

Factors associated with stress among medical students

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Abstract

Objective: To determine the probable factors responsible for stress among undergraduate medical students.

Methods: The qualitative descriptive study was conducted at a public-sector medical college in Islamabad, Pakistan, from January to April 2014. Self-administered open-ended questionnaires were used to collect data from first year medical students in order to study the factors associated with the new environment.

Results: There were 115 students in the study with a mean age of 19 ± 6.76 years. Overall, 35(30.4%) students had mild to moderate physical problems, 20(17.4%) had severe physical problems and 60(52.2%) did not have any physical problem. Average stress score was 19.6 ± 6.76 . Major elements responsible for stress identified were environmental factors, new college environment, student abuse, tough study routines and personal factors.

Conclusion: Majority of undergraduate students experienced stress due to both academic and emotional factors.

Keywords: Medical students, Stress, Factors. (JPMA 65: 753; 2015)

Introduction

Stress is a state of emotional distress.¹ A person develops stress due to multifactorial aspects of human life, including occupational, individual, community, socioeconomic and ideological aspects. Stress can either be a subconscious vexing concern or a state of conscious urge. It is an emotionally unstable state that hinders one's ability to focus and function effectively on a routine basis. It decreases a person's working efficiency and productivity to a diminished number.² Stress is an emerging burden of the modern competitive era. The fast life and skilled worker age-driven economics prompting quick actions has added to the already piling stress of individuals in middle class age groups. Stress has also been likened to mental tension, agitation and irritability.³

Students are no different to this phenomenon. They also come across serious stressful situations through the course of their academic career and youthful pursuits. Medical students are no exception to this phenomenon, and experience substantial stress at different levels of their training and patient care process.⁴ This stress may proceed unattended and may accumulate due to their educational responsibility and the overall environment they persist in.

Students at a military medical college also face stress on a daily basis. The military environment and the

maintenance of every segment of cadet discipline in itself becomes a stressful job. Furthermore, the burden of studies and fast-track academic process incumbent adds to the stress as they have to accomplish more in less time. There is an absolute lack of effective student leadership, which is a reason for communication barriers between the administration and student bodies.

There are many strategies that students may use to undo the devastating impact of stress on psychological and physical health. Strategies that centre on eliminating the problem are avoidance, social withdrawal and self-criticism.⁴ Surveys in both the United States and abroad identify a high frequency of depression and poor mental health amongst medical students due to stress, poor coping strategies and inappropriate counselling. There is an earnest need to quantify this rising malady and take the required action to curb this illness. Student counselling, empowering and encouraging initiatives are urgently needed. The current study was planned to identify factors leading to stress and level of stress in medical students.

Subjects and Methods

The qualitative study was conducted at the Army Medical College, National University of Sciences and Technology (NUST), Islamabad, from Jan to April 2014, and comprised all first year students willing to participate. First year students were selected to be able to focus on factors associated with the new environment. Those not willing to participate and students who submitted incomplete questionnaires were excluded. The study sample was picked using non-probability convenience sampling.

The students were allowed to respond in their own time and

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Table: Themes/Subthemes.

Environmental Factors Affecting Medical Students	
1. Weather Changes	The medical students had a difficulty in adapting to the new environment which was in the middle to harsh weather changes, as there is extreme cold and lack of supply of electricity and gas in the hostels.
2. Homesickness	The new students feel home-sick and miss home and the facilities available at home and the emotional support they could get directly from parents and friends.
3. Lack Of Contact With Family	The strict policies of the institution of losing contact with family for certain time period gives students a lot of stress.
4. Pressure Of Studies	The overwhelming pressure that medical studies bring with it is enormous and the stress from parents to give better results and teachers to maintain a good record affects the students.
5. Time Table / Study Schedule	The environment of hostel and medical studies does not go as planned and extra-curricular activities in hostel affects the students.
6. Bullying/Ragging	The hostelites and even in the campus of college the new medical students have to face bullying and this leads to lowered self-esteem and changes in personality.
7. Cadaveric Dissection	The fear of cadaver dissection also causes stress among the students as the never saw it in their lives before.
Emotional Response To Environmental Factors	
1. Sleeplessness And Anxiety	The stresses in new medical students, leads to difficulty in sleeping and anxiety which directly affects their studies and ability to cope in the stressful environment.
Physical Health Issues	
1. Stress Affecting Body	Though physically a few students were not well but enormous stress and lack of sleep and anxiety can eventually lead to poor health.

privacy after they were informed about the objectives of the study and that their participation was absolutely voluntary. The questionnaire was also explained to them. The questionnaire explored, 'What are the related environmental factors that have affected you?', 'What was your emotional response to cope up with such kind of stress?', and 'How often have physical health problems been the main cause of these feelings?' Approval was obtained from the institutional ethics committee. For statistical analysis, content analysis method was employed to formulate in a condensed form what the students meant by their statements. Themes and opinions identified in students perceptions about different stress factors were linked together (Table).

Results

There were 115 students in the study with a mean age of 19 ± 6.76 years. Overall, 35(30.4%) students had mild to

moderate physical problems, 20(17.4%) had severe physical problems and 60(52.2%) did not have any physical problem.

While 84(73%) students were satisfied with the hostel facilities, but labelled the environmental factors as being responsible for maximal stress. The batch had joined the college in December and the students stated how cold climate had affected their feelings and settlement time. Inadequate supply of gas and electricity to overcome the extreme cold climate was the leading contributory cause. Family stresses, which included being away from one's family and adjusting to a new environment as well as the family not being necessarily understanding of what it's like to be away was another type of stress.

All of these factors caused sleeplessness and anxiety change in living environment. Absence of calm and quiet environment as a stress was identified by many hostilities. Parental and teacher pressures to perform better and competitive attitude among students was also identified by 92(80%) students. Scheduling time to devote to college and to the family was a time-related barrier. Finally, motivation functioned as a barrier because of a lack of self-discipline or because of an inability to set priorities. Human cadaver dissection was also recognised as a stress by many students. Attempting to master a large volume of information was also one of the factors identified by the students.

Most of the students (30%) reported experience of the death of a family member, personal illness or injury, or change of health in a relative to be the cause of stress at the time of joining the medical college. Perceptions regarding physical health were not the leading stress factor.

The perception of being taken advantage of or abused was common (50%-85%) among medical students. More female (90%) than male medical students reported having been victims of bullying. The most common student abuse was verbal, emotional, or part of institutional culture.

Major factors responsible for stress identified were increased workload towards the exam, vast syllabus, not getting the expected marks and less time for repetition and long-term learning. Learning styles and demoralising talks were also creating stress among medical students.

Discussion

Academic or psychosocial stressors were experienced by most students. Temperature change is one very important stressor produced by the environmental factors having a diverse impact on human lifestyle in general and productivity in specific. It was found that amongst academic stressors, adjusting to the college environment and the tough study routines with regular examinations

and less preparation time were the major sources of accumulated stress amongst the cadets. Reports from earlier studies have showed that examinations were a common source of stress among medical students.⁵ Through this research, a need has surfaced to revisit the examination system as it may be the reason for causing stress among the students. An important source of stress was related to psychosocial factors which occurred due to less time for self-grooming and analysis, family, friends and health due to the ever-increasing and demanding medical curriculum. Several studies have implicated the negative effects of long and tiring medical education on the psychological status of students. A study done in UK showed that one-third of psychologically ill students failed to graduate from college.⁶ The changes faced when becoming a medical student appear to have a significant impact on the psychological condition of students during the first year of medical studies. Students living in university dormitories were significantly more depressed and anxious than those living at home. Those having a history of negative life events in the recent past were more likely to be depressed. Students in their first 2 years of medical school were more stressed, and those who had more friends were less anxious and depressed.⁷

Previous studies from medical schools in different countries have reported varying levels of stress.⁸ Common methods of harassment, like student abuse and bullying by seniors in the early phase, is a major contributory factor of early stress as well. With early identification of these factors and effective psychological services, possible future dangers and side effects of stress may be averted.

Stress in female students was found to be higher compared to male students. As male and female students have separate hostels during their academic period, it could be assumed that in comparison to the male campus, less recreational activities are available in the female hostels.

We suggest that a counselling cell of the institute should be in place to support the students and take good care of them. This will also help them cope well with stress in the later years. It is imperative to teach, enable and ensure the adoption of stress-prevention strategies⁹ by the students. These strategies will in turn prevent the development of more serious conditions emerging at a later stage. To smoothen this period of transition between students, rapidly evolving learning environments and growing burden of medical literature, health programmes are needed to work on the solution for these issues. Medical

schools in the United States and Canada have initiated numerous health-promotion programmes and have reported positive results in reducing the negative effects of stress upon health and academic performance of medical students.¹⁰ Therefore, there is a need for us to follow in their footsteps and ensure student safety by averting the ill-effects of stress on all the dimensions of their personal and collective health. This will improve both their productivity and understanding of their curriculum by providing a good learning environment.

In terms of limitations, the single-centre, single-batch orientation was a limitation of our study. Besides, the sources of stress identified were also limited.

Conclusion

Undergraduate students experienced academic and emotional factors responsible for the development of stress. Programmes are needed to manage the problem in its early stage.

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