

A Study of Perceived Stress Levels in First Year Medical Students in South India

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Abstract

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Introduction: Medical students during their course of education may experience stress when their curricular demands tends to exceed their resources to deal with them, and they have been also reported to suffer from higher perceived stress compared to the general population and students in other academic fields. Current study aims to assess the level of stress in first year medical students. *Objective:* To assess the perceived stress levels in first year medical students. *Method:* Across-sectional study was conducted among first year medical students of Al-Azhar medical college and super speciality hospital. Where, perceived stress scale -10 (PSS-10) was used for assessing the perceived stress levels. The data was entered in Microsoft excel and analyzed using SPSS version 16. *Results:* Of the 150 first year medical students, who took part, 109 were females and 41 were males. Most students reported PSS-10 mean score of 24.56 (SD 7.24) and scores ranging from 8-38. There was no difference between the mean stress levels of male students and female students $p>0.05$. *Conclusion:* The study reported that there is a higher level of stress among the medical student than compared to the general population. Also there is no difference in stress level between male or female students.

Keywords: First Year Medical Students; Perceived Stress; South India.

Introduction

Stress by definition is “a condition or feeling experienced when a person perceives that the demands placed on them exceed the resources the individual has available” [1].

Many Medical students may experience stress during their medical course, when their curricular demands tends to exceed their resources to deal with them [2], and they have been also reported to suffer from higher perceived stress compared to the general population and students in other academic fields [3-7]. Moffat et al. examined stress during the first year of medical school and found a significant increase in psychological morbidity as measured by the General Health Questionnaire GHQ-12, a screening instrument to detect psychological disorders in the general population and in primary care [2,8]. First year of the medical course is a very important phase of the medical course, Wolf TM et al.

observed that Positive mood in the medical students decreased (joy, contentment, vigour, and affection) while negative mood increased (depression and hostility). End of the year first year students appear to be worse off psychosocially than when they entered [9]. So, it's very important to assess the level of stress in students experience during their first year of medical course. It was also found in other studies that the students generally used active coping strategies to cope with their stress in medical school [2].

Researches over past few decades have shown that medical students reported a high level of perceived stress and they apply individual approaches to cope with it, there are also studies regarding the effects of interventions such as stress reduction trainings, peer support programs, student focused curricula or wellness courses [10-13]. There are many Studies conducted in Asian countries like Malaysia, Thailand, etc those have shown a high level of stress among the medical students [14-17].

But, hardly any studies have been conducted in south India with regards to stress levels in first year medical students. Current study aims to study the stress levels in the first year medical students in south India.

Material and Method

This cross-sectional study was conducted among first medical students Al-Azhar medical college and super speciality hospital. Students gave their consent and participated voluntarily. The approval to conduct this study was obtained from the ethical committee of the Al-Azhar medical college and super speciality hospital. Perceived Stress Scale (PSS 10) was used to assess the degree of perceived stress students experienced during their first year of MBBS course [17].

Items were designed to know how unpredictable, uncontrollable, and overloaded students would find their lives during the first year of their medical course. The scale also includes a number of direct queries about current levels of experienced stress.

Scoring

PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items.

Statistical Analysis

The data was entered in Microsoft excel and analyzed using SPSS version 16. The descriptive statistics such as frequency, proportion and mean and standard deviation was analyzed.

To check the association between stress score and other factors student t-test was used and P value less than 0.05 was considered significant.

Results

All the 150 students who had enrolled in study completed and returned the questionnaire. The mean age of the students was 18.83 years (SD=0.84) with a range of 17-21 years. Among the students 109 were female with mean age of 18.80 years (SD= 0.83) and 41 were males with mean age of 18.90 years (SD = 0.88) as shown in Chart No: 01 and Table 1.

Perceived Stress

The mean PSS-10 score of the study population was 24.56 (SD 7.24) and scores ranging from 8-38.

The mean PSS-10 score among the female students was 24.55 (SD 7.36) and the mean score for male students was 24.60 (SD 6.98) as shown in Chart No: 02. There was no difference between the mean stress levels of male students and female students' p-value = 0.9 as shown in Table 2.

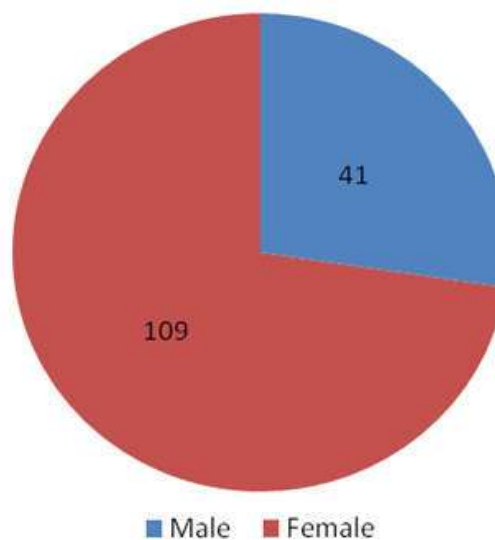


Chart 1: Showing the gender distribution

Table 1: Showing the number, age and the PSS-10 score of the first year medical students

	Total	Female	Male
n	150	109	41
Average age	18.83	18.80	18.90
SD	0.84	0.83	0.88
Average score	24.56	24.55	24.60
SD	7.24	7.36	6.98

Table 2: Showing the association between the gender and stress score

Gender	Mean score	S.D	p-value
Male	24.60	6.98	0.9
Female	24.55	7.36	
Total	24.56	7.24	

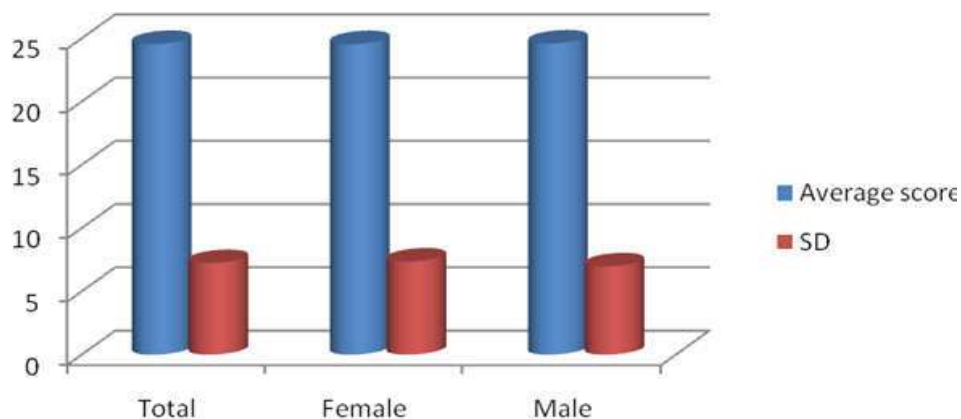


Chart 2: Showing the mean PSS-10 score and standard deviation of the students

Discussion

There have been many studies in medical colleges of many countries with respect to stress level in medical students. There are many studies have shown that very levels of stress and depression among medical students may also lead to suicide [18, 19,20]. But, there are hardly any study conducted in south India to assess the level of stress in first year medical college. The first year of a medical course is even the students tends to experience high level stress, which can affect their further education during the course [9].

The learning ability and academic performance of the students especially among the medical students are affected by stress and other factors like social, emotional, etc. In country like India family problems also play important factors [21,22,23]. In present study, perceived stress experienced by 150 first year medical students was evaluated. Students reported a higher level of perceived stress than the general population which was for male 12.1 ± 5.9 and females 13.7 ± 6.6 . [17].

However, there were no significant differences in mean scores of stress between the sexes in the current study, which is similar lines with Cohen has reported that there was no significant difference in stress using PSS between male and female students. [17].

However, a recent study by Anbumalar C et al. had shown that girl students experience a significant level of higher stress than male [24]. However, that study included girls from different under graduate courses, not only medical. This study included only medical students.

Conclusion

The study reported that there is a higher level of stress among the medical student than compared to the general population. Also there is no difference in stress level between male or female students. However, a detailed study is required to identify the exact causes of the stress in first year medical students

Limitations

This study was able to show that that the first year medical students experienced significantly high level stress. But, was not able to isolate the exact causes for high level of stress, further studies should be designed and conducted to isolate the causes for the high level of stress experienced by the first year medical students.

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