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Evaluation of anxiety, stress, and depression: perspectives from a university study conducted in Herat, Afghanistan

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Abstract

Background: Mental health issues like anxiety, stress, and depression are increasingly common among university students globally, especially in conflict-affected areas like Afghanistan. This study focuses on these mental health challenges among students at Jami University in Herat, a city affected by prolonged conflict and economic instability.

Method: A cross-sectional study was conducted among 330 Jami University students from March to August 2023. Data were gathered via a self-administered questionnaire incorporating the Depression Anxiety and Stress Scale-42 (DASS-42) and additional demographic and lifestyle factors. A stratified random sampling approach was used to ensure a representative sample. Descriptive statistics, chi-square tests, and binary logistic regression identified key mental health correlates.

Results: Significant levels of anxiety, depression, and stress were reported. For anxiety, 36.1% of students were in the normal range, while 8.5% had mild, 22.7% moderate, 16.7% severe, and 16.1% extremely severe levels. Depression levels were similar, with 42.4% normal, 16.7% mild, 22.1% moderate, 10.6% severe, and 8.2% extremely severe. Regarding stress, 46.1% were normal, 13.3% mild, 23.6% moderate, 13.3% severe, and 3.6% extremely severe.

Conclusion: This study highlights the urgent need for mental health support for university students in Afghanistan. Addressing lifestyle factors, providing mental health services, and reducing stigma around mental illness are essential to improving students' well-being and academic performance.

Keywords: Anxiety; Depression; Stress; University students. Afghanistan

1. Introduction

Mental health, encompassing anxiety, stress, and depression, is increasingly recognized as a global concern, particularly among university students. The World Health Organization (WHO) has emphasized the importance of mental well-being as integral to overall health, defining mental health as "a state of well-being in which an individual realizes their abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to their community" [1]. University life represents a significant period of change and adjustment, often marked by academic pressure, financial concerns, social challenges, and personal expectations [2]. This environment can be particularly demanding for students in countries like Afghanistan, where additional sociopolitical and economic stressors exacerbate the mental health challenges faced by young people.

Mental health concerns among university students have been a subject of extensive research worldwide. Studies from various countries highlight the rising prevalence of anxiety, stress, and depression among this demographic. A 2018

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meta-analysis of studies across 27 countries found that nearly one-third of university students reported symptoms of anxiety and depression [4]. Academic pressures, uncertainty about future employment, financial stress, and the challenges of transitioning from adolescence to adulthood are common triggers for psychological distress among students globally [5]. Furthermore, university life often coincides with significant life changes, such as moving away from home, forming new social relationships, and managing personal responsibilities. These factors create a fertile ground for the development of anxiety and depression, even in relatively stable environments.

In countries with prolonged political instability or economic hardship, these challenges are amplified. Students in war-torn regions or underdeveloped nations face additional stressors that can exacerbate mental health issues. For instance, a study in Lebanon during a period of political unrest found a significant increase in anxiety and depression among university students [6]. Similarly, research conducted in Palestine showed that exposure to conflict-related violence was strongly correlated with elevated levels of psychological distress among students [7]. These findings suggest that in conflict-affected regions, the mental health burden on students is even greater, as they must deal not only with the pressures of academia but also with the broader context of societal instability.

In Afghanistan, the years of conflict, instability, and socioeconomic challenges have led to a heightened prevalence of mental health issues, particularly among vulnerable populations such as university students. The country's prolonged exposure to conflict has shaped the mental health landscape, with studies showing a rise in psychological distress, including anxiety, stress, and depression [3]. Afghanistan, a country ravaged by decades of conflict, is experiencing a mental health crisis. The psychological toll of war, displacement, poverty, and ongoing violence has contributed to a high prevalence of mental health disorders, including anxiety, stress, and depression, across the population. According to a survey conducted by the Afghan Ministry of Public Health and the WHO in 2018, approximately 70% of Afghans are affected by mental health issues, with women and young people being the most vulnerable groups [8]. These numbers are particularly concerning among university students, who are expected to be the future leaders of the country but are grappling with significant psychological distress.

Herat, located in western Afghanistan, is one of the country's major cities and a hub for higher education. The University of Jami is a prominent institution in the region, attracting students from various parts of the country [9]. A study conducted by Scholte et al. (2004) on mental health in Afghanistan found that exposure to war-related trauma was a significant predictor of anxiety and depression among Afghans. The study revealed that individuals who had experienced or witnessed violence were more likely to suffer from psychological distress [3]. These findings are relevant to university students in Herat, many of whom may have been exposed to such traumatic events during their lifetime. Moreover, the pressures of academic life, combined with personal experiences of conflict, can create a mental health crisis for students that needs urgent attention.

The transition to university life can be a significant stressor for young adults, with anxiety and depression being common mental health issues among students. Anxiety, characterized by excessive worry or fear, often arises from academic pressures, social challenges, and concerns about the future. Depression, on the other hand, is marked by persistent sadness, loss of interest, and feelings of hopelessness [1]. Research has shown that university students in conflict-affected regions are particularly vulnerable to mental health issues. A study by Miller et al. (2008) on the mental health of students in Afghanistan found that the cumulative stress of war, displacement, and economic hardship had a profound impact on students' psychological well-being [10].

In Herat, university students face a unique set of challenges. The city, while relatively more stable than some other parts of Afghanistan, is still affected by the broader conflict and economic instability of the country. Many students come from families that have been directly impacted by the conflict, and some may have experienced displacement or loss of loved ones. Additionally, the economic situation in Afghanistan has made it difficult for many students to afford higher education, leading to financial stress that further exacerbates mental health issues.

Given the significant challenges faced by university students in Afghanistan, it is crucial to assess their mental health needs accurately. A comprehensive understanding of the prevalence and determinants of anxiety, stress, and depression among students is necessary for developing effective interventions and support systems. Studies have shown that early identification and treatment of mental health issues can improve academic performance, reduce dropout rates, and enhance overall well-being [5].

In Afghanistan, addressing the mental health needs of university students is particularly important, as they represent a critical part of the country's future. Educating students about mental health, reducing the stigma associated with mental illness, and providing access to mental health services are essential steps toward improving their well-being [11]. Moreover, given the broader challenges faced by Afghanistan, supporting the mental health of university students can

contribute to the overall resilience of the country, as these individuals are likely to play important roles in its future development.

This study aims to provide insights into the mental health challenges faced by university students in Herat, Afghanistan, focusing on the prevalence and correlates of anxiety, stress, and depression. By identifying the key factors contributing to these mental health issues, this research seeks to inform interventions that can support students in managing their mental health and thriving academically.

2. Method

2.1. Study Design, Place, and Duration

This cross-sectional study was conducted among students at Jami University, located in Herat City, Afghanistan, from March to August 2023. The design of the study allowed for the collection of data at a single point in time, providing a snapshot of the mental and physical health status of the student population during the study period.

2.2. Sample Size

The sample size for this study was calculated using a statistical formula designed to accommodate a specified margin of error, the expected prevalence of the characteristic of interest (in this case, physical and mental health issues), and the desired confidence level. The formula used was:

$$n = \frac{z^2 p(1-p)}{e^2}$$

Where:

n is the sample size,

z represents the critical value for the desired confidence level (1.96 for a 95% confidence interval),

p is the estimated proportion of the population with the characteristic in question (in this case, unknown and assumed to be 0.05),

e stands for the margin of error, set at 0.04.

Using this formula, the minimum sample size required was calculated to be 318. To account for variability and potential dropout, 10% more participants were added, resulting in a total of 328. After rounding during the implementation of the stratified random sampling technique, the final sample included 330 students. This stratification ensured that the sample accurately represented the demographics of the broader student population at Jami University, which comprises approximately 1,815 students.

2.3. Sampling Procedures and Eligibility Criteria

The study targeted all students enrolled in the spring of 2023 at Jami University. Students who were fluent in Persian (Dari), provided informed consent, and were free of any diagnosed mental illness were eligible to participate. A sampling frame was developed using the university's attendance records. The total student population was divided by the calculated sample size, and a stratified random sampling method proportional to school size, gender, and academic class was employed to select participants. Data were collected through face-to-face interviews conducted by trained data collectors.

2.4. Data Collection

Participants completed a self-administered questionnaire consisting of 49 questions organized into three primary sections: socio-demographic data (10 items), physical health (6 items), dietary health (6 items), and the Depression Anxiety and Stress Scale-42 (DASS-42) modified version (27 items).

Socio-demographic section: This part gathered data on the participants' academic year, gender, marital status, age, height, weight (used to compute Body Mass Index or BMI), self-assessed health status, economic status, employment,

and the faculty to which they belonged. These variables were collected to understand the background characteristics that might influence mental and physical health outcomes.

Physical and Dietary Health sections: The questions in these sections were adapted from the Iranian Physical Health Questionnaire, a simplified version used in the MEPHASOUS-Iran program. This program was designed to monitor health behaviors and issues among university students. The physical health variables included daily teeth brushing, weekly exercise, frequency of having a complete breakfast, sleep patterns, and smoking habits. The dietary health questions focused on the consumption of fruits, vegetables, dairy, protein, carbonated drinks, and fast food.

DASS-42 section: The Depression Anxiety and Stress Scale-42 (DASS-42) measures depression, anxiety, and stress using 14 questions for each of these domains, with responses rated on a 0-3 scale (0 = "did not apply to me," 3 = "applied to me very much"). The Dari-translated version of the DASS-42 was validated [12] and demonstrated high internal consistency and construct validity, with Cronbach's alpha values of 0.888 for depression, 0.866 for anxiety, and 0.833 for stress. During the validation process, several questions were omitted to adapt the instrument to the Afghan context. Specifically, 7 questions from the depression subscale, 6 from the anxiety subscale, and 4 from the stress subscale were removed.

2.5. Data Analysis

The data were analyzed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were used to summarize categorical variables. The scores from the DASS-42 for depression, anxiety, and stress were dichotomized at the median to facilitate comparison. Chi-square tests were employed to explore the association between socio-demographic, physical, and dietary factors and mental health outcomes. Variables that showed significant associations in the chi-square analysis were subsequently included in a binary logistic regression model. The regression analysis was conducted using the Enter method, with a significance level of $P < 0.05$. Results from the regression analysis were reported as odds ratios (ORs) with 95% confidence intervals (CIs) and were presented in tabular form.

2.6. Ethical Considerations

The study protocol was reviewed and approved by the Human Ethics Committee of the Bureau of Research and Development, Faculty of Medicine, Jami University, on January 27, 2023 (J.2024.1.27.3). Informed consent was obtained in writing from all participants before they were enrolled in the study. Participant privacy and confidentiality were maintained throughout the research process, in accordance with the Declaration of Helsinki and established ethical guidelines for research involving human subjects.

3. Results

Table 1 provides an overview of the sociodemographic characteristics of the participants. The total sample size consisted of 328 participants, with 182 (55.2%) from the medical faculty, 60 (18.2%) from economics, 36 (10.9%) from law, 32 (9.7%) from theology, and 20 (6.1%) from engineering. Most of the students (61.8%) were aged between 21-24 years, followed by 23% aged 17-20 years, and 15.2% aged 25 and above. A substantial majority of the participants resided in urban areas (84.2%), and 87.3% of the sample were single.

Regarding their academic year, 33% of the students were in their first year, while 19.4%, 18.2%, 17.9%, and smaller percentages were in their second, third, fourth, and later years, respectively. Around 28.8% of the participants reported having a job alongside their studies.

Table 1 Sociodemographic Characteristics of Participants.

Variable		N	%	Variable		N	%
Age (year)	17-20	76	23.0	Economic status	Not income	255	77.3
	21-24	204	61.8		Less than 50$	18	5.5
	25 and above	50	15.2		50$- 100$	21	6.4
Residence type	Urban	278	84.2		100$- 200$	20	6.1
	Rural	52	15.8		200-300	5	1.5
Marital status	Married	42	12.7		more than 300$	11	3.3

	Single	288	87.3	Physical activity	Yes	252	76.4
Faculty	Engineering	20	6.1		No	78	23.6
	Medical	182	55.2	Nutritional status	Very Good	57	17.3
	Economics	60	18.2		Good	137	41.5
	Law	36	10.9		Average	114	34.5
	Theology	32	9.7		Bad	21	6.4
Class	First	109	33.0		Very Bad	1	.3
	Second	64	19.4	Sleep status	Very Good	94	28.5
	Third	60	18.2		Good	120	36.4
	Fourth	59	17.9		Average	91	27.6
	Fifth	10	3.0		Bad	22	6.7
	Sixth	16	4.8		Very Bad	3	.9
	Seventh	12	3.6	Chronic disease	Yes	41	12.4
Occupation	Yes	95	28.8		No	289	87.6
	No	235	71.2	Health status	Very Good	92	27.9
BMI	Underweight	44	13.3		Good	139	42.1
	Normal weight	238	72.1		Average	82	24.8
	Overweigh	41	12.4		Bad	13	3.9
	Obese	7	2.1		Very Bad	4	1.2

The self-reported health status of the students was varied. Approximately 42.1% of the participants rated their health as "good," followed by 27.9% reporting "very good" health, 24.8% reporting "average," 3.9% rating their health as "bad," and 1.2% indicating "very bad" health. Many students (77.3%) reported no income, and only a small fraction earned more than $300 per month (3.3%).

In terms of physical health, most of the students (72.1%) fell within the normal BMI range, while 13.3% were underweight, 12.4% were overweight, and 2.1% were obese. A significant portion of students (76.4%) engaged in regular physical activity. The nutritional status was also varied, with 17.3% of students reporting "very good" nutrition, 41.5% reporting "good," 34.5% indicating "average" nutrition, and smaller percentages reporting "bad" or "very bad" nutritional status.

Sleep quality was also assessed, with 28.5% of students reporting "very good" sleep, 36.4% reporting "good," 27.6% indicating "average" sleep, and 6.7% and 0.9% reporting "bad" and "very bad" sleep quality, respectively. A small portion of students (12.4%) reported having a chronic disease.

Table 2. Shows the prevalence of Depression, Anxiety, and Stress. The results show significant levels of anxiety, depression, and stress among the students. The study classified mental health conditions into five categories: normal, mild, moderate, severe, and extremely severe. In terms of depression, 42.4% of students fell into the "normal" category, while 16.7% had mild depression, 22.1% moderate depression, 10.6% severe depression, and 8.2% were classified as having extremely severe depression.

Anxiety levels showed a slightly higher distribution across the categories. While 36.1% of students were classified as having no anxiety, 8.5% had mild anxiety, 22.7% moderate anxiety, 16.7% severe anxiety, and 16.1% had extremely severe anxiety. Stress levels were similarly alarming, with 46.1% of students falling into the normal category, while 13.3% had mild stress, 23.6% moderate stress, 13.3% severe stress, and 3.6% classified as experiencing extremely severe stress.

Table 2 Prevalence of Depression, Anxiety, and Stress among participants

Variable	Normal		Mild		Moderate		Sever		Extremely Severe	
	N	%	N	%	N	%	N	%	N	%
Depression	140	42.4	55	16.7	73	22.1	35	10.6	27	8.2
Anxiety	119	36.1	28	8.5	75	22.7	55	16.7	53	16.1
Stress	152	46.1	44	13.3	78	23.6	44	13.3	12	3.6

Table 2. Shows Correlations of Depression, Anxiety, and Stress with Sociodemographic and Health and Lifestyle Factors. Several demographic, lifestyle, and health-related factors were analyzed to determine their correlation with depression, anxiety, and stress among the students. There was no significant relationship between age and mental health conditions, though students aged 21-24 had slightly higher percentages of abnormal depression and stress levels. Students from rural areas exhibited lower levels of abnormal anxiety and depression compared to their urban counterparts, though this difference was not statistically significant. Marital status showed that married students were significantly less likely to experience anxiety compared to single students ($p=0.044$), although the association with depression and stress was weaker. Faculty-wise, medical students had higher levels of depression and stress, while those in economics and theology reported higher anxiety levels, though these differences were also not statistically significant. Health status, however, showed a strong correlation, with students rating their health as "very good" or "good" experiencing significantly lower levels of depression, anxiety, and stress ($p<0.001$), while those with "average" or "bad" health had higher levels of psychological distress.

Economic status, while not significantly correlated with depression or stress, showed a trend toward students with lower income levels experiencing higher anxiety ($p=0.088$). Furthermore, students who engaged in regular physical activity demonstrated lower levels of anxiety ($p=0.028$), and nutritional status was strongly correlated with all three mental health conditions. Those who reported "very good" or "good" nutrition had significantly lower levels of depression, anxiety, and stress compared to students with "average" or "bad" nutritional status ($p<0.001$). Sleep quality also showed a strong correlation with mental health, as students with "very good" or "good" sleep had significantly lower levels of depression, anxiety, and stress ($p<0.001$), whereas those with "average" or "bad" sleep reported more abnormal levels. Lastly, students with chronic diseases were more likely to experience anxiety and stress ($p=0.044$ and $p=0.008$, respectively), though the association with depression was not statistically significant.

Table 3 Correlations of Depression, Anxiety, and Stress with Sociodemographic and Health and Lifestyle Factors

Variable		Depression			Anxiety			Stress		
		Normal	Abnormal	P-value	Normal	Abnormal	P-value	Normal	Abnormal	P-value
		%	%		%	%		%	%	
Age (year)	17-20	21.4	24.2	0.821	21.8	23.7	0.697	21.1	24.7	0.251
	21-24	63.6	60.5		64.7	60.2		66.4	57.9	
	25 and above	15.0	15.3		13.4	16.1		12.5	17.4	
Residence type	Urban	80.0	87.4	0.069	84.0	84.4	0.938	81.6	86.5	0.220
	Rural	20.0	12.6		16.0	15.6		18.4	13.5	
Marital status	Married	16.4	10.0	0.083	17.6	10.0	0.044	16.4	9.6	0.061
	Single	83.6	90.0		82.4	90.0		83.6	90.4	
Faculty	Engineering	5.7	6.3	0.073	5.9	6.2	0.633	6.6	5.6	0.919
	Medical	62.1	50.0		60.5	52.1		55.9	54.5	
	Economics	14.3	21.1		16.8	19.0		19.1	17.4	

	Law	12.1	10.0		8.4	12.3		9.9	11.8	
	Theology	5.7	12.6		8.4	10.4		8.6	10.7	
Class	First	31.4	34.2	0.993	34.5	32.2	0.650	34.9	31.5	0.305
	Second	18.6	20.0		21.0	18.5		19.1	19.7	
	Third	19.3	17.4		16.8	19.0		19.1	17.4	
	Fourth	18.6	17.4		16.8	18.5		15.1	20.2	
	Fifth	3.6	2.6		.8	4.3		2.0	3.9	
	Sixth	5.0	4.7		5.9	4.3		3.9	5.6	
	Seventh	3.6	3.7		4.2	3.3		5.9	1.7	
Occupation	Yes	30.7	27.4	0.507	31.1	27.5	0.487	29.6	28.1	0.762
	No	69.3	72.6		68.9	72.5		70.4	71.9	
Health status	Very Good	42.9	16.8	<0.001	49.6	15.6	<0.001	42.1	15.7	<0.001
	Good	43.6	41.1		39.5	43.6		45.4	39.3	
	Average	13.6	33.2		10.9	32.7		12.5	35.4	
	Bad	.0	6.8		.0	6.2		.0	7.3	
	Very Bad	.0	2.1		.0	1.9		.0	2.2	
Economic status	Not income	75.0	78.9	0.933	80.7	75.4	0.088	75.7	78.7	0.471
	Less than 50$	6.4	4.7		4.2	6.2		7.2	3.9	
	50$- 100$	6.4	6.3		6.7	6.2		7.9	5.1	
	100$- 200$	6.4	5.8		4.2	7.1		4.6	7.3	
	200-300	2.1	1.1		3.4	.5		2.0	1.1	
	more than 300$	3.6	3.2		.8	4.7		2.6	3.9	
BMI	Underweight	10.7	15.3	0.598	10.1	15.2	0.133	11.8	14.6	0.760
	Normal weight	75.7	69.5		79.8	67.8		75.0	69.7	
	Overweigh	11.4	13.2		8.4	14.7		11.2	13.5	
	Obese	2.1	2.1		1.7	2.4		2.0	2.2	
Physical activity	yes	77.9	75.3	0.584	83.2	72.5	0.028	79.6	73.6	0.200
	No	22.1	24.7		16.8	27.5		20.4	26.4	
Nutritional status	Very Good	26.4	10.5	<0.001	25.2	12.8	<0.001	24.3	11.2	<0.001
	Good	46.4	37.9		51.3	36.0		47.4	36.5	
	Average	23.6	42.6		18.5	43.6		21.7	45.5	
	Bad	3.6	8.4		5.0	7.1		6.6	6.2	
	Very Bad	.0	.5		.0	.5		.0	.6	

Sleep status	Very Good	42.9	17.9	<0.001	42.9	20.4	<0.001	39.5	19.1	<0.001
	Good	40.0	33.7		39.5	34.6		37.5	35.4	
	Average	15.0	36.8		13.4	35.5		17.8	36.0	
	Bad	1.4	10.5		4.2	8.1		5.3	7.9	
	Very Bad	.7	1.1		.0	1.4		.0	1.7	
Chronic disease	Yes	9.3	14.7	0.138	7.6	15.2	0.044	7.2	16.9	0.008
	No	90.7	85.3		92.4	84.8		92.8	83.1	

4. Discussion

Mental health issues, such as anxiety, depression, and stress, among university students have become an increasing global concern. In our study conducted in Herat, Afghanistan, a total of 330 students were assessed for anxiety, stress, and depression, with data collected on various demographic, health, and lifestyle factors. The results revealed substantial levels of anxiety, depression, and stress among students, with important correlations to age, marital status, economic status, physical activity, sleep quality, and chronic diseases.

In our study, 36.1% of students were found to have no anxiety, while 8.5% had mild anxiety, 22.7% moderate anxiety, 16.7% severe anxiety, and 16.1% extremely severe anxiety. These results align with a global trend where university students exhibit heightened anxiety levels. For instance, a systematic review of studies worldwide found that the prevalence of anxiety among university students varies between 17% and 41% [13]. A meta-analysis revealed that anxiety prevalence among medical students is particularly high, with global estimates suggesting rates of about 33.8%. In comparison, our study showed a slightly higher prevalence of severe anxiety, particularly among medical students, indicating a trend seen in other countries where health-related faculties report elevated anxiety levels [14].

In a similar study conducted in Pakistan, found that about 43% of students experienced anxiety, with medical students reporting higher rates than those in other faculties [15]. In China, Lei et al. found that 28.8% of university students experienced moderate to severe anxiety, a figure that is slightly lower than our findings, but still indicative of a global issue [16].

Our study found that 42.4% of students had normal levels of depression, while 16.7% had mild depression, 22.1% moderate depression, 10.6% severe depression, and 8.2% extremely severe depression. Globally, depression among university students is a growing concern. A meta-analysis of Chinese university students by Lei et al. reported a depression prevalence of about 23.8%, which is lower than the 33.7% combined rate of moderate to extremely severe depression in our study [16].

In Egypt [17], Fawzy and Hamed found that 43.2% of medical students experienced severe anxiety and depression, which is comparable to the rates found in our study among Afghan medical students. In contrast, a study conducted in the United States reported a lower prevalence of depression, with approximately 15-20% of students experiencing moderate to severe depression [5]. This difference could be attributed to better mental health support systems available in Western countries, which might help mitigate the severity of depression among students.

Our findings showed that 46.1% of students experienced normal levels of stress, with 13.3% reporting mild stress, 23.6% moderate stress, 13.3% severe stress, and 3.6% extremely severe stress. Globally, stress among university students is commonly reported, with several studies indicating high levels of academic and financial stress. A study in Lebanon by Fawaz and Samaha found that 68% of university students experienced moderate to severe stress during the COVID-19 pandemic, a rate higher than the figures from our study but reflective of the added burden of the pandemic [18].

In a study conducted in Spain, Ramón-Arbués et al. reported a similar prevalence of stress, with around 28% of students reporting moderate to severe stress levels [19]. This suggests that stress is a universal experience for university students, exacerbated by academic pressures and, in many cases, by external factors like financial instability and global crises such as the COVID-19 pandemic.

In our study, age was not significantly correlated with depression, anxiety, or stress. However, students aged 21-24 years showed slightly higher percentages of abnormal depression and stress levels. This finding is consistent with global research. For example, a study in Bangladesh found that students aged 18-24 were most susceptible to mental health problems, particularly anxiety and depression [20]. Similarly, research in Spain [19] found that students in their early 20s were more likely to experience moderate to severe depression and anxiety, likely due to the transition into adulthood and the increased academic and social pressures that come with it.

Our study found that married students were less likely to experience anxiety compared to single students, although the association with depression and stress was not as strong. Globally, there is some evidence to suggest that married students may experience lower levels of anxiety due to the emotional and financial stability that marriage can provide. A study conducted in Jordan by Hamaideh et al. supports this, showing that married students had significantly lower anxiety levels than their single counterparts [21].

However, the relationship between marital status and mental health varies across cultures. In the United States and Western Europe, for example, marital status tends to have a more limited effect on student mental health, with some studies even suggesting that married students may experience higher stress levels due to balancing family and academic responsibilities [5].

In our study, students in the medical faculty had higher levels of depression and stress, while those in economics and theology reported elevated anxiety. This finding aligns with global research, which consistently shows that medical students experience higher levels of psychological distress compared to students in other faculties. For example, Rathnayake and Ekanayaka found that nursing students in Sri Lanka reported significantly higher rates of anxiety, stress, and depression than students from non-medical faculties [22]. Similarly, Asif et al. found that medical students in Pakistan experienced greater academic pressure and mental health challenges [15].

This trend may be attributed to the demanding nature of medical education, which often involves long study hours, high expectations, and frequent examinations. In contrast, students in non-medical faculties, such as theology and economics, may face different stressors, such as uncertainty about future job prospects or ethical dilemmas, which could explain the higher anxiety levels found in these faculties.

Economic status in our study was correlated with anxiety, with students from lower-income backgrounds reporting higher anxiety levels. This finding is consistent with global research. Financial stress is a significant predictor of mental health problems among university students worldwide. In the United States, Eisenberg et al. found that students with financial difficulties were more likely to experience anxiety and depression [5]. A study in Egypt by Fawzy and Hamed also highlighted the impact of economic instability on mental health, with students from lower-income families reporting higher levels of anxiety and depression [17].

Our study found that students who engaged in regular physical activity and reported good or very good nutrition had significantly lower levels of depression, anxiety, and stress. These findings are well-supported by global research. A meta-analysis by Reed and Ones found that regular physical activity was associated with a 20-30% reduction in anxiety and depression among university students [23]. Similarly, a study in Spain by Ramón-Arbués et al. found that students with poor dietary habits were more likely to experience mental health problems [19].

The positive correlation between good nutrition and mental health is also well-documented. Othman et al. found that students with a balanced diet were less likely to suffer from depression and anxiety, emphasizing the importance of nutrition in maintaining mental well-being [24].

Sleep quality was strongly correlated with mental health in our study, with students reporting good sleep experiencing lower levels of depression, anxiety, and stress. This finding is consistent with global literature, where poor sleep quality has been identified as a significant risk factor for mental health issues. Hershner and Chervin found that sleep deprivation among university students was associated with higher levels of depression and anxiety, particularly during examination periods [25]. In Lebanon, Fawaz and Samaha found that poor sleep quality during the COVID-19 pandemic was a strong predictor of anxiety and depression among students [18].

In our study, students with chronic diseases were more likely to experience anxiety and stress, a finding that is echoed in global research. Students with chronic health conditions often face additional challenges, such as managing their health while keeping up with academic demands. A study in Spain by Ramón-Arbués et al. found that students with chronic illnesses were more likely to experience depression and anxiety [19]. Similarly, Othman et al. highlighted the

increased mental health burden on students with chronic diseases, emphasizing the need for targeted mental health interventions for this group [24].

5. Conclusion

The mental health challenges faced by university students in Herat, Afghanistan, as revealed by our study, align closely with trends observed in global research. Anxiety, depression, and stress are pervasive issues among university students worldwide, with academic pressure, financial instability, poor sleep quality, and lifestyle factors such as physical activity and nutrition playing significant roles in mental health outcomes.

While there are some cultural differences in the correlates of mental health, such as the impact of marital status, the overall patterns remain consistent. Students in health-related faculties, such as medicine, tend to report higher levels of anxiety, depression, and stress, while financial hardship is a significant predictor of mental health problems in both developing and developed countries.

By comparing our findings with global research, it becomes clear that university students, regardless of geographic location, face common mental health challenges. Addressing these challenges requires a comprehensive approach that includes academic support, mental health services, and lifestyle interventions such as promoting physical activity and good sleep hygiene.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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