

A Study on Evaluation of Stress and Anxiety in the First Year Undergraduate Medical Student¹Dr. Sudhir Sharma, MBBS, MD, Specialist Physiology, Sardar Patel Medical College, Bikaner.²Dr. Pradhyumn Singh, Senior Resident, RVRS Medical College, Bhilwara.**Corresponding Author:** Dr. Sudhir Sharma, MBBS, MD, Specialist Physiology, Sardar Patel Medical College Bikaner.**How to citation this article:** Dr. Sudhir Sharma, Dr. Pradhyumn Singh, “A Study on Evaluation of Stress and Anxiety in the First Year Undergraduate Medical Student”, IJMACR– August – 2026, Volume – 9, Issue –4, P. No. 606 – 609.**Open Access Article:** © 2026 Dr. Sudhir Sharma, et al. This is an open access journal and article distributed under the terms of the creative common’s attribution license (<http://creativecommons.org/licenses/by/4.0>). Which allows others to remix, tweak, and build upon the work non- commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Original Research Article**Conflicts of Interest:** Nil**Abstract****Background:** The study was carried out to assess the level of stress and anxiety experienced by the 1st year undergraduate medical students and to find out the sources of stress in these students and also to assess their stress coping mechanism.**Methods:** The present study was conducted at Department of Physiology for the period of one year. Informed consent was obtained from the participants on MBBS students studying in SP Medical College in Bikaner, Rajasthan.**Results:** A majority of students (70.00%) fell in the normal range (score 0-14), while 30.00% experienced varying degrees of stress: mild (12.00%), moderate (11.00%), severe (6.00%) and extremely severe (1.00%). This indicates a notable prevalence of stress at the beginning of the study. Less than half of the students (44%) were in the normal range (score 0–7), while the remaining 55% had elevated anxiety levels: mild (12%), moderate (27.00%), severe (9.00%) and extremely

severe (8.00%). This indicates a high prevalence of anxiety symptoms at the start of the study.

Conclusion: The present study showed that the stress and anxiety among the 1st year medical students is highly prevalent**Keywords:** Anxiety, Stress, Medical students.**Introduction**

The term stress was first employed in the 1930s by endocrinologist Hans Selye who published model of stress.¹ Stress is actually the wear and tear that the body experiences to adjust to the changing environment; it can affect both physically and emotionally and thus can create positive or negative influence on us.²

Stress includes financial problems, health problems, social issues or academic difficulties, information and input overload, and lack of leisure time. Stress sometimes is favorable and can facilitate learning. It can also inhibit and suppress learning.⁴ When students appraise their education and the new atmosphere in the medical institution as a challenge, stress can bring them a sense of competence and can enhance the learning

process. When education is seen as a threat by the student, stress can elicit feelings of helplessness which leads to poor performance and emotional distress and may lead to serious social consequences in subsequent years.^{5,6}

Material and method

The present study was conducted at Department of Physiology for the period of one year. Informed consent was obtained from the participants.

Study place: Department of Physiology, Sardar Patel Medical College, Bikaner, Rajasthan.

Study population: MBBS students studying in SP Medical College in Bikaner, Rajasthan.

Inclusion criteria

- Ist year MBBS students of any gender.
- Those students who gave informed consent for this study.

Exclusion criteria

1. Students who had undergone any major surgery, having any diagnosed major illness such as hyper tension, diabetes mellitus and history of heart disease and on any medication have been excluded.
2. Those who were doing other form of daily exercises or yoga practices have been excluded from the study.
3. Students who didn't give consent.

Sampling method: Random sampling method

Depression, Anxiety and Stress Scale - 21

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into sub-scales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale

assesses autonomic arousal, skeletal muscle effects, situational anxiety and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items and then multiplying by 2.

The DASS - 21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety and the stress experienced by normal subjects and clinical populations are essentially differences of degree. The DASS-21 therefore has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the DSM and ICD.

Data analysis

- Data was summarized and classified in the form of a master chart.
- Qualitative data was expressed in proportion (%).
- Quantitative data was expressed in mean $\pm$ SD.
- Significance of difference in mean $\pm$ SD was calculated by 'student T test' and ANNOVA test. P-value<0.05 was considered as statistically significant.
- All these statistical tests were applied using the software Medcalc 16.4.

Results

Table 1: Sociodemographic profile

Age	19.05 $\pm$ 1.13 years
Male : Female	72 : 28
Urban : Rural	63 : 37
Nuclear family : Joint family	57 : 43

The mean age of the sample population came out to be 19.05 ± 1.13 years. Out of 100 subjects, a total of 72 were male and 28 were female. 63 were from urban areas while 37 were from rural areas. 57 were from nuclear families while 43 were from joint families.

Table 2: Stress level

Score	Stress
Normal (0-14)	70.00%
Mild (15-18)	12.00%
Moderate (19-25)	11.00%
Severe (26-33)	6.00%
Extremely severe (≥ 34)	1.00%

A majority of students (70.00%) fell in the normal range (score 0-14), while 30.00% experienced varying degrees of stress: mild (12.00%), moderate (11.00%), severe (6.00%) and extremely severe (1.00%). This indicates a notable prevalence of stress at the beginning of the study.

Table 3: Anxiety level

Score	Anxiety
Normal (0-7)	44.00%
Mild (8-9)	12.00%
Moderate (10-14)	27.00%
Severe (15-19)	9.00%
Extremely severe (≥ 20)	8.00%

Less than half of the students (44%) were in the normal range (score 0-7), while the remaining 55% had elevated anxiety levels: mild (12%), moderate (27.00%), severe (9.00%) and extremely severe (8.00%).

This indicates a high prevalence of anxiety symptoms at the start of the study.

Discussion

Stress is a state of emotional or mental strain resulting in a number of normal bodily reactions to retain self-preservation.⁷ Medical education is taken as being

stressful. Medical students face multiple anxieties as they transform from an insecure student to a young knowledgeable physician. The stress in medical training is a growing concern these days.⁸ Many studies have shown that medical students face high rate of psychological morbidity at various stages of their training, especially at the beginning during first year.^{8,9} In our study, the overall prevalence of anxiety, and stress among first-year medical students were found to be 56%, and 30% respectively. A study conducted among first-year medical students in an Egyptian Public University reported the prevalence of anxiety, and stress to be 78.4%, and 57.8% respectively, which is higher, compared to our study.¹⁰ On the other hand, a study conducted among medical students in two medical colleges reported the prevalence of anxiety, and stress to be 41.1%, and 27% respectively, which is lower than the finding of our study.¹¹

Conclusion

The present study showed that the stress and anxiety among the 1st year medical students is highly prevalent

References

1. Selye H. Stress and the general adaptation syndrome. British medical journal. 1950 Jun 6; 1(4667): 1383.
2. Behere SP, Yadav R, Behere PB. A comparative study of stress among students of medicine, engineering, and nursing. Indian journal of psychological medicine. 2011 Jul; 33(2):145-8.
3. Guthrie E, Black D, Bagalkote H, Shaw C, Campbell M, Creed F. Psychological stress and burnout in medical students: a five-year prospective longitudinal study. Journal of the Royal Society of Medicine. 1998 May; 91(5):237-43.

4. Spiegel DA, Smolen RC, Jonas CK. An examination of the relationships among interpersonal stress, morale and academic performance in male and female medical students. *Social Science & Medicine*. 1986 Jan 1; 23 (11):1157-61.
5. Vaz RF, Mbajorgu EF, Acuda SW. A preliminary study of stress levels among first year medical students at the University of Zimbabwe. *The Central African journal of medicine*. 1998 Sep 1;44(9):214-9
6. Sharma B, Prasad S, Pandey R, Singh J, Sodhi KS, Wadhwa D. Evaluation of Stress among Post-graduate Medical and Dental Students: A pilot study. *Delhi Psychiatry Journal*. 2013 Oct; 16 (2):312-6.
7. Australian Bureau of Statistics (ABS): Information Paper: Use of the Kessler Psychological Distress Scale in ABS health surveys, Australia, 2001.
8. Firth J. Levels and sources of stress in medical students. *Br Med J (Clin Res Ed)*. 1986 May 3; 292 (6529):1177-80.
9. Miller PM, Surtees PG. Psychological symptoms and their course in first-year medical students as assessed by the Interval General Health Questionnaire (I-GHQ). *The British Journal of Psychiatry*. 1991 Aug 1; 159 (2):199- 207.