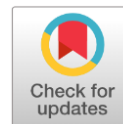


Prevalence and Correlates of Psychiatric Symptoms Among Medical Students in Punjab: A Comprehensive Cross-Sectional Study

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Abstract

Background: Pain is evident, pressure, hopelessness and anxiety-is equally well-known to students with each passing academic semester in medical school. To understand the frequency and reasons of mental symptoms in MBBS students, the current study aims at investigating the level of MBBS students at several medical colleges in Punjab, Pakistan.

Objective: To compare the results of stress, depressive, and anxious symptoms of several numbers of medical students studying in different medical colleges in Punjab and secondly, to evaluate the role of several demographics on these mental health indicators.

Methods: The cross-sectional survey was completed between September 2023 to May 2024 with 350 medical students from multiple private and government medical colleges in Punjab. A cross-sectional survey was carried out including the Depression Anxiety Stress Scale-21 (DASS-21) as the research tool and the data aspires to be statistically analyzed.

Results: the results indicated that the percentage of the medical students who reported to be stressed, sad, or anxious was 47.3%, 55.7%, and 61.4%, respectively. Female students also claimed higher levels of depression compared to male students 58.3% vs. 50.1%, ($p \leq 0.01$) and higher levels of anxiety 65.2% vs. 55.1%, ($p \leq 0.03$). Students in rural locations reported greater levels of stress (52.6% vs. 43.2%, $p \leq 0.04$) than urban ones.

Conclusion: The study linked high levels of mental symptoms among medical students in Punjab to characteristics such as being a female student or originating from a rural area. The current study emphasizes the necessity of targeted programs and activities in the areas of mental health promotion and preventive measures among medical college students.

Keywords: Medical education, Psychiatric symptoms, Depression, Anxiety, Stress, Medical students, Punjab, Gender differences.



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INTRODUCTION

The level of stress that students undertake during the medical education has always been something renowned for its intensity. Research has shown that students studying in the medical faculty are subjected to higher levels of stress, anxiety, and depression than students of any other discipline in the entire world. This stress may stem from academic workload, the empathy that healthcare students or workers experience due to their direct interaction with patients, and acculturated pressure to perform[1]. There are other barriers which are more unique to the Pakistani context such as socio-economic factors and the cultural pressure, and at times lack of support system existing for the medical students. The objectives of this research therefore include: To determine the severity of psychiatric symptoms in medical students in Punjab and; To ascertain whether there are specific demographic characteristics that determine the aforementioned mental health status. This knowledge of these factors can help equip these future professionals with better resources to maintain their own mental health[2].

These factors impose a significant risk of developing mental health problems, which can influence both their academic success as well as their performance as pharmacists or other healthcare professionals in the future[3]. Prior studies have revealed that there is a trend of medical student's overlooking a help seeking service because it is stigmatized and when it comes to delivery of a mental health service in colleges, it is scarce. The already high-stress environment of medical training is compounded by the demands to achieve excellent academic performance, as well as clinical performance, which hurts the quality of care since medical students start practicing compassion fatigue[4, 5].

This means that in the course of following medical education, students with certain socio-economic status or from a certain geographical background are more likely to be subjected to certain condition that adversely affects their mental health. For example, while those from rural backgrounds may bear an extra load of stress resulting from the insecurity of living in an urban setting and the costs associated with the education[6, 7, 8]. There are also noted gender inequalities with female students being exposed to more stress and anxiety emanating from their societal and gender roles. It is expected that through elaborating upon these demographic variables, this study will be able to fill the gap in the current literature and effectively conceptualize a theoretical understanding of the specific mental health needs of medical students in Punjab so as to enable the appropriate population-specific treatment and policy approaches to be recommended. Fondling with these variables is important for designing intervention measures which would help various groups of students to better manage their bowels and hence, cope with stressors associated with the medical school[9].

MATERIAL AND METHODS

Existing cross-sectional study was conducted in both private and public medical colleges of Punjab specifically at Allama Iqbal Medical College Lahore, Lahore medical and dental college (LM&DC), University College of Medicine and Dentistry (UOL), Sialkot medical college, Central Park Medical College, Lahore from September 2023 to May 2024, Ethical Approval certificate ref.no:ERC/2023/14B from IRB committee of biological sciences, Lahore-UBAS(a project of LM&DC). Total 350 students were selected for this study. Samples were obtained through using a stratified random sampling technique that helps in making sure that samples from different

academic years, gender and place of residence are included in the study. The participants for this study were 70 first-year students, 74 second-year students, 72 third-year students, 68 fourth-year students and 66 fifth-year respectively. This would help in spreading the demand for the products across the academic year, thus making it more balanced. Regarding inclusion criteria the medical students currently enrolled in the MBBS program were selected and on the other side those students who provided informed consent to participate in the study and available during the data collection period.

Whereas students with known chronic illnesses and those who were unavailable or absent during the data collection period excluded from the research. Questionnaires were self-completed and consisted of a set of structured questions. All participants completed the questionnaire that comprising demographic data and the Depression Anxiety Stress Scale-21 (DASS-21) instrument which serves to assess the severity of depression, anxiety, and stress. Secured institutional review boards from all colleges that participated in their study.

All participants completed a questionnaire and provided written informed consent for their participation in the study, and the right of the participant to stop participating at any time in the study without any explanation was explained to them. Participants' identity was also concealed to ensure that their data was

anonymized to conform to the study's guided principle of confidentiality. Data were analyzed using SPSS version 25. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were used to summarize the demographic characteristics and prevalence rates of psychiatric symptoms. Inferential statistics, including Chi-square tests and logistic regression, were employed to explore associations between psychiatric symptoms and demographic variables. A p-value of less than ($P \leq 0.05$) was considered statistically significant.

RESULTS

The study included total 350 medical students with a mean standard deviation (21.4 ± 0.03) years age, out of them (39.01 ± 0.02) were Male and (61.03 ± 0.01) were Female. The majority (65.11 ± 0.02) were from urban areas, while (35.10 ± 0.03) were from rural areas. The frequency percentage of study years and Socioeconomic Status of participants were (70.031 ± 0.021 , 74.01 ± 0.012 , 72.13 ± 0.01 , 68.51 ± 0.04 , and 66.31 ± 0.01), (17.13 ± 0.04 , 56.12 ± 0.02 , 27.01 ± 0.05) respectively showed in table-1.

Table 1: Frequency percentage of demographic characteristics of the participants

Parameters	Frequency (%) (Mean \pm SD)	p-value ($P \leq 0.05$)
Age		
Male/Female	21.4 \pm 0.03	0.03
Gender		
Male	39.01 \pm 0.02	0.02
Female	61.03 \pm 0.01	0.01
Year of Study		
First Year	70.031 \pm 0.021	0.02
Second Year	74.01 \pm 0.012	0.01
Third Year	72.13 \pm 0.01	0.01
Fourth Year	68.51 \pm 0.04	0.04
Final Year	66.31 \pm 0.01	0.01
Residence		
Urban	65.11 \pm 0.02	0.02
Rural	35.10 \pm 0.03	0.03
Socioeconomic Status		
Low	17.13 \pm 0.04	0.03
Medium	56.12 \pm 0.02	0.02
High	27.01 \pm 0.05	0.05

The overall mean scores for stress, depression and anxiety in medical students found in this study were 47.3%, 55.7%, and 61.4%, respectively as shown in table-2. Female students had significantly higher levels of depression and anxiety compared to male students. Students from rural areas reported higher levels of stress compared to those from urban areas as shown in table-3.

Table 2: Prevalence of Psychiatric Symptoms by Gender

Variable	Male % (Mean \pm SD)	Female % (Mean \pm SD)	P- Value ($P \leq 0.05$)
Depression	50.1 \pm 0.02	58.3 \pm 0.03	0.01
Anxiety	55.1 \pm 0.04	65.2 \pm 0.01	0.02
Stress	44.2 \pm 0.05	48.9 \pm 0.02	0.03

Table 3: Prevalence of Psychiatric Symptoms by Residence

Variable	Urban % (Mean \pm SD)	Rural % (Mean \pm SD)	P- Value ($P \leq 0.05$)
Depression	53.2 \pm 0.01	57.8 \pm 0.05	0.03
Anxiety	59.1 \pm 0.02	64.3 \pm 0.03	0.05
Stress	43.2 \pm 0.03	52.6 \pm 0.02	0.01

The presentation of bar graph stated that the study showed stress, depression, and anxiety as apparent. The percentage frequency of anxiety, depression and stress symptoms regarding gender and Residence in male, female, urban and rural was (50.1 \pm 0.02, 55.1 \pm 0.04, and 44.2 \pm 0.05) (58.3 \pm 0.03, 65.2 \pm 0.01, 48.9 \pm 0.02), (53.2 \pm 0.01, 59.1 \pm 0.02, 43.2 \pm 0.03) (57.8 \pm 0.05, 64.3 \pm 0.03, 52.6 \pm 0.02) the most common type of symptom reported with 61 percent, followed by depression in the 4th quarter at 47 percent. 4% and depression at 55% were prevalent among the patients visiting the psychiatrists.

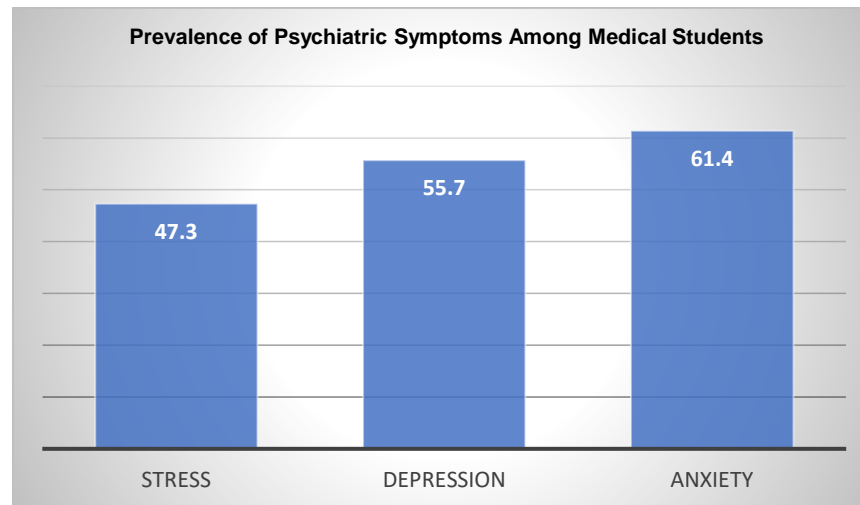


Fig-1: Prevalence of Psychiatric Symptoms Among Medical Students in Punjab

DISCUSSION

As the study comprehended, the proportion of the female students experienced a higher degree of the characteristics of depression and anxiety than the male students[10]. This is in line with what other studies have shown indicating that the female students in medical school normally have mental illnesses due to the pressure they receive from family, school, and society in relation to gender expectations. This evidence of increased anxiety and depression among female students has given credence to the call for the consideration of gender-sensitive delivery of mental health services in medical facilities[11, 12]. More students from rural enrolment zone claimed to experience high stress rates compared to the urban enrolment zone. This might have been the result of the extra hurdles present in the path of the rural students like the pressure of adjusting to a new environment and the expenses incurred to study medicine. These observations point out that in order to help rural students they need more assistance as they may experience and deal with different stress factors[13, 14]. These facts indicate the severity of the problem calling for

educational managers and policymakers to respond actively[15]. Some important directions include, conducting periodic mental health checks, ensuring students have access to therapists and counsellors, and including stress reduction programs in the curriculum. A, eradicating the culture or stereotype by which people shy off from seeking the mental health care is of equal importance[16]. The influence of some variables and the direction of causality also cannot be ascertained due to cross-sectional research design. This partly applies in the case of self-reported measures, since they may per default present a medium that is biased. Further work should also harness longitudinal designs in addition to include more objective measures of mental health should be included in further work[17, 18]. Previous studies should be extended to investigate the underlying effects of these symptoms on the subsequent academic performance and vocation careers of the medical students[19]. Research that is longitudinal may be more helpful in developing an understanding of how mental health disorders evolve within an individual and what sort of treatments may best address these conditions[20].

CONCLUSION

This research suggests that there is a high prevalence of psychiatric symptoms among medical students in Punjab with an added concern of gender differences and regional differences in residence size. This means that it is rather important to address these problems with the help of proper mental health interventions in order for potential doctors and nurses to be healthy and successful learners. It is therefore important that educational institutions play an active role in supporting the mental health of senior students, eradicating stigmatization of the mental health support seeking process and enhancing encouragement of the same to enhance the learning environment.

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All authors contributed equally in the research.

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