

Perceived stress levels in medical students.

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Abstract

Background: Stress is defined as the physiological and psychological state which could overburden an individual's ability to appropriately respond to it. Medical professional has to deal with lots of stress especially the first year medical student. The reason behind high perceived stress are inordinate hours, sleep deprivation, excessive workload, helplessness, increased psychological pressure, mental tension, assignments, inadequate support from allied health professionals. The present study aimed to assess perceived stress among the medical students.

Aim and Objectives:

To assess the amount of perceived stress among the first year medical students

Materials and Method: A cross-sectional online survey study was done on 293 medical students whose perceived stress were assessed using an online questionnaire. The stress test was done with the help globally acceptable Perceived Stress Scale (PSS) which has got 14 items.

Results: In 293 medical students (151- boys and 142 girls), the mean perceived stress score was observed as 28.61. In boys the PSS score was found to be 28.41 and in girls it was 28.82. When the score were compared with the mean validated score the students were having moderate amount of stress (p value < 0.05).

Conclusion: The present study concluded that the medical students perceived the moderate level of stress which has affected the psychological well being of medical students. These findings emphasize the need for greater attention to the psychological well-being of doctors-in-training in our country.

Keywords: Stress, Perceived stress scale, Medical students.

Introduction

Stress is defined as a structured series of physiological, Neuro-hormonal and psychological response to circumstances that threatens or provokes us and that require some kind of adaptation. Stress primarily signifies condition of disturbed normal functioning due to variance between individual's interactions with the surrounding environment. Stress is a flexible response to noxious stimulus causing interruption in normal functioning.

Medical students experience tremendous stress. There are multiple reasons by which the stress is produced in medical students. Some of the reasons for perceived stress are academic related stress, peer pressure to perform, stress because of inordinate hours, sleep deprivation, excessive workload, helplessness, increased psychological pressure, mental tension, assignments, inadequate support from allied health professionals adds to the stress of medical students. Effect of stress among medical graduate students can influence physical and psychological well-being of students and affect the stability of the student's mental health. This can cause

medical graduate students from being healthy to being sick [1].

The study was aimed to find out the perceived stress levels in first year medical students. A globally acceptable PSS was given to first year medical students. Perceived Stress Scale (PSS) questionnaire is associated with direct changes to both physiologic and psychological processes. The PSS is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. The scale includes a 14 set of questions to assess current levels of perceived stress. This study would help to evaluate the amount of stress perceived by first year medical students [2].

Materials and methods

The cross sectional study was performed on randomly selected 300 medical students out of which 293 medical students responded to the questionnaire (out of which there were Boys- 151 and Girls- 142 girls) with age group of 18- 25 years studying in Datta Meghe Institute of Medical Sciences University (DMIMSU). Informed consent was taken

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Table 1. Perceived Stress levels in medical students.

Gender wise distribution	No of sample	Mean PSS ± Standard deviation	T test
Boys	151	28.41 ± 8.32	p value < 0.0001
Girls	142	28.82 ± 8	
Total	293	28.61 ± 8.13	

from participating students. They were given online access to PSS questionnaire which contains 14 items (questions). The questionnaire was available online in English and Hindi language. As per the convenience of students language they were asked to answer the PSS questions. This scale assists to measure the perception of stress by an individual. The scale includes a number of variety of questions about present levels of experienced stress. In this scale there are 14 items which are easy to understand, and the response alternatives are simple to understand. The items (questions) in PSS scale assess about feelings and thoughts of the previous month. Out of the 14 items, 7 items (item number on PSS as 1,2,3,8,11,12,14,15) are neutrally stated questions which suggests that if the stress score is more then more is the stress perceived by the subject .Other 7 questions (item number on PSS as 4,5,6,7,9,10&13) were positively stated questions. This means scores get reversed i.e. more is score; less is the severity of stress perceived. 2 Average score all 14 items of 293 subjects were calculated. Statistical analysis was done by descriptive statistics [3-5].

Results of the study

Total of 293 medical students (Boys–151, Girls–142 students) were included in the study and had completed the whole PSS questionnaire. Table 1 gives gender wise and overall average PSS score findings. The mean perceived stress score among the students was 28.68 ± 8.23 (Mean ± Standard deviation) . When the data is compared with the validated data of PSS- 14 scale which suggest average score of 19.62 showed significant difference ($p < 0.0001$) between the gender wise and average distribution.

Discussion

In this study we assessed perceived stress on first year medical students of DMIMSU College. Choosing medical field as a career itself is a challenge which can have a huge psychological impact on college students such as stress, anxiety etc. The PSS is stress assessment instrument used in the present study. The PSS scale is helpful to understand how different situations and surroundings influence our feelings and our perceived stress. The questions in the scale ask about your thoughts & feeling in the last month. 2.

In current study it was found that, average 14 item PSS scale score is 28.61. The findings of the results were compared with the average score evaluation of PSS scale in healthy individual. From the validation studies, the mean score for 14 item PSS scale was 19.62 in healthy population.4, 5 When the average score was compared with the normal healthy individual score it was observed that significant difference ($p < 0.0001$) was there between validated score and calculated PSS score. However, when average PSS score of both boys and girls were analyzed there was no significant difference in stress score between the two.

Similar findings were found in the study conducted by Ratana Saipanish et al. The study aimed to determine the prevalence and sources of stress among Thai medical students. The study was conducted on 686 students. It was observed that about 61.4% of students had some degree of stress. 17 students (2.4%) had a high level of stress. The main cause of stress was found to be related with the academic issues among all students.6

Nudrat Sohaile observed relationship of stress and academic performance in medical students. The study showed high level of stress in the medical students. The results also show that higher level of stress is associated with poor academic performance [6,7].

Barikani et al observed nearly half the students (45%) experienced intermediate or higher levels of stress. Factors leading to stress were adaptation to the program (84.5%), apprehension of exam (41.3%) and economic issues (32.4%). Thus the study concluded that there are many stressors are present to become a medical professional.

Conclusion

The amount of stress perceived by first year medical students was found to be moderate level of stress on PSS stress scale score .Thus, this study helps to understand the amount of perceived stress in the medical students. The stress factors should be looked seriously and should be addressed by the medical colleges. These findings emphasize the need for greater attention to the psychological well-being of doctors-in-training in our country.

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