ORIGINAL ARTICLE

DOI: https://doi.org/10.63050/jpps.22.03.985

JPPS JOURNAL OF PAKISTAN PSYCHIATRIC SOCIETY WWW.JPPS.PK

PERCEIVED STRESS LEVEL AMONG MEDICAL STUDENTS

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Submitted: October 22, 2024
Accepted: September 30, 2025

ABSTRACT

OBJECTIVE

To examine the level of perceived stress among students at a medical college.

STUDY DESIGN

Cross-sectional study

PLACE AND DURATION OF THE STUDY

The research was carried out in Saidu Medical College, Swat, Pakistan, over a period of 3 months from May 10 to August 11, 2024.

METHOD

The Perceived Stress Scale (PSS-10) was employed to measure variables in the participants. Means for continuous parameters and frequencies for categorical parameters were used for analysis.

RESULTS

Out of 180 students, 150 completed questionnaires. The sample included 61 females (40.6%) and 89 males (59.4%). Most respondents were boarders (72.6%) and single (93.3%). Stress levels revealed 24 students (16%) with low stress, 37 (24.6%) with moderate stress, and 89 (59.3%) with high stress. Males reported 23.6% low, 23.6% moderate, and 52.8% high stress, while females reported 28.26% low, 18.03% moderate, and 53.69% high stress. First-year students had the lowest stress, while final-year students experienced the highest overall stress.

CONCLUSION

The study concludes that medical students, specifically in final professional year of study, reported high levels of stress, with substantial gender differences. These results highlight the necessity of focused treatments to improve the wellbeing of students and deal with particular pressures in medical school.

KEYWORDS

Pakistan; Perceived Stress Scale; Schools, Medical; Stress, Psychological; Students, Medical.

INTRODUCTION

Globally, mental health in medical colleges is a major public health issue. According to the WHO, mental health is an indispensable component of health.[1] It is well known that medical schools are stressed places where students' health, academic success, and physical and emotional health often suffer. Medical students all over the world are supposed to be responsible, learn a huge amount of knowledge, do a lot of different things, and put in a lot of effort while having little restrained resources. Thus, this pressure can cause stress and burnout among medical students.[2]

Stress is a ubiquitous experience that affects individuals across various walks of life, manifesting differently depending on the context. For students, stress might revolve around academic performance and future prospects; for working professionals, it could be job security, deadlines, and workload. Athletes might experience stress related to performance and competition, while caregivers might feel overwhelmed by the demands of supporting loved ones. Medical students in particular face a unique blend of academic rigor, clinical pressures, and the weight of future responsibility for human lives, making their stress especially intense and multifaceted. Despite these differences, the common thread is the potential for stress to impact mental and physical health, underscoring the importance of effective stress management strategies across all walks of life.

For medical students, stress is a pervasive and often overwhelming experience. The demands of medical school, including rigorous coursework, clinical responsibilities, and high-stakes exams, can create an environment of intense pressure. Medical students often sacrifice sleep, social relationships, and personal time to meet expectations, leading to burnout and mental health challenges. The stakes are high, and the fear of failure can exacerbate stress levels.

Recognising the signs of stress and developing healthy coping mechanisms are essential for medical students to maintain their well-being and thrive in their demanding profession. Stress as the body's reaction to different triggers that cause psychophysiological adaptation, and it has a huge effect on the overall health of the individual. These triggers can have either good or bad effects, but if they keep happening over time, they can affect mental and physical health.[3] Over the last several

years, several studies have demonstrated a worrisome trend: medical students had a considerably greater incidence of mental illnesses than the general population.[4-7] This worrying finding shows the unique problems that people who want to work in health-related areas have to deal with. Medical students are more likely to be stressed if they have long classes, a lot of exams, high academic expectations and the fear of failing, not enough free time, too much work, not getting enough sleep or bad sleep, having a lot of career options, and worrying about the future.[8,9] When these risk factors are present, students may experience stress.

Stress in medical institutions in Pakistan is a serious concern, influenced by various academic, environmental, and psychosocial factors. A study found that 72.83% of medical students reported moderate stress, while 14.52% experienced high stress.[10] Another research among Pakistani undergraduate students indicated that 85% of students reported feeling stressed, with significant levels of stress associated with academic pressures.[11] Similarly, another study found medical students in Pakistan have a moderate stress, with a mean score of 29.79±5.3, particularly higher in 2nd year students and younger age groups.[12]

While there is existing research on perceived stress among medical students, but it is not conclusive, this study was designed to generate recent data of perceived stress among medical students. The main aim of this study is to examine the levels of perceived stress among medical pupils and determine the factors that influence their stress levels.

METHOD

Participants

This quantitative, descriptive cross-sectional study was done at Saidu Medical College in Swat over a three-month period from May 10 to August 11, 2024. The WHO sample size calculator was used to determine the sample size, taking into account the targeted degree of prevention and the overall population size. A simple random sampling method was applied to select participants. Inclusion criteria consisted of currently enrolled students at Saidu Medical College who willingly consented to participate in the survey. Students who chose not to participate were excluded.

Instruments

The study questionnaire consisted of two sections:

Demographic information: This gathered details about participants' age, gender, academic year, and other relevant information.

Perceived Stress Scale (PSS-10): It comprises 10 statements that measure perceived stressful occurrences of last one month. It has a 5-point Likert type scale to rate the stress level, ranging from "never" (0) to "very often" (4). The highest score is 40; higher the scores, more sense of stress. Scores of 0 to 13 are considered low stress, scores between 14 to 26 are labelled as moderate stress, and scores of 27 to 40 are rated as severe stress.

Procedure

The ethical approval for the study was obtained from Saidu Medical College and Swat Medical College Ethical Review Board (ref. no. 87-ERB/023, dated: 08/08/2023). A pilot study was conducted before the main study. A Google form was created with the first section for informed consent, and a web link for the questionnaire was sent to the students, and a computerised database was used for data analysis. Continuous variables in the descriptive analyses were expressed as means and standard deviations, while the categorical variables were represented using frequencies and proportions.

RESULTS

Out of 180 possible pupils, 150 completed the survey. The mean ± SD Perceived Stress Scale (PSS) value among the students was found as 25.85± 10.17. Table 1 shows the demographic profile of the participating students.

Table 1
Demographic Characteristics of Undergraduate Medical Students.

Variable	Frequency (%)
Gender	
Male	89(59.4)
Female	61(40.6)
Age	
Less than 20 years	11(7.7)
20-21 years	32(21.4)
22-23 years	58(38.5)
24-25 years	40(26.5)
26 years or above	8(5.6)
Year Of Study	
1st Year MBBS	18(12.0)
2nd Year MBBS	20(13.5)
3rd Year MBBS	32(21.4)
4th Year MBBS	35(23.1)
Final Year MBBS	45(29.9)
Living Arrangements	
Boarders	109 (72.7)
Non-Boarders	41 (27.3)
Marital Status	
Single	140(93.3)
Married	10(6.7)

Among the 150 students, 24 (16%) had a low level of stress, 37 (24.7%) had a moderate level of stress, and 89 (59.3%) had a high level of stress.

Table 2
Gender-wise Level of Stress among Undergraduate Medical Students

LEVEL OF STRESS	MALE n (%)	FEMALE n (%)
Low Stress	21 (23.59)	13 (21.31)
Moderate Stress	21(23.59)	11 (18.03)
High Stress	47 (52.81)	37 (60.66)

Table 3
Year-wise stress levels among undergraduate medical students.

Level of Stress	1st Year MBBS	2nd Year MBBS	3rd Year MBBS	4thYear MBBS	Final Year
w Stress	4(22.2)	4 (22.3)	5(15.62)	2(5.73)	2 (4.4
oderate Stress	5 (27.8)	3(16.6)	9 (28.12)	8 (22.85)	10(22.
gh Stress	9 (50)	11 (61.1)	19(59.37)	25(71.4)	33(73.

DISCUSSION

The study provided valuable insights into the undergraduate medical students' stress, a growing concern in medical education in Pakistan. Understanding the students' level of stress is important for their health and academic success as they deal with tough schedules of classes, professional duties, and the cognitive demands of healthcare training.

With a response rate of nearly 83.3%, this study matched or exceeded response rates from other studies.[13-15] The current findings showed that 16% of undergraduate students had low stress, 24.6% of students had moderate stress while 59.3% of students had high stress, which highlights a critical issue in the medical education system of the country. A prior study done among medical students of Mysore Medical College discovered that low, moderate, and high levels of stress were reported at 20%, 74%, and 6%, respectively, which were notably lower than the present findings.[16] Furthermore, according to a survey conducted in Bosnia and Herzegovina, the majority of students indicated moderate (70.6%) or low levels of stress (27.5%), which are less than the present research.[17] However, both the studies align closely with the immense academic pressures investigated in the regional context.[11,12] A prior study of Saudi medical students indicated that low, moderate, and high stress among pupils were 20.4%, 18.2%, and 25.2%, respectively.[18] These finds align with the present research. Another study done among medical pupils in preclinical years showed that students with no, low, moderate, and high levels of stress were found to be 28.3%, 21.7%, 31.7%, and 18.30%, respectively.[19] A research done in Pakistan among medical students discovered that 25.2% had little stress, 48.4% experienced moderate stress, and 26.3% reported high stress levels.[20] This means that the quantity and intensity of stress experienced by medical students appear to differ depending on their curriculum, medical school environment, and most crucially, the sort of psychometric assessments employed.

Contrary to several studies reporting higher stress among first-year students,[21] the present results revealed that final-year students experienced the greatest stress, possibly due to academic load and impending professional responsibilities, followed by fourth year, second year, third year, and first year. Similarly, previous research done in Multan, Pakistan found that students in the first year had the lowest felt stress, while last-year pupils had the highest stress.[10] In contrast, a study of South African undergraduate pupils found that there are no significant differences in the sense of stress in the medical students among the groups who had started clinical rotation or not.[22]

Furthermore, a research conducted in India found that first-year students had the greatest rate of stress, followed by internship students and final-year students.[23] The difference in stress levels between first-year and final-year students yields inconsistent results. According to some studies, first-year students are more stressed because of the adjustment to college life, unfamiliar surroundings, and the pressure to adapt socially and academically.[21] Other research suggests that final-year students are more stressed, owing to the demands of upcoming graduation, job searches, and the need to finish rigorous schoolwork.[10]

The study has several limitations. There is potential sampling bias if participants are not representative of the broader population, which affects generalisability. The use of self-administered scales may create a bias in responding, and the cross-sectional design does not allow drawing causal inferences. External factors, such as personal and financial pressures, may influence stress but are not considered. Lastly, voluntary participation may lead to self-selection bias, as those who chose to participate might differ in their stress perceptions compared to those who did not.

CONCLUSION

This study showed that the stress levels of undergraduate medical students were quite high and majority of the respondents perceive themselves to be under a lot of stress. Such high perception of stress is more common among the final year students, thus providing evidence that academic and clinical requirements increase as students proceed in their studies.

Recommendations

As the results indicated that there are some differences in the stress levels which further suggest that some interventions are needed. At the same time, lessened stress through systems of institutional support, stress management education, and services of psychological counseling is imperative in enhancing the welfare and academic performance of students in profession subsequent practice. More complex and longitudinal studies may help capture differences in stress levels over time, while incorporating the changes in society as a result of stress factors influenced by the conditions of socio-economy in the research area of medical education.

CONFLICT OF INTEREST

None

FUNDING

None

ACKNOWLEDGMENTS

None

DISCLOSURE

None

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