Research Article

Stress in medical students: A cross sectional study

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Abstract
Background & Objectives: Stress occurs when pressure is greater than resources available. Medical education has many factors causing stress among the medical students. This study was conducted to find out the prevalence of stress among medical students and to know the factors causing stress in them.

Methods: This is a cross sectional study, conducted on the 1st MBBS to III/IInd MBBS students of B. J. Medical College, Ahmedabad, using a semistructured self administered questionnaire, in October 2010. A total of 200 students both male & female were participated in this study.

Results: Among all 200 students, who were responded the questionnaire, 174 (87%) students felt stress at one or other time. Out of total 174 stressed students, 93 (53.45%) were female, while 81 (46.55%) were of male. Among which 1st & III/IInd MBBS students were more stressed 92% & 90% respectively. Vast medical course, language problems, frequent examinations, homesickness, improper mess food & high parental expectations are the main stressors.

Conclusion: Medical students are highly affected with stress, which affect their academic performance as well as their health & day to day activities also. Review academic & exam schedules, changing the exam pattern, adding some recreational activities, better interaction with the faculty and proper guidance, will help them to cope up with stress.

Keywords: Depression, Medical students, Stress, Stressors

1. Introduction
Stress is the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressure of the situation.1 It usually results in negative thoughts and perceptions which affects even their day to day life.

A Medical student generally faces different kinds of stressors such as vastness of academic syllabus, language problems, more frequency of examination, homesickness, high parental expectations, lack of time for recreation & improper quality of food in mess etc.

The training period for medical students is a constantly changing environment of 5 to 6 years, to ensure that graduates gain sufficient skill. Which itself is long, exhausting & stressful. Some aspects of the training have been found to have negative effects on the student’s life, which manifest in the form of stress, depression and burn out. These students may have poor learning ability and academic performance as they also face social, emotional, physical and family problems. Emotional problems are closely associated with substance abuse, personality changes and even suicide attempt.2

This study was conducted to find out the prevalence of stress among medical students of B. J. Medical College, Ahmedabad, to know the factors causing stress in them.

2. Material and Method
This is a cross sectional study, conducted on the 1st to III/IInd MBBS students of B.J. Medical College, Ahmedabad in October 2010. A total of 200 students out of which 100 males & 100 female students participated in this study. Pre-designed questionnaire, consisting of 15 questions with multiple responses regarding sex, residence (Local or hostel), year of study and also interviewing on the academic, social, financial and daily life factors giving them stress, was distributed. Students were assured of confidentiality & anonymity of their response and informed consent was obtained. Obtained data was analysed for results.

3. Result
In our study we found that 174 (87 %) out of 200 students felt stress at one or other time, while 13 % of students had never felt themselves stressed at all. As per shown in the Image 1, female had somewhat more affected with stress 53.45 % as compared to male who had 46.55%.
For year distribution as shown in Table 1, 1st MBBS students were more stressed as 92% followed by II/IInd MBBS students as 90%. IInd & III/Ist MBBS students showed stress up to 82% & 84% respectively.

### Table: - 1 Year wise distribution of stress affected students

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of stressed Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I²</td>
<td>46</td>
<td>92%</td>
</tr>
<tr>
<td>II³</td>
<td>41</td>
<td>82%</td>
</tr>
<tr>
<td>III/F⁴</td>
<td>42</td>
<td>84%</td>
</tr>
<tr>
<td>III/I⁵</td>
<td>45</td>
<td>90%</td>
</tr>
</tbody>
</table>

All 174 affected students felt stress during their examination results. Vast & difficult academic curriculum was the most common stressor in 80% of students. Many students are resides in hostels and therefore homesickness (30%) & improper mess food (40%) are also stressors for them. Ist MBBS students felt stress because of language problem (70%) as most of them are came from Gujarati medium. While III/IInd MBBS students are more worried about their future (85%) & stressed from their parents high expectations (60%).

Out of this 174 students, 16 (9.2%) students seek medical treatment and they have been prescribed medicine for relieving stress. 42% students share their problem with friends or parents, while 34% students doing recreational activities or by giving time in their hobbies. 5% students tried smoking / alcohol / sedatives to relieve their stress.

4. Discussion

Medical education is associated with significant stress. Of course, some degree of stress is needed for healthy competition & good academic performance. But when they do not cope up with demand & pressure of situation it may affect their mental and physical health.

Shaikh BT et al, found in their study that > 90% have been stressed during their study period. Shahida et al, Sharifirad et al, Supe and Sani et al were also found the high prevalence of stress in medical students, 85%, 76.1%, 73% & 71.9% respectively. In our study we found that 174 out of 200 (87%) students felt stress during their MBBS course, while 13% of students had never felt themselves stressed at all. Which is coincides with above study.

Sani et al, noted in their study that females being more stressed (77%) than the males (64%). Similarly Shahida et al also found that female students (55%) were more affected than male students 45%. In our study we noticed that female had somewhat more stressed 53.45% as compared to male 46.55%.

Shahida et al, found in their study that First year and final year students were more in trouble 75 and 71% respectively, as compared to second, third and fourth year batches 65%, 45% and 33% respectively. Marjani et al, also noted that the prevalence of stress was higher (73.33%) in first year of study followed by second year (55.31%) and third year (53.33%). Shaikh BT et al, noted that the senior students of the fourth and final year feel more stressed 95% and 98% respectively. In our study Ist MBBS students were more stressed 92% followed by III/IInd MBBS students 90%. While II³ & III/I⁵ MBBS students showed stress up to 82% & 84% respectively.

Shahida et al, found in their study that first year students 81% reported stress due to hugeness of academic curriculum followed by frequency of examinations. Also high parental expectations in 56%, quality of food in mess in 32%, adjustment with local fellows in 25%, being away from home in 27% of junior batches (first three years) seen. Worrying about the future in 85% & becoming a good doctor (expectations on all fronts) in 66%. Nonavailability of adequate learning materials in 38%, dissatisfaction with class lectures in 45% were main source of stress in senior (4th and final year) classes found. Sani et al, noted in their study that the major factor associated with perceived stress was long hours of study. Examinations and very tight time schedules, Psychological and family issues, lack of entertainment in the campus and the education system itself were other stressors for the medical students. Sami et al, found that the most common stressor was worries of the future (71.0%), followed by financial difficulties (68.6%). Shaikh BT et al, also found that academics and exams are the most powerful stressors.

In our study all 174 affected students felt stress during their exam results. Vast & difficult academic curriculum was the most common stressor in 80% of students. Homesickness (30%) & improper mess food (40%) are also important stressors for them. Ist MBBS students also felt stress because of language problem (70%) as most of them came from Gujarati medium. While III/IInd MBBS students are more worried about their future (85%) & stressed from their parents high expectations (60%).

In our study we noted that 42% students share their problem with friends or parents, while other students doing recreational activities, by giving time in their hobbies, listening music etc. as coping mechanism. We also found that some students became victim of substance abuse like smoking / alcohol / drug abuse.

5. Conclusion

Medical students are highly affected with stress, which affect their academic performance as well as their all aspects of health & day to day activities also. Review academic curriculum & exam schedules, changing the exam pattern, adding some recreational activities, better interaction with the faculty and proper guidance, will help them to cope up with stress. More such studies are recommended to further evaluate coping mechanism of stress to ensure good future of such doctors.

References

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