

A Study of Perceived Stress Levels in Medical Students and Dental Students in South India

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Abstract

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Introduction: Medical and dental 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 compare the level of stress in first year medical and dental students. *Objective:* To assess the perceived stress levels in first year medical and dental students. *Method:* A cross-sectional study was conducted among first year medical students of Al-Azhar medical college and super specialty hospital and first year dental students of al azhar dental college. 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 250 first year medical and dental students. Students reported PSS-10 mean score of 23.83(SD 7.08) scores ranging from 7-28. The mean PSS-10 for the medical students was 24.56(SD 7.24) and scores ranging from 8-38 and the mean PSS-10 score of the dental students was 24.66 (SD 7.27) and scores ranging from 7-37. There was no difference in stress levels between the two groups and gender. *Conclusion:* The study reported that there is a higher level of stress among the medical and dental student than compared to the general population. Also there is no difference in stress level between the two groups.

Keywords: First Year Medical Students; First year Dental 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].

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 [8].

There are many Studies conducted in Asian countries like Malaysia, Thailand, etc those have shown a high level of stress among the medical students [9-12].

Just like the medical students, even the dental students experience a high level of stress. Many studies conducted around the world have shown that the dental students also experience a high level of stress. [13,14].

Kharel Sushil et al. had conducted a study to compare the stress levels among medical and dental students in Nepal [15].

But hardly any study was conducted in south India to compare the stress levels experienced by medical

and dental students. This study is designed to compare the level of perceived stress experienced among dental and medical students.

Material and Method

This cross-sectional study was conducted among first medical students Al-Azhar medical college and super specialty hospital and al Azhar dental college. 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 specialty hospital. Perceived Stress Scale (PSS 10) was used to assess the degree of perceived stress students experienced during their first year of MBBS and BDS course [12].

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 250 students who had enrolled in study completed and returned the questionnaire. . The mean age of the study populations was 18.83years (SD=0.94) with a range of 17-21 years. The mean age of the medical students was 18.83years (SD=0.84) with a range of 17-21 years. Whereas the mean age of the dental students was 18.84 years (SD=1.07) with a range of 17-21 years. Among the medical 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) whereas Among the dental students 76 were female with mean age of 18.81 years (SD= 1.12) and 24 were males with mean age of 18.91 years (SD = 0.92) as shown in Chart 1 and Table 1.

Perceived Stress

The mean PSS-10 score of the study populations was 23.83 (SD 7.08) scores ranging from 7-28.

The mean PSS-10 score medical students was 24.56 (SD 7.24) and scores ranging from 8-38. The mean PSS-10 score among the female medical students was 24.55 (SD 7.36) and the mean score for male medical students was 24.60 (SD 6.98). There was no difference between the mean stress levels of male students and female students' p- value >0.05.

The mean PSS-10 score of the dental students was 24.66 (SD 7.27) and scores ranging from 7-37. The mean PSS-10 score among the female Dental students was 24.51 (SD 6.94) and the mean score for male dental students was 25.12 (SD 8.73). There was no difference between the mean stress levels of male students and female students' p- value >0.05.

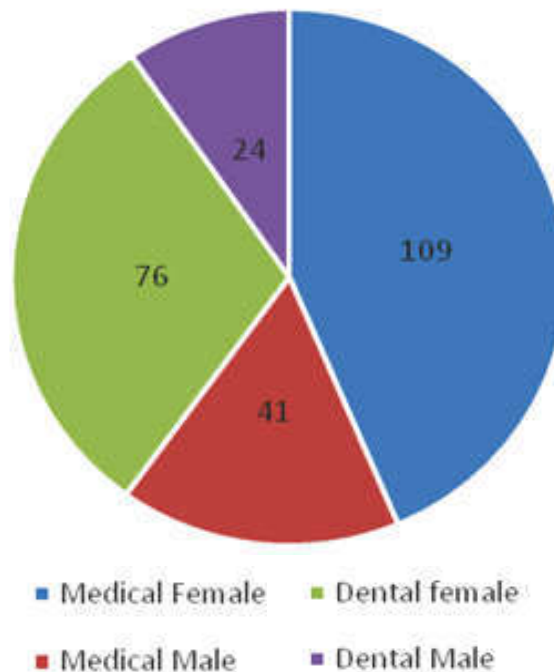


Chart 1: Showing the gender distribution of medical and dental students

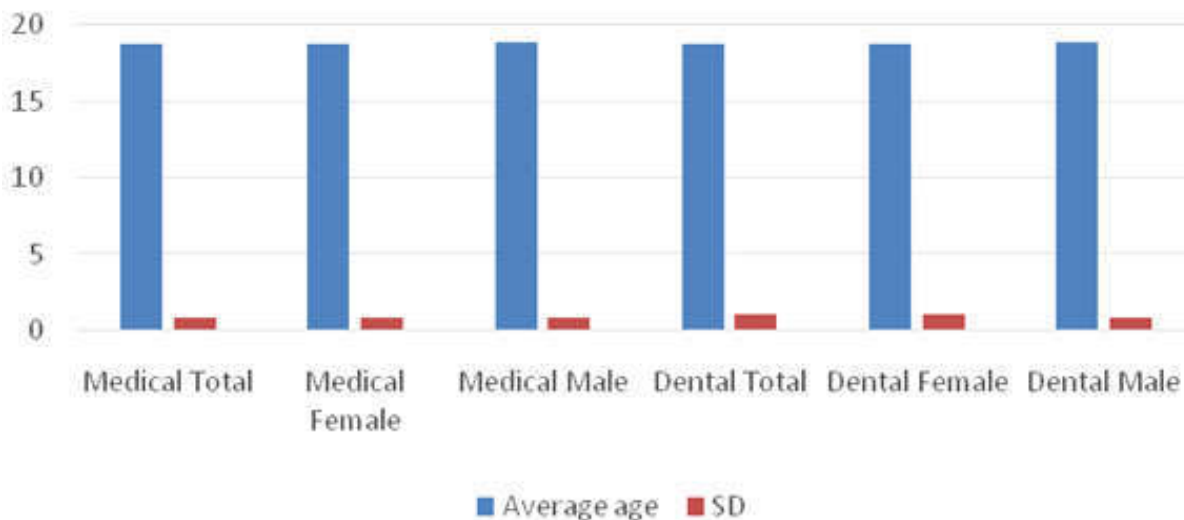


Chart 2: Showing the average age of the different group

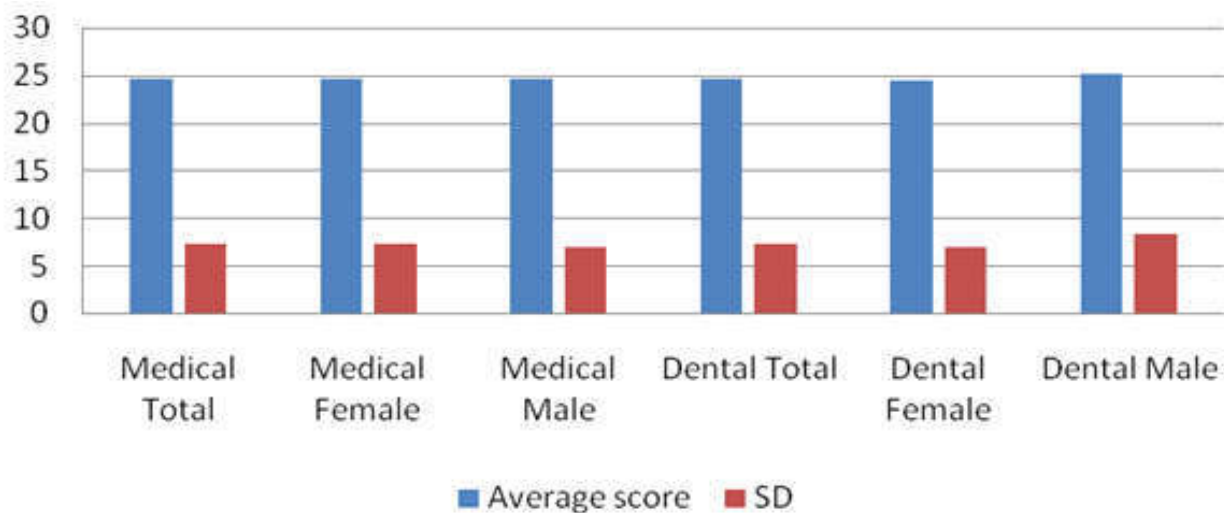


Chart 3: Showing the mean PSS-10 score of different group

	Total	Medical Female	Male	Total	Dental Female	Male	Grand total
N	150	109	41	100	76	24	250
Average age	18.83	18.8	18.9	18.84	18.81	18.91	18.83
SD	0.84	0.83	0.88	1.07	1.12	0.92	0.94
Average score	24.56	24.55	24.6	24.66	24.51	25.12	23.83
SD	7.24	7.36	6.98	7.27	6.94	8.378	7.08

When student t-test was applied between the mean scores of medical and dental students, there was no difference p- value >0.05.

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 [16,17,18]. the academic stress is not only high in medical students, but also dentals students have reported a high level of stress [13,14]. Very few studies have been conducted around the world to compare the levels of stress experienced by medical and dental students. In present study, perceived

stress experienced by 250 first year medical and dental students was evaluated. Both 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 two group's i.e medical and dental students. Kharel Sushil et al. [15] had conducted a similar study, in which he found dental students had higher levels of stress, but in that study student t test was not done to statistically to prove the differences. In the current study student t test was done and it was found that there was no significant difference.

Conclusion

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

Limitations

This study was able to show that that the first year medical and dental 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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