

Assessment of stress among medical college students of Government Siddhartha Medical College, Vijayawada, Andhra Pradesh, India

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Abstract

Background: Medical course is a difficult study requiring hard work, commitment, and maturity unlike other professional courses. Medical students are found to be under mild to severe psychological stress. The institutions in India are not sufficiently equipped with necessary stress coping mechanisms or facilities.

Objective: To assess the magnitude and causes of stress among first-year medical students in a medical college.

Materials and Methods: A descriptive, cross-sectional study was carried out from September 2014 to August 2015 at Siddhartha Medical College of Andhra Pradesh, India; 150 medical students who had joined the course newly were provided orientation program. After a period of 8 months, the students were given a self-administered questionnaire adapted from the General Health Questionnaire (28 items). The data obtained were analyzed using Microsoft Excel and SPSS, version 16.

Result: About 78% of the respondents were stressed. Girls (44.7%) perceived greater stress when compared with boys (33.33%); the difference being statistically significant. Large content to be learnt, poor performance in examination, lack of time to revise, and no time for recreational/relaxational activities were found to be the major causes of stress among the students.

Conclusion: A substantial proportion of students were found to be stressed, with academic stressors being the major cause of stress among the subjects.


KEY WORDS: stress, medical students, general health questionnaire, relaxational activities

Introduction

Medical course is a needs-based curriculum, designed by Medical Council of India (MCI). All the medical colleges are recommended through their respective health universities to adhere to the same, to bring about a desired medical graduate

that will address the health needs of the country at large and the respective community that the teaching institute caters too. The curriculum emphasizes the firm grounding of the students to the slated objectives of the MCI for an Indian medical graduate. The course is perceived to be a stressful course for all its depth and diversity. Besides dealing with human lives, it makes one all the more conscious.

Several studies have shown that medical graduates experience stress impacting their learning process, leading to poor academic performance. This further leads to distress, depression, and a multitude of psychological problems. Hence, it is important that every institute conducts its own situation analysis of the psychological stress on its students and designs a mitigation strategy to help its students perform better and become an "Indian Medical Graduate" as the MCI envisions.

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Prevalence of emotional disturbance in medical students is higher than that in the general population as reflected through studies globally. The prevalence of stress was 31.2% and 41.9% in a Malaysian medical school^[1] and 61.4% in a Thai medical school. Stress in medical school is a predictor of future mental health problems, but students seldom seek help for their problems. In a Swedish study, 12.9% of medical students revealed incidence of depressive symptoms, and suicidal attempts was found in 2.7% of students. It is crucial that the medical educators know the prevalence, reasons, and levels of stress among students, as these factors impact not only the students' health but also their academic success at various points of their study period.

In several medical schools, the pressurized scenario arises from the atmosphere itself, as it creates a strict and rigid system that supports competition instead of cooperation among the learners. It is not just the undergraduate study period that is stressful. Stress continues to build and gain weight during the internship and postgraduate study period and later spills into a practitioner's life. The stress may also reach burnout levels, sometimes giving way to suicidal ideas.^[2]

Recent studies from Egypt and Saudi Arabia suggest high rates of anxiety and depression among medical students. An extensive electronic Internet-based search for studies on association between stress and academic achievement in undergraduate medical students in India was disappointing. This study was conducted to analyze the situation of the newly enrolled medical students at Siddhartha Medical College, Andhra Pradesh, India, with an aim of measuring the magnitude of psychological stress they face and the main causes of this stress.

Materials and Methods

A descriptive, cross-sectional study was carried out on 150 medical students, from August, 2014 to March, 2015, at Siddhartha Medical College, Vijayawada, Andhra Pradesh, India. Permission was obtained from the institutional authorities and the institutional ethical committee. The students had been informed, and their consent was obtained.

One hundred fifty medical students who newly joined the course were provided an orientation program for a week on various aspects of the undergraduate medical course. They were oriented on humanities, interpersonal interaction, community services, and purpose of pursuing the medical course. The probable problems anticipated in addressing the community were role played to them. They were asked to reflect on their own selves to help break their mental and psychological barriers. At the end of 8 months of their study period, 150 students were given a pretested, predesigned, semi-structured questionnaire adapted and customized from General Health Questionnaire (28 items), consisting of demographic information, causative factors of stress, various measures to mitigate stress, and questions related to assessment of somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression.

Results

A total of 150 students participated in the study. Of them, 71 were male and 79 female students. Their academic performance in the recent examinations was recorded and graded as excellent (75% and higher total marks percentage), very good (65%–74%), good (50%–64%), and poor (less than 50%). Data concerning their attendance were obtained from their attendance register, which was updated regularly at the end of every class and laboratory activity. Table 1 represents the demographic data of the participants.

The causes of stress were attributed to various factors such as large content to be learnt (84%), poor performance in examination (76%), lack of time to revise^[3] (74%), lack of recognition/appreciation for work done (68%), no time for recreational/relaxational activities(65.3%), no formal counselor (63.3%), lack of awareness about the depth of the subject (54%), and difficulty in understanding the subject (52.7%) [Table 2].

Stress was measured using the General Health Questionnaire scores and categorized as no stress (for scores less than or equal to 4) and distress (for scores equal to 5 and more). Distress was comparatively more in girls (44.7%) than boys (33.3%), and the difference was statistically significant ($P = 0.0337$) [Table 3].

Female students (62%) attributed distress to lack of appreciation of work done compared with male students (46.5%) but the difference was not statistically significant ($P = 0.0562$). There was no significant difference in the stress perceived by day scholars and residents.

Various methods adopted by students^[4] to unwind and destress are shown in Figure 1. Most of them found listening to music (42%) helpful.

Stress was being perceived as physical problems ranging in severity from mild to moderate to severe by 48% of the students.

Discussion

This study confirms the general impression that medical students are subjected to constant high levels of stress, the prevalence being 78%. Gender has an influence on stress experienced: female students (44.7%) were more distressed compared to the male students (33.3%). The causes of stress were mostly academic: large content to be learnt (84%), poor performance in examination (76%), lack of time to revise (74%), and lack of recognition/appreciation for work done (68%). Students depend on self-administered methods mostly for coping with stress, the most common being listening to music (42%).

The results are in consensus with existing literature from around the world, reflecting the high levels of stress to which medical students are subjected.^[5,6,8] Distress prevalence among the students is similar to a study from Kurnool done by Sreedevi et al.^[9] Causes of stress were mostly academic, as voiced by Firth,^[10] Garbee et al.,^[11] and Lazarus.^[12] Majority of

Table 1: Demographic data of participants

	No. of students	Percentage
Gender (n = 150)		
Male	71	47.12
Female	79	52.88
Year of study (n = 150)		
First	150	100
Grades (n = 150)		
Excellent	77	51.1
Very good	41	27.3
Good	25	16.7
Poor	7	4.9
Regular in attendance (n = 150)		
Yes	137	91.3
No	13	8.7

Table 2: Factors contributing to stress

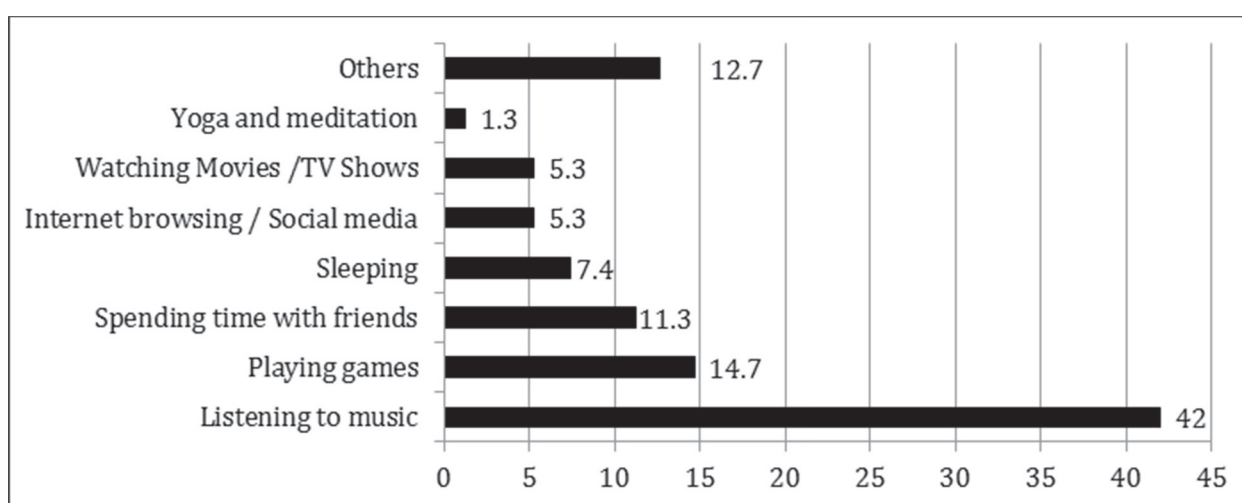
Cause of stress	No. of students	Percentage
Poor performance in examination	114	76
Unaware of subject depth	81	54
Difficulty in understanding	79	52.7
Lack of recognition/appreciation for work done	102	68
Lack of time to revise	111	74
Large content to be learnt	126	84
No time for recreational/relaxational activities	98	65.3
No formal counselor	95	63.3

the participants (63.3%) attributed this to lack of proper mentoring, both before entering the course and during the course. Counselings held after securing a seat in the entrance examinations to medical courses for the students are just a window

Table 3: Levels of stress and perception of physical problems

Variable	No. of students	Percentage	P
Levels of stress			
No stress (score less than 4)			0.0337*
Male	21	14	
Female	12	8	
Total	33	22	
Distress (score ≥ 5)			
Male	50	33.3	
Female	67	44.7	
Total	117	78	
Total No. of students	150	100	
Perception of physical problems			
Mild to moderate	62	41.2	
Severe	11	7.2	
Total	150	100	

of few seconds, focusing only on the place where they would like to study, rather than providing a healthy introductory insight as to what the candidate would be subjected to after entering the course. After entering the course, owing to the huge strength of the students, there is minimal or no scope for individually mentoring the students. Gender has a significant effect on stress perception according to our study, with female students showing more signs of distress (44.7%). But the gender variability showed no association with causative factors of stress, in contrast to the studies by Matud et al.^[13] and Sreedevi et al.^[9] Coping with stress is mostly left to the students, and the huge gap between students and formal academic guidance cannot be ignored. Major recourses to destressing adopted by the students were listening to music (42%) and playing games (14.7%), and the results were similar to that of Sreedevi et al.^[9]

**Figure 1:** Methods adopted by students to unwind and destress.

Although care has been taken to design the study in the best possible way, there are a few limitations. The General Health Questionnaire gives only a glimpse of the stress levels over the past 2 weeks. In addition, the scale gives only the indication of distress but does not provide information regarding the severity of the distress experienced. A baseline measurement of stress at the time of orientation program would have provided a yard stick to assess the actual role of the course in building stress on the students.

Recommendations

Establishing mentoring facilities before entering the course through professional career counseling will help the student understand and mentally prepare him/her for coping with the demands of the course load. Teaching students through small focused groups^[14] can ensure better guidance and a more personal interaction between the faculty and students and inculcate a more collective sense of camaraderie between the students. Early and effective professional help in the medical institutions through psychologists and experienced student counselors to identify symptoms of distress and mental trauma can restore the students to their full work potential. Peer groups involving the students both formally and informally can aid as vents for students who are not open to formal counseling. Regular counseling classes to all the students, at least once a week, combined with teaching them life skills like effective time management;etc and including relaxation activities into the course curriculum, will keep them motivated and inculcate a healthy positive attitude among the future doctors toward life.

Conclusion

Medical students are subjected to high volumes of stress. Distress can intensely affect the students' professional progress and negatively impact their academic performance, leading to academic deceit and substance abuse. Addressing these issues by the institution using professional help would aid in reducing their distress and make their learning a healthy experience.

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