appear to have an impact on the incidence of depression. While studying the association of depression and anxiety with various socio-demographic factors the outcome shows that the significant factors are gender, social class and area of residence as they have the p value less than 0.05. The results suggest that people from middle class and urban areas are most likely to feel depression. Also, females as compared to males are expected to be depressed.

In table 5, responses of students from different age groups were evaluated. The p value in this case was 0.004; statistically significant association. For the gender characteristic, the p value was calculated as 0.646 which is greater than 0.005 so the association of socio demographic status with curricular involvement in this regard was not statistically significant. Similarly in case of area of residence, the p value of 0.672 did not give statistically significant association. However, for the category of social class, we got a statistically significant p value of 0.178; a clear relationship between the urban or rural areas of residence with academic performance of respondents. The association with the characteristic of day scholar or hostelite in living status was also not significantly significant with a p value of 0.234. For the characteristic of marital status, we got a p- value of 0.013 which is not statistically significant hence showing no association with academic performance of the students.

Study Limitation

This study has specific limitations since the participation in the survey was voluntary, the respondents filled out the questionnaire according to their freewill. So, they were self-reported measures, there may be ambiguity in the authenticity of the results. Because there is a stigma related with anxiety and depression, the respondents may not have answered truthfully especially the students with poor academic performance. Secondly this study was conducted in

only one city of Pakistan and not necessarily represents the pattern seen in the whole country. There is a need to conduct more of such studies in other cities of Pakistan. Another limitation is the diverse sociodemographic characteristics of the respondents such as family educational background, area of residence (urban or rural), and socio-economic factor may have a significant effect on the academic performance of university students. These differences may introduce confounding factors which can impact the conclusion of this study. Lastly a better method may be used to collect the data as selfadministered questionnaire may lead to biasness.

6.0 CONCLUSION

This descriptive cross sectional quantitative study examined the effect of depression and anxiety on the academic performance of undergraduates in Pakistan. The results revealed depressed students can have issues regarding their academic performance. The study concluded main reasons for lack of performance in depressed undergraduates could be trembling, lack of positive energy, nervousness and agitated feeling. Furthermore, anxious students seem to experience panic, especially during exams, that leads to low academic success.

This cross-sectional study conducted among undergraduates in Lahore, Pakistan found out that about 148(28.84%) students felt that they were overacting to simple situations and 122 (23.78%) were experiencing trembling. 174(33.91%) were using a lot of nervous energy and 144(28.07%) were worried to panic.

While assessing the academic scale, we found out that 96(18.7%) respondents stated that they cannot actively participate in every discussion. 112(21.83%) found it difficult to start project as assigned. 100(19.49%) were not able to enjoy homework and activities.

The study basically revealed that about 25% of the students (sample size=513) had depressive thoughts and 20% of them were having problems in their academics. This research highlights a concerning mental health issue like depression in undergraduates that can further contributes to

study its risk factors, effects and preventive methods.

The study also revealed that there was no statistical significance or association between study faculty and depression, indicating that both medical and non-medical students were equally engaged in this practice. However, there was a significant association between social class and depression, with the majority of participants belonging to the middle class being depressed.

To address this vital issue of anxiety and depression among undergraduates, it is crucial to increase public awareness about the mental issues and promote counseling. Educational campaigns, mental health seminars involving healthcare professionals, psychological therapies and media can play an important role. Additionally, students should be given proper counseling sessions about their dreams, jobs and future goals. They should be given a healthier learning environment instead of sheer academic pressure. Further research can focus on understanding some other risk factors for depression and exploring major effects of depression on students' academics. By focusing on these issues, we can work towards minimizing the anxiety related issues among students, depressive mindsets related to the exams and ensuring the academic credibility of students of Pakistan.

7.0 REFERENCES

- Akram, F., Kawa, S., & Giordano, J. (2017). Diagnosis in American psychiatry: a brief history of the diagnostic and statistical manual. *Handbook of DSM-5 disorders in children and adolescents*, 3-15.
- Al-Qaisy, L. M. (2011). The relation of depression and anxiety in academic achievement among group of university students. *Int J Psychol Couns*, 3(5), 96-100.
- Ali, S., Haider, Z., Munir, F., Khan, H., & Ahmed, A. (2013). Factors contributing to the students academic performance: A case study of Islamia University Sub-Campus. *American journal of educational research*, 1(8), 283-289.

- Almeida-Filho, N., Mari, J., Coutinho, E., França, J., Fernandes, J., Andreoli, S., & Busnello, E. (1998). Brazilian multicentric study of psychiatric morbidity. Methodological features and prevalence estimates. *The British journal of psychiatry : the journal of mental science*, 171, 524-529
- Alvi, T., Assad, F., Ramzan, M., & Khan, F. A. (2010). Depression, anxiety and their associated factors among medical students. *J Coll Physicians Surg Pak*, 20(2), 122-126.
- Awadalla, S., Davies, E. B., & Glazebrook, C. (2020). A longitudinal cohort study to explore the relationship between depression, anxiety and academic performance among Emirati university students. *BMC psychiatry*, 20, 1-10.
- de Castro, F., Cappa, C., & Madans, J. (2023). Anxiety and Depression Signs Among Adolescents in 26 Low-and Middle-Income Countries: Prevalence and Association With Functional Difficulties. *Journal of Adolescent Health*, 72(1), S79-S87.
- Doulougeri, K., Panagopoulou, E., & Montgomery, A. (2016). (How) do medical students regulate their emotions? *BMC medical education*, 16, 1-10.
- Elias, H., Ping, W. S., & Abdullah, M. C. (2011). Stress and academic achievement among undergraduate students in Universiti Putra Malaysia. *Procedia-Social and Behavioral Sciences*, 29, 646-655.
- Greenberg, P. E., Stiglin, L. E., Finkelstein, S. N., & Berndt, E. R. (1993). The economic burden of depression in 1990. *J Clin Psychiatry*, 54(11), 405-418.
- Huberty, T. J. (2009). Test and performance anxiety. *Principal leadership*, 10(1), 12-16.
- Khan, H., Kalia, S., Itrat, A., Khan, A., Kamal, M., Khan, M. A., Khalid, R., Khalid, S., Javed, S., & Javed, S. (2007). Prevalence and demographics of anxiety disorders: a snapshot from a community health centre in Pakistan. *Annals of general psychiatry*, 6(1), 1-6.
- Khurshid, S., & Khurshid, S. (2022). Impact of Depression, Aggression, and Self-Esteem on Students' Scholarly Execution. 6, 1-8
- Kumaraswamy, N. (2013). Academic stress, anxiety and depression among college students: A brief review. *International review of social sciences and humanities*, 5(1), 135-143.
- Lane, A. M., Whyte, G. P., Terry, P. C., & Nevill, A. M. (2005). Mood, self-set goals and examination performance: the moderating effect of depressed mood. *Personality and individual differences*, 39(1), 143-153.
- Leander, M., Lampa, E., Rask-Andersen, A., Franklin, K., Gislason, T., Oudin, A., Svanes, C., Torén, K., & Janson, C. (2014). Impact of anxiety and depression on respiratory symptoms. *Respiratory Medicine*, 108(11), 1594-1600
- Marx EM, Schulze CC. Interpersonal problem-solving in depressed students. *J Clin Psychol*. 1991 May;47(3):361-70. doi: 10.1002/1097-4679(199105)47:3<361::aid-jclp2270470307>3.0.co;2-I. PMID: 2066404.
- Muhammed, K., Terna, I. G., & Saanyol, D. B. (2018). The relationship between depression and academic performance among undergraduate students of Benue State University Makurdi, Nigeria. *Int. J. Educ. Eval*, 4(6), 77-85.
- Naser, A. Y., Alwafi, H., Amara, N. A., Alhamad, H., Almadani, M. A., Alsairafi, Z. K., & Salawati, E. M. (2021). Epidemiology of depression and anxiety among undergraduate students. *International journal of clinical practice*, 75(9), e14414.
- Niaz, U., Hassan, S.-U.-N., H, H., & Ss, S. (2004). A cross-sectional study of the frequency of psychiatric morbidity in affluent urban population of Karachi. *Pakistan Journal of Medical Sciences*, 20.
- Pilania, M., Bairwa, M., Kumar, N., Khanna, P., & Kurana, H. (2013). Elderly depression in India: An emerging public health challenge. *Australas Med J*, 6(3), 107-111.
- Saravanan C, Wilks R. Medical students' experience of and reaction to stress: the role of depression and anxiety. *ScientificWorldJournal*. 2014 Jan 29;2014:737382. doi:

- 10.1155/2014/737382. PMID: 24688425; PMCID: PMC3929074.
- Sarokhani, D., Delpisheh, A., Veisani, Y., Sarokhani, M. T., Manesh, R. E., & Sayehmiri, K. (2013). Prevalence of depression among university students: a systematic review and metaanalysis study. *Depression research and treatment*, 2013.
- Sharma, G., Mitra, M., & Mishra, S. (2015). Classroom Environment as a predictor of Academic Achievement. *Asian Man (The) - An International Journal*, 9, 47.
- Sharma, P., & Kirmani, M. (2013). *Exploring Depression & Anxiety among College Going Students*.
- Simpson, J. (1989). dmund Weiner, editors. Oxford EnglishDictionary. In: Oxford University Press.
- Wagner, F., Wagner, R., Kolanisi, U. *et al.* The relationship between depression symptoms and academic performance among first-year undergraduate students at a South African university: a cross-sectional study. *BMC Public Health* 22, 2067 (2022).
- Weissman, M., Bland, R., Canino, G., Faravelli, C., Greenwald, S., Hwu, H.-G., Joyce, P., Karam, E., Lee, C. K., Lellouch, J., Lépine, J.-P., Newman, S., Rubio-Stipec, M., Wells, J., Wickramaratne, P., Wittchen, H.-U., & Yeh, E. K. (1996). Cross-National Epidemiology of Major Depression and Bipolar Disorder. *JAMA : the journal of the American Medical Association*, 276, 293-299.
- Win, R., & Miller, P. W. (2005). The effects of individual and school factors on university students' academic performance. *Australian Economic Review*, 38(1), 1-18.
- Yang, X., Fang, Y., Chen, H., Zhang, T., Yin, X., Man, J., Yang, L., & Lu, M. (2021). Global, regional and national burden of anxiety disorders from 1990 to 2019: results from the Global Burden of Disease Study 2019. *Epidemiol Psychiatr Sci*, 30, e36