

Impact of Stress on Mental Health: Empirical Investigation from University Graduating Students in Nawabshah – Pakistan

Imran Farooque^a
Nawaz Ahmad^b
Salman Bashir Memon^c
Jolita Vveinhardt^d

Abstract

Around 10.7 % of the world population lives with a mental disorder, the most common mental disorders are anxiety and depression. It is assessed that out of 10.7%, around 3.9% live with anxiety, and 3.5 % suffer from depression. This study aimed to check the impact of stress on the mental health of university students in Nawabshah, Pakistan. Data was collected through an online questionnaire, and a sample of 302 students was selected through simple random sampling from three universities (SBBU, PUMHSW, and QUEST) of Nawabshah. Students of master's programs at these universities were excluded. Data were analysed to check the relationship and impacts for which this study was conducted. Of 302 students, 130, 116, and 56 were from SBBU, PUMHSW, and QUEST, respectively; the male respondents were 196, and the female respondents were 106. The study found 13.7 percent, 11.6 percent, and 19.2 percent of students with severe stress, severe anxiety, and severe depression, respectively. Moreover, 1.3 percent, 30.1 percent, and 11.6 percent of students were suffering from extremely severe levels of stress, anxiety, and depression, respectively. Regarding mean scores of stress, anxiety, and depression, they fall under the categories of mild, moderate, and moderate, respectively.

Keywords: DASS, Mental health, Stress, University students, Well-being

Article history:

Received on: May 30, 2023

Revised on: June 28, 2023

Accepted on: June 28, 2023

Published on: June 30, 2023

^a Shaheed Benazir Bhutto University, Pakistan. email: imranfarooque66@gmail.com

^b Associate Professor, Shaheed Benazir Bhutto University, Shaheed Benazirabad.

Research Associate, GOVCOPP, University of Aveiro, Portugal. email: nawazahmad1976@gmail.com

^c Shaheed Benazir Bhutto University, Pakistan. email: salman.bashir@sbbusba.edu.pk

^d Lithuanian Sports University, Kaunas, Lithuania. email: j.vveinhardt@gmail.com

INTRODUCTION

The World Health Organization (WHO) defines mental health as a “state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community”. This definition reminds us that various factors influence a person's mental or psychological health, including socioeconomic situation, surrounding environment, and characteristics or attributes.¹ It is critical to stress how dynamically these various determinants interact with one another and how they can either support or undermine a person's mental health. An example set of variables that could endanger or promote mental health is given in Table 1.

Table 1
Contributing Factors to Mental Health and Well-Being

<u>Level</u>	<u>Adverse Factors</u>	<u>Protective Factors</u>
Individual attributes	Low self-esteem. Cognitive/emotional immaturity Difficulties in communicating. Medical illness, substance use.	Self-esteem, confidence. Ability to solve problems and manage stress or adversity. Communication skills. Physical health, fitness.
Social circumstances	Loneliness, bereavement. Neglect, family conflict. Exposure to violence/abuse. Low income and poverty. Difficulties or failure at school. Work stress, unemployment.	Social support of family & friends. Good parenting/family interaction. Physical security and safety. Economic security. Scholastic achievement. Satisfaction and success at work.
Environmental Factors	Poor access to basic services. Injustice and discrimination. Social and gender inequalities. Exposure to war or disaster.	Equality of access to basic services. Social justice, tolerance. Social and gender equality. Physical security and safety.

The most common mental disorders are anxiety and depression. According to Dattani, et al, (2021) around 10.7 % of the world population lives with a mental disorder.² Out of these, around 284 million, which is 3.9%, are living with anxiety, and about 264 million, which is 3.5%, are suffering from depression.

¹ World Health Organization. "Risks to mental health: An overview of vulnerabilities and risk factors." *Geneva: WHO* (2012).

² S. H. Ritchie Dattani and M. Roser. "Our world in data: Mental health." (2021)

Impact of Stress on Mental Health

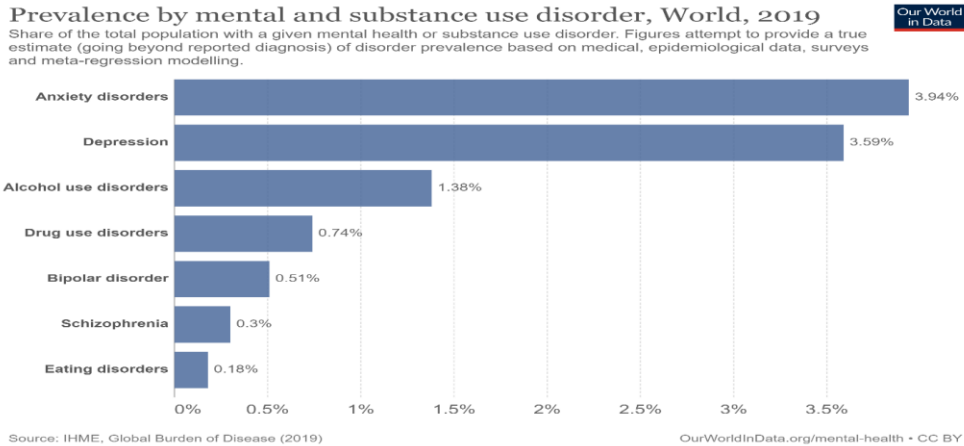


Figure 1. Prevalence of different Mental Health Disorders

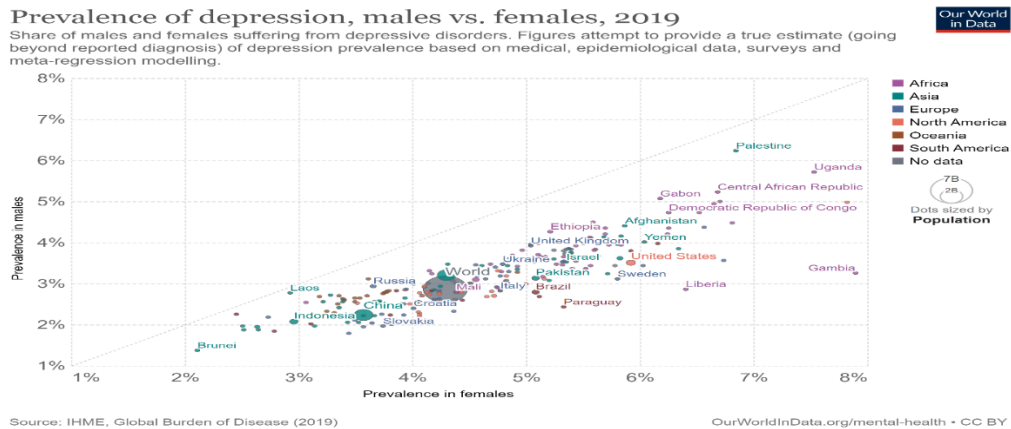


Figure 2. Prevalence of Depression in Females vs. Males in different Countries

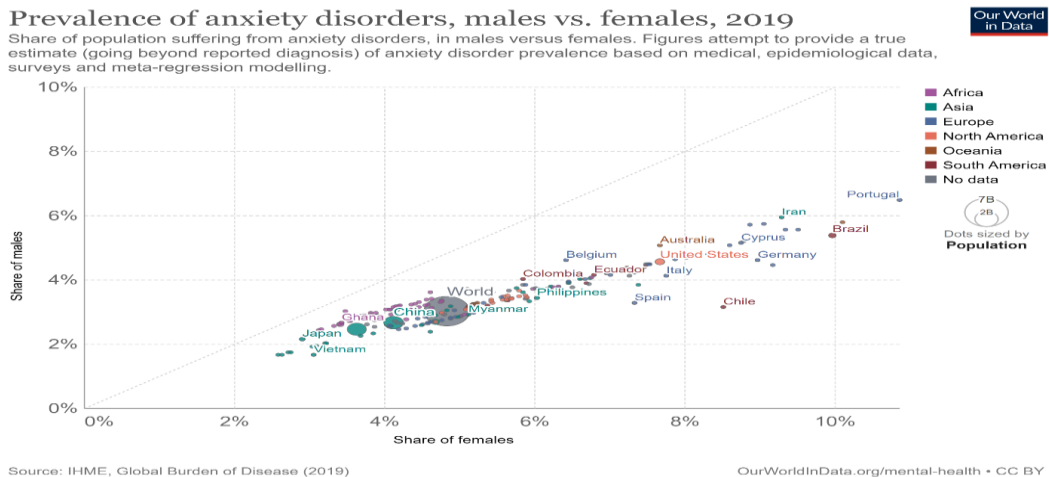


Figure 3. Prevalence of Anxiety in Females vs. Males in different Countries

The mental effects of stress can manifest in a variety of ways, including increased irritability or aggression, a feeling of helplessness or powerlessness, difficulty sleeping, extreme tiredness or exhaustion, extreme sadness or tears, difficulty focusing, or a combination of these and other symptoms. Continuous stress can result in other issues like depression and anxiety.^{3&4} World Health Organization defines stress as any change that causes physical, emotional, or psychological strain. Stress is your body's response to anything that requires attention or action. Everyone experiences stress to some degree. However, how you respond to stress greatly affects your overall well-being. Graduate students may experience high stress levels due to competing demands and the demanding nature of graduate programs. Professional pressures, such as the need to publish, teach, and meet advisor expectations, are added to the standard academic pressures of higher education, which can be overwhelming for graduate students. Students may risk their mental and physical health when juggling graduate school, work, and family responsibilities.⁵

LITERATURE REVIEW

Evaluating the psychological and mental effects on university students has received remarkable effort. From February 3 through the 10th, 2020, researchers in China conducted a cross-sectional study. Only 746217 of the 821218 graduating students who participated in the study were considered for statistical significance. About half of the people involved had some mental illness. Probable cases of stress, depression, and anxiety had prevalence rates of 34.9%, 21.1%, and 11.0%, respectively.⁶ In another study, 200 graduation students filled out online questionnaires, which shows that participants who report stress also suffer from depression and anxiety.⁷ A systematic review of 40 articles suggested that students with a higher stress level also have a high prevalence of anxiety and depression.⁸

Studies conducted over the past decade on the topic of stress and coping strategies among Arab medical students. Eight articles were found that fulfilled the inclusion criteria. According to the available data, many of these students suffer from mental health issues like stress, depression, and anxiety.⁹ In a cross-sectional study conducted at a private medical college in Abbottabad, Pakistan, out of 150 students, Around 19 per cent of students had moderate to severe anxiety, 23 per cent

³ Jacqueline Hoying, Bernadette Mazurek Melnyk, Elizabeth Hutson, and Alai Tan. "Prevalence and correlates of depression, anxiety, stress, healthy beliefs, and lifestyle behaviors in first-year graduate health sciences students." *Worldviews on Evidence-Based Nursing* 17, no. 1 (2020): 49-59.

⁴ Fu Wei, Tamizharasi G. Seetharam, and V. Sivakumar. "Early development of normative mind for the students- Stress management approach." *Aggression and Violent Behavior* (2021): 101627.

⁵ Hannah K Allen, Angelica L. Barrall, Kathryn B. Vincent, and Amelia M. Arria. "Stress and burnout among graduate students: Moderation by sleep duration and quality." *International journal of behavioral medicine* 28 (2021): 21-28.

⁶ Zijuan Ma, J. Zhao, Y. Li, D. Chen, T. Wang, Z. Zhang, Z. Chen et al. "Mental health problems and correlates among 746 217 college students during the coronavirus disease 2019 outbreak in China." *Epidemiology and psychiatric sciences* 29 (2020): e181.

⁷ Rebecca Stead, Matthew J. Shanahan, and Richard WJ Neufeld. "'I'll go to therapy, eventually': Procrastination, stress and mental health." *Personality and individual differences* 49, no. 3 (2010): 175-180.

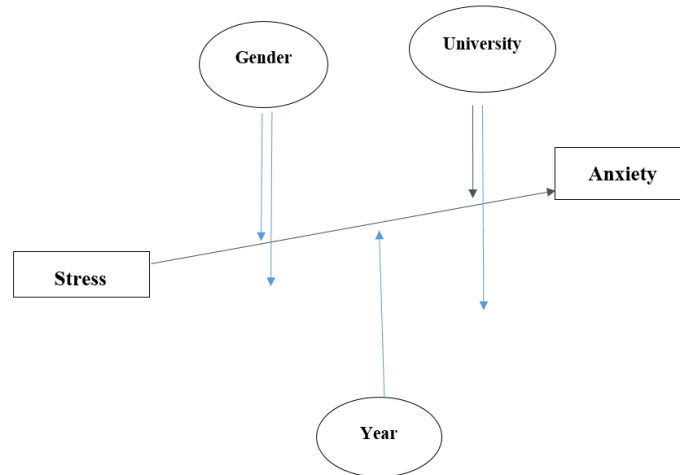
⁸ Liselotte N Dyrbye, Matthew R. Thomas, and Tait D. Shanafelt. "Systematic review of depression, anxiety, and other indicators of psychological distress among US and Canadian medical students." *Academic medicine* 81, no. 4 (2006): 354-373.

⁹ M.A Elzubeir, K. E. Elzubeir, and M. E. Magzoub. "Stress and coping strategies among Arab medical students: towards a research agenda." *Education for Health* 23, no. 1 (2010): 355

Impact of Stress on Mental Health

had moderate to severe stress, and moderate to severe depression 14 percent.¹⁰ The other study includes nursing students from Saudi Arabia and showed comorbidity of almost 19 percent of depression, stress, and anxiety. About 43 percent of respondents had mild depression, 37 with mild anxiety, and 31 percent with mild stress.¹¹ In Addis Ababa, Ethiopia, in a cross-sectional study among medical students, about 25 percent co-morbidity of stress, depression, and anxiety was observed.¹² According to Konac, et al., (2021), on analysis of secondary data comprised of 3760 participants, there was a comorbidity of 19 percent between stress, depression, and anxiety.¹³

Conceptual Framework



Hypotheses

H₁: Stress has a positive impact on anxiety.

H₂: Stress has a positive impact on depression.

H₃: Gender moderates the relationship between stress and anxiety.

H₄: Gender moderates the relationship between stress and depression.

H₅: University moderates the relationship between stress and anxiety.

¹⁰ Nadia Azad, Afshan Shahid, Nadeem Abbas, Azra Shaheen, and Nargis Munir. "Anxiety and depression in medical students of a private medical college." *Journal of Ayub Medical College Abbottabad* 29, no. 1 (2017): 123-127.

¹¹ Abdullelah Alsolais, Nahed Alquwez, Khalaf Aied Alotaibi, Aidah Sanad Alqarni, Mohammed Almalki, Fatmah Alsolami, Joseph Almazan, and Jonas Preposi Cruz. "Risk perceptions, fear, depression, anxiety, stress and coping among Saudi nursing students during the COVID-19 pandemic." *Journal of mental health* 30, no. 2 (2021): 194-201.

¹² Mebratu Abraha Kebede, Birke Anbessie, and Getinet Ayano. "Prevalence and predictors of depression and anxiety among medical students in Addis Ababa, Ethiopia." *International journal of mental health systems* 13, no. 1 (2019): 1-8.

¹³ Deniz Konac, Katherine S. Young, Jennifer Lau, and Edward D. Barker. "Comorbidity between depression and anxiety in adolescents: Bridge symptoms and relevance of risk and protective factors." *Journal of psychopathology and behavioral assessment* 43 (2021): 583-596

H6: University moderates the relationship between stress and depression.

H7: The year of study moderates the relationship between stress and anxiety.

H8: The year of study moderates the relationship between stress and depression.

METHODOLOGY

A Sample of 302 was included in this study through simple random sampling from graduating students of three universities (Peoples University of Medical and Health Sciences for women, Quaid e Awam University of Engineering, Sciences & Technology, and Shaheed Benazir Bhutto University) of Nawabshah, Pakistan. Data was collected through an online questionnaire method. The questionnaire comprised 24 closed-ended questions, of which 3 were about the respondents' demography, and the remaining 21 were taken from the DASS-21. Lovibond developed the Depression, Anxiety, and Stress Scales (DASS). A triangular set of self-report scales was developed to assess the above-mentioned negative emotional states. Each of the three contains 14 questions. Participants are asked to rate how frequently they have experienced each state over the previous week using a 4-point Likert scale. Each item that is depression, anxiety, and stress, is given a score between 0 to 42, and a total score of each item determines the severity of that particular item, as shown in Table 2. Total scores are calculated by adding the scores for the relevant items and multiplying by 2 if using the short version of DASS, which is DASS-21, as in the case of this study.

Table 2
Score Ranges of DASS

	Stress	Anxiety	Depression
Normal	0-14	0-7	0-9
Mild	15-18	8-9	10-13
Moderate	19-25	10-14	14-20
Severe	26-33	15-19	21-27
Extremely Severe	34+	20+	28+

Students of master's programs at these universities were excluded. Data were analysed by SPSS version 24 to check the relationship and impacts for which this study was conducted.

RESULTS & FINDINGS

Demographic Profile

Demographics Table 3 shows that the overall number of respondents was 302, of which 130, 116, and 56 respondents were from SBBU, PUMHSW, and QUEST, respectively. The Male respondents were 196, 64.9%, and the female respondents were 106, 35.1%. According to the year of study, 73 (24.2%) were from 1st year, 75 (24.8%) were from 2nd year, 80 (26.5%) were from 3rd year, 63 (20.9%) were from 4th year and only 11 (3.6%) students were from 5th year.

Table 3
Demographic Frequencies

	Sub Groups	Frequency	Percentage
University	SBBU	130	43 %
	PUMHSW	116	38.4 %
	QUEST	56	18.5 %
Gender	Female	196	64.9 %
	Male	106	35.1 %
Year of Study	1st Year	73	24.2%
	2nd Year	75	24.8%
	3rd Year	80	26.5%
	4th Year	63	20.9%
	5th Year	11	3.6%

Descriptive Analysis

Table 4 shows that 151, 46, 59, 42, and 4 students were classified as normal, mild, moderate, severe, and extremely severe for stress, respectively, based on their total scores. There were 74 students classified as having no anxiety, another 28 as mildly anxious, another 74 as moderately anxious, another 35 as severely anxious, and another 91 as extremely anxious. Depending on their level of depression, students were categorized as follows: 93 had no symptoms, 37 had mild symptoms, 79 had moderate symptoms, 58 had severe symptoms, and 35 had extremely severe symptoms. That is, as many as half of respondents experienced higher than normal level of stress, while anxiety symptoms of only a quarter of students and depression symptoms of just over a quarter of students were within the normal range.

Table 4
DASS Score Frequencies

	Stress		Anxiety		Depression	
	f	%	f	%	F	%
Normal	151	50%	74	24.5%	93	30.8%
Mild	46	15.2%	28	9.3%	37	12.3%
Moderate	59	19.5%	74	24.5%	79	26.2%
Severe	42	13.9%	35	11.6%	58	19.2%
Extremely Severe	4	1.3%	91	30.1%	35	11.6%
Total	302	100%	302	100%	302	100%

Descriptive Statistics Based on Total Score

The mean stress score is 15.24, which can be categorised as a mild stress level according to the score ranges of DASS Table 2. For depression, the mean score is 15.086, which represents a moderate level of depression, and the mean score for anxiety is 14.019, which falls in the category of a moderate level of anxiety.

Table 5
Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Stress Score	302	15.2450	9.14044	.185	.140	-.464	.280
Depression Score	302	15.0861	9.36306	.097	.140	-.865	.280
Anxiety Score	302	14.0199	8.88088	.384	.140	-.452	.280
Valid N (listwise)	302						

Correlation

The correlation analysis shows below in Table 6 that the relationship between stress and depression is positively significant with a value of 0.784, the relationship between stress and anxiety is positively significant with a value of 0.828 and the relationship between anxiety and depression is positively significant with a value of 0.774.

Table 6
Correlations

		Stress Score	Depression Score	Anxiety Score
Stress Score	Pearson Correlation	1	.784**	.828**
	Sig. (2-tailed)		.000	.000
	N	302	302	302
Depression Score	Pearson Correlation	.784**	1	.774**
	Sig. (2-tailed)	.000		.000
	N	302	302	302
Anxiety Score	Pearson Correlation	.828**	.774**	1
	Sig. (2-tailed)	.000	.000	
	N	302	302	302

** . Correlation is significant at the 0.01 level (2-tailed).

Regression

Table 7 shows that the model’s explanatory power is significant as $F=477.97$ ($p=0.000$). Moreover, the relationship between depression and stress is significant. Furthermore, Table 8 shows there is a positive impact of stress on depression. When the stress score increases by 1 unit, the depression

Impact of Stress on Mental Health

score increases by 0.803 units. This relationship is significant as $t = 21.86$ (benchmark $t \geq 2$) followed by $\text{sig} = 0.000$ ($\text{sig} < 0.01$).

Table 7
ANOVA of Stress and Depression

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16212.185	1	16212.185	477.973	.000b
	Residual	10175.576	300	33.919		
	Total	26387.762	301			
a. Dependent Variable: Depression Score						
b. Predictors: (Constant), Stress Score						

Table 8
Coefficients of Stress and Depression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	2.846	.653		4.361	.000
	Stress Score	.803	.037	.784	21.863	.000
a. Dependent Variable: Depression Score						

Table 9 shows that the model's explanatory power is significant as $F=651.97$ ($p=0.000$), and the relationship between Anxiety and stress is significant. So far, Table 8 is concerned; it shows there is a positive and significant impact of stress score on the anxiety score as $t = 25.53$ (benchmark $t \geq 2$) followed by $\text{sig} = 0.000$ ($\text{sig} < 0.01$). The gradient shows that when there is a unit increase in the stress score, the anxiety score increases by 0.804 units.

Table 9
ANOVA of Stress and Anxiety

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16258.628	1	16258.628	651.975	.000b
	Residual	7481.253	300	24.938		
	Total	23739.881	301			
a. Dependent Variable: Anxiety Score						
b. Predictors: (Constant), Stress Score						

Table 10
Coefficients of Stress and Anxiety

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.762	.560		3.149	.002
1 Stress Score	.804	.031	.828	25.534	.000

a. Dependent Variable: Anxiety Score

Gender as Moderator

Tables 11 and 12 show the impact of stress on depression and the impact of stress on anxiety, respectively. Gender was tested as a moderator, but in both cases, gender does not moderate the relationships, as both males and females significantly affect depression and anxiety.

Table 11
Coefficient of Relation between Stress and Depression according to Gender

Gender	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Female	1 (Constant)	3.319	.833		3.984	.000
	1 Stress Score	.746	.051	.727	14.760	.000
Male	1 (Constant)	2.217	1.031		2.150	.034
	1 Stress Score	.872	.052	.856	16.851	.000

a. Dependent Variable: Depression Score

Table 12
Coefficient of Relation between Stress and Anxiety According to Gender

Gender	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Female	1 (Constant)	1.547	.640		2.415	.017
	1 Stress Score	.849	.039	.843	21.849	.000
Male	1 (Constant)	1.743	1.106		1.576	.118
	1 Stress Score	.762	.056	.803	13.729	.000

a. Dependent Variable: Anxiety Score

University as Moderator

University does not moderate the relationship between stress and either depression or anxiety (Tables 13 and 14) as all relationships are significant ($t > 2$; $sig < 0.01$). It depicts that respondents have significant level of depression and anxiety due to stress; irrespective of the university they are studying.

Table 13

Coefficient of Relation between Stress and Depression according to the University

University	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
SBBU	1	(Constant)	5.643	1.279		4.413	.000
		Stress Score	.716	.065	.698	11.019	.000
PUMHSW	1	(Constant)	2.780	.821		3.386	.001
		Stress Score	.793	.051	.822	15.400	.000
QUEST	1	(Constant)	-.805	1.500		-.537	.594
		Stress Score	.882	.090	.800	9.791	.000

a. Dependent Variable: Depression Score

Table 14

Coefficient of Relation between Stress and Anxiety according to University

University	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
SBBU	1	(Constant)	2.344	.928		2.526	.013
		Stress Score	.826	.047	.840	17.524	.000
PUMHSW	1	(Constant)	1.917	.618		3.101	.002
		Stress Score	.874	.039	.904	22.551	.000
QUEST	1	(Constant)	2.196	1.408		1.559	.125
		Stress Score	.473	.085	.606	5.594	.000

a. Dependent Variable: Anxiety Score

Year of Study as Moderator

It has been hypothesized that the year of study may have a different level of depression and anxiety, but the assessment of the data reveals that the year of study does not moderate either of the relationships as for Tables 15 and 16, the stress score for all five years have a significant impact on depression as well as on anxiety as $t > 2$ and $sig < 0.01$ for all the cases.

Table 15

Coefficient of Relation between Stress and Depression according to Year of Study

Year	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1st Year	1	(Constant)	-.108	1.291		-.083	.934
		Stress Score	.889	.076	.812	11.720	.000
2nd Year	1	(Constant)	1.806	1.115		1.620	.110
		Stress Score	.869	.063	.849	13.750	.000
3rd Year	1	(Constant)	5.428	1.424		3.812	.000
		Stress Score	.670	.087	.658	7.721	.000
4th Year	1	(Constant)	4.918	1.564		3.144	.003
		Stress Score	.760	.081	.767	9.341	.000
5th Year	1	(Constant)	3.483	2.361		1.475	.174
		Stress Score	.718	.101	.921	7.091	.000

a. Dependent Variable: Depression Score

Table 16

Coefficient of Relation between Stress and Anxiety according to Year of Study

Year	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1st Year	1	(Constant)	1.227	1.107		1.109	.271
		Stress Score	.750	.065	.808	11.544	.000
2nd Year	1	(Constant)	1.808	1.029		1.757	.083
		Stress Score	.845	.058	.861	14.492	.000
3rd Year	1	(Constant)	2.372	1.271		1.867	.066
		Stress Score	.783	.077	.753	10.116	.000
4th Year	1	(Constant)	1.054	1.217		.865	.390
		Stress Score	.867	.063	.869	13.686	.000
5th Year	1	(Constant)	3.955	1.849		2.139	.061
		Stress Score	.685	.079	.945	8.631	.000

a. Dependent Variable: Anxiety Score

Table 17
Hypotheses Assessment Summary

No.	Statement	P	Decision
H1	Stress has a positive impact on anxiety	.000	Supported
H2	Stress has a positive impact on depression.	.000	Supported
H3	Gender moderates the relationship between stress and anxiety.	.000	Not Supported
H4	Gender moderates the relationship between stress and depression.	.000	Not Supported
H5	University moderates the relationship between stress and anxiety.	.000	Not Supported
H6	University moderates the relationship between stress and depression.	.000	Not Supported
H7	The Year of study moderates the relationship between stress and anxiety	.000	Not Supported
H8	The Year of study moderates the relationship between stress and depression	.000	Not Supported

Discussion

This research examined the connection between stress, depression, and anxiety. Therefore, we aim to calculate the correlation between stress, depression, and anxiety in this investigation. In addition, according to Table No. 6, there is a positive relationship between all three variables. A study conducted in Saudi Arabia during COVID-19 also shows the relationship between three variables as their results show the comorbidity of anxiety, depression, and stress.¹⁴ Furthermore, the regression analysis indicates that stress does not significantly contribute to emotional distress. The correlation between stress and mental health problems is not moderated by demographics such as age, year of study, or institution attended. In contrast to this study, Calvarese (2015), who investigated reactions to stress, found that women studying in the US exhibited higher levels of depression and anxiety than men did. However, cultural differences also need to be taken into account.¹⁵ Shamsuddin et al., (2013) found that there was a relation between ethnic origin and stress scores.¹⁶ In addition, different levels of stress are determined by the educational systems differing across countries as well as the conditions set by them, which students in different years of study strive to meet.¹⁷

CONCLUSION & RECOMMENDATIONS

Summarizing the results of the study, it can be stated that students' state of emotional well-being is a very serious problem that requires special attention and interventions from higher education institutions. The results of this study revealed that among the graduating students of the universities in Nawabshah, 13.7 per cent, 11.6 per cent, and 19.2 per cent of students had severe stress, severe anxiety, and severe depression, respectively. This shows that a significant proportion of students

¹⁴ Op.Cit. Abdullelah Alsolais, "Risk perceptions, fear, depression, anxiety, stress and coping among Saudi nursing students during the COVID-19 pandemic."

¹⁵ Michelle Calvarese, "The effect of gender on stress factors: An exploratory study among university students." *Social Sciences* 4, no. 4 (2015): 1177-1184.

¹⁶ Khadijah Shamsuddin, Fariza Fadzil, Wan Salwina Wan Ismail, Shamsul Azhar Shah, Khairani Omar, Noor Azimah Muhammad, Aida Jaffar, Aniza Ismail, and Raynuha Mahadevan. "Correlates of depression, anxiety and stress among Malaysian university students." *Asian journal of psychiatry* 6, no. 4 (2013): 318-323

¹⁷ Zsuzsanna Szabo, and Mihai Marian. "Stressors and reactions to stress: A cross-cultural case study in two educational programs." *Journal of Evidence-Based Psychotherapies* 17, no. 1 (2017)

encounter serious psychological problems that can have a negative impact on their quality of life and academic performance. In addition, 1.3%, 30%, and 11.6% of students were dealing with extremely high levels of stress, anxiety, and depression, respectively. As to the mean scores of stress, anxiety, and depression, they fall under the categories of mild, moderate, and moderate, respectively. It is therefore important that higher education institutions ensure adequate assistance and support for students to help them cope with psychological problems.

This study was focused on the Impact of Stress on Mental Health disorders, but we restrict our study to depression and anxiety due to the highest prevalence throughout the world, and other mental health disorders like schizophrenia, eating disorders, and addictive behaviours are still unattended in the study population of this study. Other researchers can study these variables in the same study population. The second limitation is the demographic that is in this study. We include only university students. Considering the population of Pakistan is over 250 million, we can't generalise results to the whole population and other demographic areas like working class, school students, and aged population so that other researchers can study other demographic and geographic areas.

The research shows that many college graduates struggle with mental health issues that, if left untreated, can have far-reaching consequences for their professional and personal lives. Studies have shown that if these disorders go untreated, they can lead to suicidal ideation and burnout. Given the lack of a foundational study on mental health disorders in Nawabshah's academic institutions, the present findings can serve as a starting point from which to launch an in-depth investigation into the factors contributing to such alarmingly high prevalence rates, as well as the development and implementation of strategies for mitigating those factors and lowering students' stress levels.

REFERENCES

Allen, Hannah K., Angelica L. Barrall, Kathryn B. Vincent, and Amelia M. Arria. "Stress and burnout among graduate students: Moderation by sleep duration and quality." *International journal of behavioral medicine* 28 (2021): 21-28.

Alsolais, Abdullelah, Nahed Alquwez, Khalaf Aied Alotaibi, Aidah Sanad Alqarni, Mohammed Almalki, Fatmah Alsolami, Joseph Almazan, and Jonas Preposi Cruz. "Risk perceptions, fear, depression, anxiety, stress and coping among Saudi nursing students during the COVID-19 pandemic." *Journal of Mental Health* 30, no. 2 (2021): 194-201.

Azad, Nadia, Afshan Shahid, Nadeem Abbas, Azra Shaheen, and Nargis Munir. "Anxiety and depression in medical students of a private medical college." *Journal of Ayub Medical College Abbottabad* 29, no. 1 (2017): 123-127.

Calvarese, Michelle. "The effect of gender on stress factors: An exploratory study among university students." *Social Sciences* 4, no. 4 (2015): 1177-1184.

Dattani, S., H. Ritchie, and M. Roser. "Our world in data: Mental health." (2021).

Impact of Stress on Mental Health

Dyrbye, Liselotte N., Matthew R. Thomas, and Tait D. Shanafelt. "Systematic review of depression, anxiety, and other indicators of psychological distress among US and Canadian medical students." *Academic medicine* 81, no. 4 (2006): 354-373.

Elzubeir, M. A., K. E. Elzubeir, and M. E. Magzoub. "Stress and coping strategies among Arab medical students: towards a research agenda." *Education for Health* 23, no. 1 (2010): 355.

Hoying, Jacqueline, Bernadette Mazurek Melnyk, Elizabeth Hutson, and Alai Tan. "Prevalence and correlates of depression, anxiety, stress, healthy beliefs, and lifestyle behaviors in first-year graduate health sciences students." *Worldviews on Evidence-Based Nursing* 17, no. 1 (2020): 49-59.

Kebede, Mebratu Abraha, Birke Anbessie, and Getinet Ayano. "Prevalence and predictors of depression and anxiety among medical students in Addis Ababa, Ethiopia." *International Journal of Mental Health Systems* 13, no. 1 (2019): 1-8.

Konac, Deniz, Katherine S. Young, Jennifer Lau, and Edward D. Barker. "Comorbidity between depression and anxiety in adolescents: Bridge symptoms and relevance of risk and protective factors." *Journal of psychopathology and behavioral assessment* 43 (2021): 583-596.

Ma, Zijuan, J. Zhao, Y. Li, D. Chen, T. Wang, Z. Zhang, Z. Chen et al. "Mental health problems and correlates among 746 217 college students during the coronavirus disease 2019 outbreak in China." *Epidemiology and psychiatric sciences* 29 (2020): e181.

Shamsuddin, Khadijah, Fariza Fadzil, Wan Salwina Wan Ismail, Shamsul Azhar Shah, Khairani Omar, Noor Azimah Muhammad, Aida Jaffar, Aniza Ismail, and Raynuha Mahadevan. "Correlates of depression, anxiety, and stress among Malaysian university students." *Asian Journal of Psychiatry* 6, no. 4 (2013): 318-323.

Stead, Rebecca, Matthew J. Shanahan, and Richard WJ Neufeld. "'I'll go to therapy, eventually': Procrastination, stress, and mental health." *Personality and individual differences* 49, no. 3 (2010): 175-180.

Szabo, Zsuzsanna, and Mihai Marian. "Stressors and reactions to stress: A cross-cultural case study in two educational programs." *Journal of Evidence-Based Psychotherapies* 17, no. 1 (2017).

Wei, Fu, Tamizharasi G. Seetharam, and V. Sivakumar. "Early development of normative mind for the students-Stress management approach." *Aggression and Violent Behavior* (2021): 101627.

World Health Organization. "Risks to mental health: An overview of vulnerabilities and risk factors." *Geneva: WHO* (2012).