

Prevalence of Anxiety, Stress and Depression Symptoms in University Students of South Punjab: Its Relationship with Socioeconomic Factors

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Abstract

Background: Psychiatric disorders as Depression, anxiety and stress have huge burden on productivity and economy of any nation. Identification of symptoms and impending disease in future workforce is essential for national progress.

Objective: To determine frequency and correlate Depression, Anxiety and Stress (DAS) symptoms with socioeconomic factors among undergraduate students of Science and Arts group in South Punjab, Pakistan.

Study type, settings & duration: This cross sectional descriptive study was carried out at Islamia University Bahawalpur (IUB), Institute of Southern Punjab Multan (ISP), and Bahaudin Zikria University, Multan (BZU) from March to July 2021.

Methodology: Total 491 students of science and arts subjects participated in the study (M= 332, F=159). After taking approval from ethical committee, sampling was done through nonprobability convenient sampling technique. Written informed consent was taken from each respondent. Questionnaire included DASS-21 scale and questions related to socioeconomic status. Standardized Urdu version of DASS-21 was used. Questionnaire was tested for validity and reliability.

Results: The prevalence of depression, anxiety and stress symptoms in our study sample was 48.5%, 41.1% and 31.2% respectively. Depression and stress symptoms were more prevalent in males and science students than females and arts students. Chi-Square tests suggest that depression was significantly associated with academic satisfaction, economic satisfaction and job worry.

Conclusion: The high predominance of depression, anxiety and stress symptoms among university students is catastrophic and it demands measures to treat the sufferers and prevent others from developing this serious morbidity.

Key words: Depression, anxiety, stress, socioeconomic, university, students, Pakistan.

Introduction

Psychiatric disorders such as depression, anxiety and stress are amongst the common

and ominous morbidities throughout the globe. They deteriorate the mental health of individuals adversely affecting performance of individual. In 1990 major depression was the fourth most prevalent disease and is expected to be second by 2020.¹ According to reports of World Health Organization, globally 4.4% of population is suffering from mental disorders i.e. depression and anxiety.² Undergraduates are subjected to various stressors, such as hindrances in integrating into system of university, peer pressure with regard to academics and unpredictability about the future. Additionally, difficulties in social interactions, economic problems and family issues can further exacerbate the negative emotions within an individual. These factors, when exceed limits,

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Authors Contribution

MAI & AI conceptualized the project and did the literature search. MAI & MMI did the data collection. MMI perform the statistical analysis. Drafting, revision & writing of manuscript were done by MAI, AI & MMI.

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increase the susceptibility of individuals to develop depression, stress and anxiety.³

A systemic review indicates the prevalence of depression with suicidal thoughts among medical students range from 9.3% to 55.9%.⁴ Additionally, 23.8% students among Chinese universities⁵ and 22.8% of students in Sri Lanka suffer from depression.⁶ But studies in India show higher frequency of anxiety; depression and stress among students, which were 86.5%, 59.2% and 52.7% respectively.⁷ Additionally, in Egypt, the rates of depression, anxiety, and stress were 62.4%, 64.3% and 60.8% respectively.⁸ A study conducted in Turkey reported the overall rates of depression as 39%, and 35.8% for mild to moderate level of anxiety.⁹ Recent study from Saudi Arabia reported high prevalence of anxiety 65.7% and depression 53.6%.¹⁰ Studies conducted in Pakistan has reported a higher prevalence of anxiety and depression; 73.8% among engineering students.¹¹ 40.9% among medical students.¹² A recent study conducted on physiotherapy students reported the frequency of depression, anxiety and stress as 48.0%, 68.54% and 53.2%, respectively.¹³

DAS among students may adversely affect their cognitive functioning, learning abilities and ultimately academic performance and quality of life. It is also a significant factor responsible for alcohol abuse, smoking^{14,15} and acute infectious illness among students.¹⁶ Furthermore, mental morbidity not only is associated with higher risk of school dropout¹⁷ but, it also predicts suicidal ideation.¹⁸ These outcomes of DAS highlight the need to explore the prevalence and risk factors associated with this psychological morbidity and support interventions like counseling and rehabilitation to lessen its burden among university students. The World Health Organization (WHO) reported in 2001 that 10% members of higher learning institution experience emotional problems during a year that could interfere with their activities. Unfortunately, there is scarcity of psychiatric services in institution to deal with this hidden and severe problem.¹⁹

The objectives of the current study were to investigate the prevalence of anxiety, stress and depression symptoms and their correlation with socioeconomic factors in university students of South Punjab.

Methodology

Three major universities of south Punjab, The Islamia university, Bahawalpur; Institute of Southern Punjab and Bahaudin Zikri University, Multan were surveyed during from March 2021 to July 2021.

The sampling was done through nonprobability convenient sampling technique. Written informed consent was taken from each respondent. Questionnaire included DASS-21 scale and questions related to socioeconomic status. Standardized Urdu version of DASS-21 was used. Questionnaire was tasted for validity and reliability

DASS-21 is 21 items open-source scale which does not require any special permission for its use. It has three subscales for Depression, stress and anxiety each having seven questions. Participants' score there hitches from 0 to 3; zero being minimum value to 20. Values ≤ 0.05 were regarded significant in chi-square tests.

Undergraduates of age between 18 and 27 of science and arts departments were considered in study with no apparent mental disability.

Those who themselves or their close family member (parents and siblings only) faced any serious accident or injury or finical crisis.

Participants, who have lost their close relative or faced any serious emotional incident i.e., breakup with finance or failure in love in past 6 month were also excluded from study.

The ethical approval was obtained from the Institutional Review Board of Multan Medical & Dental College, Multan vide reference Publi/8/21.

Results

The 752 students were reached out of which 491 students participated in the study (M=332, F=159) overall response rate was 65.2%. Out of these 358 were science students (M=312, F=46) with Mean age = 22.1 ± 2.6 . While the rest 133 (M=20, F=113) were arts students with mean age 22.1 ± 2.75 . The prevalence of depression, anxiety and stress in our study sample was 48.5%, 41.1% and 31.2% respectively. Table-1 depicts the frequencies of science and arts students within the levels of academic year, academic satisfaction, job worry, depression, anxiety and stress. It can be deduced from this distribution that males and science students are less satisfied with their academics and economic condition, and they are also more worried about their jobs than females and arts students respectively. Males and science students showed a higher frequency of depression, anxiety and stress symptoms than females and arts students respectively.

Table-2 shows a significant association between depression symptoms and academic satisfaction, economic satisfaction, job worry, gender, depression symptoms and department, stress symptoms and department, and stress symptoms and gender.

Table 1: Demographic details.

Variables	Gender		Departments	Science	Arts
	Male	Female			
Academic year					
• 1 – 2 yrs.	23.2%	12.0%	25.5%		9.8%
• 2 – 3 yrs.	29.9%	12.0%	31.0%		11.0%
• >4 yrs.	14.5%	8.4%	16.5%		6.3%
Academic Satisfaction					
• Not a problem	21.0%	12.8%	20.4%		13.4%
• Maybe/don't know.	21.4%	6.7%	24.8%		3.3%
• Problem	25.3%	12.8%	27.7%		10.4%
Economic Satisfaction					
• Not a problem	29.9%	16.9%	31.8%		15.1%
• Maybe/don't know.	5.3%	1.6%	5.9%		1.0%
• problem	32.4%	13.8%	35.2%		11.0%
Job worry					
• Not a problem	13.4%	6.7%	14.7%		5.5%
• Maybe/don't know.	21.2%	12.2%	22.8%		10.6%
• problem	33.0%	13.4%	35.4%		11.0%
Depression symptoms					
• Normal	29.1%	22.4%	30.3%		21.2%
• Mild	17.7%	4.9%	19.3%		3.3%
• Moderate	14.9%	3.9%	16.7%		2.0%
• Severe	5.9%	1.2%	6.5%		0.6%
• Very severe	0%	0%	0%		0%
Anxiety symptoms					
• Normal	40.0%	19.0%	42.4%		16.5%
• Mild	8.8%	6.7%	10.2%		5.3%
• Moderate	14.7%	4.9%	15.7%		3.9%
• Severe	4.3%	1.6%	4.7%		1.2%
• Very severe	0%	0%	0%		0%
Stress symptoms					
• Normal	43.8%	25.1%	46.8%		22.0%
• Mild	10.6%	5.5%	11.4%		4.7%
• Moderate	11.4%	1.6%	12.6%		0.4%
• Severe	1.8%	0.2%	2.0%		0%
• Very severe	0%	0%	0%		0%

Table 2: Result of Chi-square tests.

Association between	<i>p value</i>
Depressive Symptoms & academic year	0.53
Depressive Symptoms & academic satisfaction	<0.001*
Depressive Symptoms & Economic satisfaction	<0.001*
Depressive Symptoms & Job worry	<0.001*
Anxiety Symptoms & academic year	0.39
Anxiety Symptoms & academic satisfaction	0.11
Anxiety Symptoms & Economic satisfaction	0.38
Anxiety Symptoms & Job worry	0.91
Stress Symptoms & academic year	0.90
Stress Symptoms & academic satisfaction	0.60
Stress Symptoms & Economic satisfaction	0.76
Stress Symptoms & job worry	0.17
Department & Stress symptoms	<0.001*
Department & Anxiety symptoms	0.51
Department & Depression symptoms	<0.001*
Sex & depression symptoms.	<0.001*
Sex & anxiety symptoms	0.97
Sex & stress symptoms	0.005*

*Significant association. *p value* <0.05 show considerable significant association

Discussion

Response rate 65.2% shows lack of interest or stigma still attached with mental issues in people of south Punjab which should be addressed. The results of our study indicated that the prevalence of depression, anxiety and stress was higher in Pakistani university students than the prevalence in previous similar studies conducted in China⁵ and Sri Lanka⁶ while it was lower than India, Egypt and a previous study conducted in Pakistan.^{7,8,11} The distribution of scores of depression, anxiety and stress in our study was better than previous similar studies using DASS with respect to severity.^{13,21}

Males were more prone to depression and stress symptoms in our study which is at odds with many previous studies^{22,23} but it is consistent with one meta-analysis.⁵ Our study also demonstrated the significant impact of depression symptoms on academic satisfaction; economic satisfaction and job worry which is line with the previous studies using DASS-21.^{24,25} Since male and science

students experienced more symptoms of depression, anxiety and stress in our study therefore as could be explained from just mentioned results, they were less satisfied with their academics, financial condition and had greater job worry than their counterparts. High frequency of economic dissatisfaction was seen in our study even though no participant reported financial crisis at time of induction for study.

Although we found no significant association between DAS symptoms and academic year, fourth year and above reported higher levels of depression and stress than juniors. Interestingly, 1-2 year students reported higher levels of depression and stress symptoms than 2-3 year students. While for anxiety, fourth year and above students had the highest prevalence. The high frequency of DAS symptoms in senior students is consistent with previous studies.²² This may be explained by the fact that fear and apprehension about the future that is their abilities and knowledge regarding their profession as they are about to end student stage of life. The higher frequency of depression and stress symptoms in 1-2 year students is also consistent with previous studies.^{21,26} This may be due to fact that freshmen are in the transition stage of life where they are about to face new challenges.

Prevalence of DAS symptoms declined to 29.9%, 25.5%, 84.5% respectively by considering disease of moderate level and above which indicate that many subjects are in mild state of disease which could be exacerbated if not properly controlled.

More than one third of our study sample had depression, anxiety and stress symptoms and impending disease that may not only significantly impact psychological well-being but also affects physical health, social interaction, academic achievement and ultimately the quality of life. Therefore, there is an urgent demand to direct interventions to those who are suffering from DAS symptoms and adopt strategies to prevent clinical depression, anxiety, and stress. As the study was limited to Science and Arts students, it is highly recommended to perform similar studies on large population size with advance analysis techniques such as binary logistic regression.

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