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Original Research Article

A study on prevalence of stress among first year medical students in Trichy SRM Medical College Hospital and Research Centre, Trichy

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ABSTRACT

Background: The stress is an inevitable part of education for medical students at time of their life when they are also involved in issues related to life style and carriers. It is reported that stress during medical education can affect the patient care negatively. The objective of the present study was to estimate the prevalence of stress among first year medical students in Trichy SRM Medical College Hospital and Research Centre, Trichy.
Methods: A descriptive cross sectional study using predesigned, semi structured questionnaire for 150 first year medical students of Trichy SRM Medical College for a period of 2 months (October to November 2018).
Results: Among 150 study participants 49% (73) were under stress, 49.3% of them are belong to 18 years. Majority of the study participants are females (57.3%) in which females are getting more stress (28.6%) than males (20.1%); among them 33.3% of them with suicidal tendency and 80.7% of them are academically stressed.
Conclusions: The greater proportion of students was found to be stressed with academic problems being major cause for stress when compared with non-academic problems. Stress management workshops soft skills development techniques at the entry of medical carrier would be helpful to reduce stress.

Keywords: Examination, Medical students, Stress, Academic

INTRODUCTION

Stress is a term that refers to the sum of physical, mental and emotional strains or tensions on a person. The term "stress", as it is currently used was coined by Hans Selye in 1930, who defined it as "the non-specific response of the body to any demand for change". Selye had noted in numerous experiments that laboratory animals subjected to acute but different noxious physical and emotional stimuli (blaring light, deafening noise, extremes of heat or cold, perpetual frustration) all exhibited the same pathologic changes of stomach ulcerations, shrinkage of lymphoid tissue and enlargement of the adrenals.[1] When we look at stress and anxiety, the particular population seems to be on the receiving end of the spectrum. Multiple studies have found significantly high-stress levels in medical students and the high stress has been reported from multiple countries, spanning different continents.[2] Studies revealed that medical students experience a relatively high level of personal distress, with adverse consequences on academic performance, competency, professionalism, and health.[3] It is imperative that medical college educator understand the incidences and causes of student distress, adverse consequences on personal and professional well-being, and institutional factors that has an impact on student's health. Stress experienced by medical students start from the beginning

of the training process. Although some degree of stress is accepted as a normal part of medical training and can be a motivator for some individuals, not all students find the stress manageable.[4] Stress may give rise to feelings of fear, incompetence, uselessness, anger, and guilt and has been associated with both psychological and physical disorders. Medical students have used various coping mechanisms to deal with stress; the coping strategies applied by students may determine the effect of stress on psychological and physical health and may determine whether stress has a positive or negative influence.[5] Different studies conducted worldwide among medical students have reported prevalence of stress ranging from 27-73%.[7-10] The academic atmosphere in medical colleges is very stressful which promotes competition among learners rather than co-operation. High level of stress among medical students has been reported in various studies in India.[10,11] Women had more significant increases in depression scores than did the men.[12] The academic demands of medical education are placed on students at time of their life when they are also involved in issues related to life style and carriers. It is also reported that stress during medical education can affect the patient care negatively.[13] Various stress factors reported in studies among medical students are academic related such as exams, getting poor marks, inability to cope, helplessness, increased psychological pressure, mental tension and too much work load.[14] The transition from pre-clinical to clinical training has also been identified as a crucial stage of medical school regarding student stress. This study therefore has been planned to identify the prevalence of stress and possible factors responsible for it among first year medical students. So that appropriate intervention strategy can be proposed to reduce and enhance student's abilities.

Objective

The objective of the present study was to study the prevalence of stress among first year medical students in Trichy SRM Medical College Hospital and Research Centre, Trichy.

METHODS

A descriptive cross sectional study was conducted in the area of Trichy SRM Medical College Hospital and Research Centre, Trichy among 150 first year medical students in the period of 2 months from October to November 2018, by using predesigned, semi-structured questionnaire. Then the students of first year medical students were selected as participants and invited to take part in the survey after taking informed consent. The questionnaire based survey was carried out among 150 first year undergraduate medical students of Trichy SRM Medical College Hospital and Research Centre. Perceived stress was assessed using the perceived stress scale consisting of a questionnaire with two parts.[8] The first part comprised demographic information of study participants are age, sex and religion. The second part of questionnaire included questions about the factors related to study. Before the distribution of questionnaire, they are sensitized to the type of questions being asked; study participants were assured about confidentiality of their details and clarification was given regarding doubts about questions and perceived stress scale was used to assess information on stress. From their answers, scores are calculated, scores can range from 0 to 4 (0=never 1=almost never 2=sometimes 3=fairly often 4=often). Scoring 0, 1 considered as no stress and more than 2 (2, 3, 4) considered as yes. According this scoring method results are obtained. Data was entered in Microsoft Excel spread sheet and analyzed with SPSS version 16.

RESULTS

Total of 150 students were enrolled for the study. The present study shows that the mean age was 17.71 with an age of 17 years to 19 years. Sociodemographic details are given in Table 1 which shows 49.3% of them are belong to 18 years, 40% are belong to 17 years, 10.7% are belong to 19 years. A total of 64 (42.7%) males and 86 (57.3%) females participated in the study. Majority of the study participants are females (57.3%). Majority of study participants (90%) are belongs to Hindu, 7.3% are Christians, and 2.7% are Muslims. Among 150 study participants 49% (73) were under stress as shown in Figure 1. In which females are getting more stress than males, 28.6% are females and 20.1% are males. Figure 2 shows frequency of stress among study participants with gender distribution. Figure 3 shows suicidal tendency, about 33.3% of them with suicidal tendency, 80.7% of them are academically stressed and 60.7% had experienced stress due to personal issues as in Table 2.

Table 1: Sociodemographic details of study participants.

Sociodemographic details		Frequency	%
Age (in years)	17	60	40
	18	74	49.3
	19	16	10.7
Gender	Male	64	42.7
	Female	86	57.3
Religion	Hindu	135	90
	Christian	11	7.3
	Muslim	4	2.7

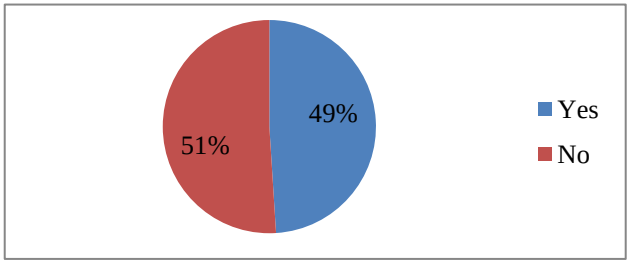

Figure 1: Stress among study participants.

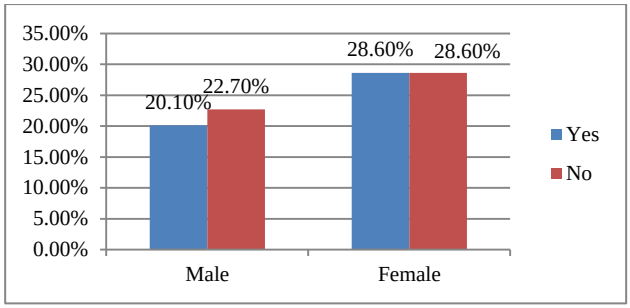

Figure 2: Stress among the study participants according to gender.

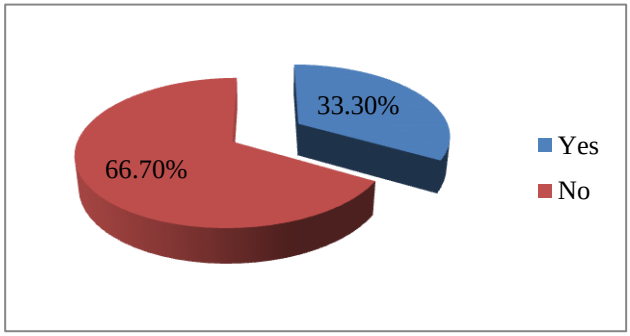

Figure 3: Suicidal tendency among study participants.

Table 2: Stress related factors.

Stress causing factors		Frequency	%
Suicidal tendency	Present	50	33.3
	Absent	100	66.7
Academic related	Present	121	80.7
	Absent	29	19.3
Personal issues related	Present	91	60.7
	Absent	59	39.3

DISCUSSION

The present study showed that stress is common among medical students. In our study the age group was 17-19 years and the mean age was 17.71. Kurnool et al study made an analysis which shows that 78.19% of the respondents experienced stress. Girls (52.88%) perceived greater stress when compared with boys (47.12%); however, the difference did not reach statistical significance. Stress levels are more common in the students aged ≤18 years.

A substantial proportion of students were found to be stressed, with academic stressors being the major cause of stress among the subjects. An intervention was planned in two sessions, and students were educated on how to handle stress by audio visual aids, personal interviews and group discussions.[14] Thangaraj et al study done in Bangalore medical college showed that the age group was 17-20 years and the mean age was 18.16.[15] In present study maximum number of students 73 (49%) are under stress. When compared to a study done by Brahmbhatt et al in a medical college in Mangalore 42.5% stress levels was found.[6] Another study done by Supe shows 73.5% stress.[7] It was observed that 50 (33.3%) students are with suicidal tendency and 121 (87.4%) and 91 (60.7%) under academic stress and 39.3% study participants are not able to handle their personal issues. But the stress levels are predominantly high.[15] Sharma et al study shows high rates of distress reported in medical students and residents, support concerns that the training process and environment contribute to the deterioration of mental health in developing physicians.[16] Somnath study and Heinen study had seen the prevalence of mild, moderate and severe stress was 39.28%, 21.43% and 3.57% respectively.[17,18] The major stressors among first year medical students were high expectation from parental side, huge syllabus, frequency of part completion tests, performance in examination, lack of sleep, low confidence level and lack of emotional and social support.

Previous studies show that stress in medical students is similar to general population when they enter, but this increase disproportionately over the years of their training.[15,16] Coupled with prior research, this study brings out high levels of perceived stress. Tackling stress in medical college is not purely related to academic performance, there are several other factors like sleep deprivation, eating and physical activity habits, financial commitments, broken relationships, in addition to the rigorous medical training.

CONCLUSION

Our study highlights that academic problems were greater sources of stress in the first year medical students when compared with non-academic problems. Stress management workshops soft skills development techniques at the entry of medical carrier would be helpful to reduce stress. Relaxation techniques like medication, yoga, and involvement in physical activities like outdoor sports can be recommended as stress busters. Stress though a well-studied entity in medical students is yet to be explored further with more research as regarding students from other than English medium background special classes may be arranged for them for understanding the subject.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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