

Original Article

PREVALENCE OF PERCEIVED STRESS IN MEDICAL AND DENTAL STUDENTS DURING THEIR PROFESSIONAL STUDIES

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ABSTRACT

Background: Stress is a common condition among students of all professional studies which not only adversely affects their mental and physical health but also affects their performance during studies. The current study is performed to assess the impact of daily routine stress on their education.

Material and Methods: 300 medical and dental students from first to final year between the age group 18- 25 years were selected and interviewed through an online perceived stress scale (PSS) questionnaire.

Results: In our study, 8.6% (26 out of 300) of medical and dental students have low-stress levels, 61% (185 out of 300) have moderate stress levels and 29% (89 out of 300) showed high perceived stress levels.

Conclusion: Medical and Dental students underwent moderate to high stress during their professional studies. Therefore, specific modifications are required in the professional curriculum so that a strong and healthy environment is provided to the students to reduce their stress levels. Multiple awareness and counseling sessions should be held throughout their course work that would help the students to cope with various challenges.

Key Words: Medical education, Curriculum, Awareness, Counseling

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INTRODUCTION

Many psychologists define stress as different challenges an individual faces which exceed his/her ability to cope with it.¹ Stress is considered a two-edged sword that can increase the performance of students to the peak or decrease to a very low.² Academic stress has been considered a major cause of many psychological problems in students.³ According to the national crime record bureau of India, 1.8% of students committed suicide due to failing examinations.

In 2012 Lancet reported the highest rate of suicide among students between the ages of 15-29 years in India.³ This number is increasing day by day. Although a major contributor to stress among students is studies and examinations but parental pressure, and peer or teacher pressure may also be a factor. Different parameters detect academic stress which includes depression, disturbed sleep, and anxiety which turns into frustration, conflict, and burden.⁴

A study conducted in Hong Kong showed that about 27% of students suffered from stress and 41% of students suffered from anxiety.⁵ Furthermore, college is a new gateway for many students as they face a different social as well as educational environment. United States data shows that about 23% of the population is affected by continuous stress and it increases the risk of cardiovascular diseases, depression, and autoimmune disorders.⁶ It is

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generally considered that stress affects life negatively but some research has shown that stress may have a favorable outcome. This is because stress has multiple factors which are associated with positive outcomes.⁷ The regions of the brain engaged in the regulation of stress include the subcortical, hypothalamus, hippocampus and brainstem. All these regions are under the control of the hypothalamic-pituitary-gonadal (HPG) and hypothalamic-pituitary-adrenal (HPA) axis.⁸ Activation of the stress system resulted in behavioral and peripheral changes that affect the quality of life.⁹ Many animal studies reported differences in hormonal and behavioral responses given by males and females after long or short-term stress.⁸ Therefore, the present study determines stress tolerance in medical and dental students. The result of this study will help identify various medical disorders that are correlated to psychological problems and hence helpful in timely treatment/intervention.

MATERIAL AND METHODS

A cross-sectional study was conducted on 300 medical and dental students of Sharif Medical and Dental College Lahore, for six months. Students of all professionals were included in the study except those having been diagnosed with psychiatric illness or any medical or systemic disorder secondary to psychiatric illness. The data was collected online via Google forms on an Authorized Questionnaire having 10 questions. The questionnaire included demographic details of the participants, their age, and stress-related questions which they experienced/observed in the last month.¹⁰

Stress levels will be scored by the perceived stress scale (PSS). The perceived stress scale is a classic assessment instrument having ten questions that indicate how often you will feel or think during the last month. Individual scores on the PSS will range from 0 to 40 with a higher score indicating a higher level of stress.

Scores ranging from 0- 13 would be considered low stress, scores ranging from

14- 26 would be considered moderate stress and scores ranging from 27- 40 would be considered high perceived stress.

RESULTS

A total of 300 medical and dental students of Sharif Medical Dental College were selected and the authorized questionnaire was given to each student. Among them 9% of students showed low stress, 61% had moderate stress and 29% showed high perceived stress (Figure 1). In the current study, 62.1% of females and 37.9% of males gave their consent and filled out the form and perceived stress test results are shown in Figure 2. Figure 3 shows the perceived stress test results of 59.3% of day scholars and 40.7% of hostilities. 46.55% of students answered that they were sometimes upset because of something that happened unexpectedly while 17.1% showed that they were upset very often. 34.6% of students felt that they were sometimes unable to control the things in their life while 10% showed they never had such feelings in their last month. 37.5% of students felt that they were sometimes nervous and stressed in the last month and 26.4% showed these feelings very often. 15.6% of students found that very often they could not cope with all the things they had to do while 8.2% never found that they could not cope with all the things. 16% of students found they were very often been angered because of things that were outside of their control and only 5.6% never had such feelings in the last month. 16.7% of students very often felt difficulties piling up so high that they could not overcome while 38.3% of students sometimes felt that they could not overcome their difficulties. 23.8% of students showed that they are not confident to handle their problems very often while 39% sometimes felt that they could not handle their problems. 43.5 % of students sometimes felt that things were going their way. 50.2% of students were able to control the irritations in their life and 43.5% of students sometimes felt that they were on top of things.

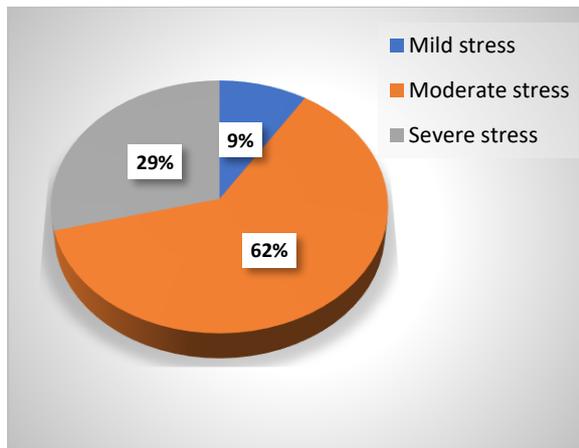


Figure-1: Showing mild, moderate, and severe stress among medical and dental students

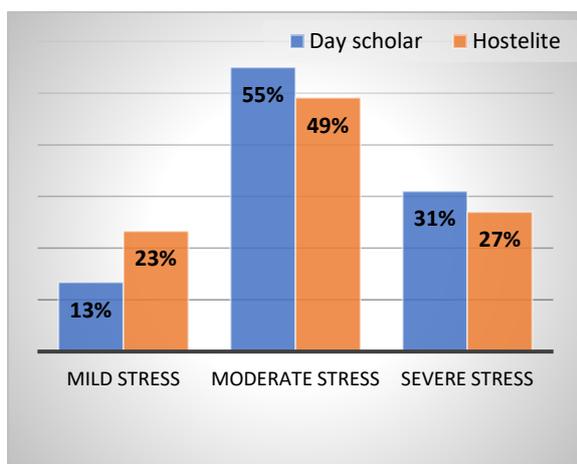


Figure-2: Graphical presentation showing male and female differences in mild, moderate and severe stress.

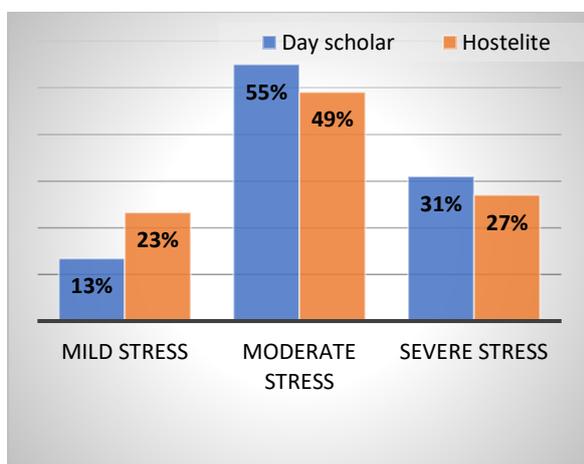


Figure-3: Graphical presentation showing day scholar and hostilities difference of mild, moderate, and severe stress.

DISCUSSION

Due to many expectations from internal and external sources, students particularly medical and dental face stress throughout their professional studies.¹¹ Continuous stress in adult age may cause various hormonal disturbances that lead to various physical and mental illnesses.¹² In this study 9% of students showed low stress, 61% showed moderate stress and 29% showed high perceived stress. These results correspond with a study conducted previously in which moderate stress was observed in nursing students in Poland.¹³ Our estimates are lower in comparison to the Malaysian study where 55.5% of students showed stress. The difference in results among different students of different countries might be due to differences in the educational environment, competition among the students, and socio-demographic variation.¹⁴ In this study, 39% of students were not confident in handling their problems which coincides with a study done by Lorenz Gotte et al. who showed that self-confidence is majorly lost by those who showed more stress and anxiety. Due to the subsequent release of various hormones like cortisol, the level of stress might be changed and self-decision capabilities might be affected.¹⁵ Also continuous stress is in parallel relation with depression by releasing various neurotransmitters.¹⁶ Previous studies showed that decreased or increased levels of these neurotransmitters have a direct effect on various systems of the body for example reproductive system by disturbing the gonadal hypothalamic-pituitary axis.¹⁷ Keeping all these effects of stress it is the prime duty of institutions and training centers to provide a healthy and encouraging environment to the students which support their mental as well as physical health. It is because professional institutions and colleges are the places where young people of various backgrounds and various socioeconomic statuses come together.¹⁸ Like every other study, our study also has some strengths and limitations. The result of this study can be used for further research on depression and anxiety among students. A

comparison should be made among students of different professions. The perceived stress scale was used to measure the stress level which cannot be used for precise diagnosis but it can be used as a screening tool to determine stress among the students.

This study also highlighted that stress parallels professional studies which include yoga, life skills training, and psychotherapy. All these measures should be taken at the personal as well as institutional level, as social well-being is essential for the students particularly medical and dental as well as for the institution.¹¹

CONCLUSION

Academic stress has become a common problem worldwide regardless of ethnicity, religion, or country due to peer or family pressure. The present study highlighted this problem among medical and dental students and concluded that about two third of them experienced moderate stress while one-third experienced high stress. Stress among the students could be minimized by introducing various management techniques like yoga and psychotherapy not only at the student level but at the institutional level also.

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AUTHOR'S CONTRIBUTIONS

MS: Collected and analyzed the data
 NA: Reviewed and finalized the manuscript.
 AG: Reviewed and finalized the manuscript.
 FA: Review and formatting
 SE: Review and formatting

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