



ASSESSMENT OF EFFECT OF STRESS ON ACADEMIC PERFORMANCE OF FIRST YEAR MEDICAL STUDENTS

Kamlesh Kunjbihari Nigam¹, Anshuman Sharma² and Sanjeev Kumar Gupta³

¹Community Medicine, RKDF Medical College Bhopal (MP)

²Community Medicine, Shyam Shah Medical College, Rewa, (MP)

³Community Medicine, LN Medical College Bhopal (MP)

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ABSTRACT

Introduction- Stress affects an individual's productivity and efficiency either by increasing or decreasing it. This varies because stress is handled in different ways among different people. Weak academic performance and high failure rate remains a persistent problem. **Aim and Objectives-** To assess the levels of stress among first-year medical students and appropriate stress relieving measures adopted by them. **Materials and Methods-** This study was an institution-based, cross-sectional study. Among 60 first-year MBBS students of RKDF medical college, Bhopal (M.P) who were willing to participate and gave consent to be part of this study. **Result-** 60 students participated in the study, among them 38 (64%) were males while 22 (36%) were females. Among 41 students who revealed stress, 24(58.5%) had poor performance in examinations as the cause. Health issues were major cause of stress in 28 students while home sickness was cause in 28 students.

Conclusion- Among first year students prevalence of stress was high and it was mainly related to academic problems. Gender had also influence in stress level of students so there is need of different kind of approach to each gender during intervention.

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INTRODUCTION

Stress affects an individual's productivity and efficiency either by increasing or decreasing it. This varies because stress is handled in different ways among different people^{1,2}.

Stress is defined as a highly subjective phenomenon and it is a nonspecific response of body to any demand for change. A stressor is defined as the personal or environmental event that causes stress.

Stress is an unavoidable part of medical education. It can influence students at any level of their education. Lack of sleep, depression, suicidal attempts, addictions to dependence-producing drugs to resolve stress, and bad performance at examinations in spite of doing hard work are some of the ill effects of stress^{3,4}.

Weak academic performance and high failure rate remains a persistent problem⁵. Detention of the students on the basis of attendance and failure to attain final medical degree causes extra burden on the students as well as on the parents^{6,7,8}.

Poor academic performance and poor attendance is often indicative of difficulties in adjusting to new environment. Many studies have reported that stress can be inversely related to academic performance.^{9,10,11}

Thus, this study was performed to assess the levels of stress among first-year medical students of RKDF medical college and research centre, Bhopal (M.P) and appropriate intervention was done on the basis of results obtained.

MATERIALS AND METHODS

This study was an institution-based, cross-sectional study. Among 60 first-year MBBS students of RKDF medical college, Bhopal (M.P) who were willing to participate and gave consent to be part of this study.

The study was done for one month duration. Ethical clearance from the ethical committee of RKDF Medical College, Bhopal, was taken. Consent from the students who were willing to participate in the study was taken, and the permission to carry out this study was taken from the incharge faculty members. Statistical analysis was done using SPSS version 20 and appropriate statistical tests were used to test the significance.

Study Procedure

A predesigned, semi-structured questionnaire was prepared. The questionnaire consisted demographic information of students and questions about the causative factors of stress with intervention adopted to relieve stress. The students of first-year MBBS were participants of the study. Students were assured about confidentiality of their details, and clarification was given regarding doubts about questions. On the basis of the analysis, an intervention was planned.

RESULT

Table 1 Distribution of students according to gender and stress

Gender	Absent(N)	Absent(%)	Present (N)	Present (%)
Female	12	63.20%	10	24.40%
Male	7	36.80%	31	75.60%
Gender	Chi-square	8.403	P value	0.004

60 students participated in the study, among them 38 (64%) were males while 22 (36%) were females.

41(68%) students had some adverse effects related to stress. Out of 41 students 31 were males and 10 were females. Mean age of students was 19.1±1.04 years.

Statistically significant association with stress was found among students according to gender.

Table 2 Association with cause of stress

Stress	Absent (N)	Absent (%)	Present (N)	Present (%)	P value
Poor performance in examination	2	10.50%	24	58.50%	0.00
Competition with fellow students	8	42.10%	26	63.40%	0.121
Conflicts with friends	7	36.80%	26	63.40%	0.054
Familial stress	4	21.10%	30	73.20%	0.00
Health issues	10	52.60%	28	68.30%	0.242
Home sickness	2	10.50%	28	68.30%	0.00

Among 41 students who revealed stress, 24(58.5%) had poor performance in examinations as the cause (due to large content to be learnt in 12 and lack of time to revise in 10, 2 of them had unknown reasons for their poor performance in exams). Significant association was found with poor performance.

Competition with fellow students (26, 63.4%) was a more common cause of stress in female (6) than male students (20), and it was not significant. Conflicts (26, 63.4%) were also more common in female (8) than male students (18), and it was also not significant. Familial stress (30, 73.2%) was also a more common cause of stress in female students (8 out of 10) than male (22 out of 31), which was also statistically significant. This means that female students presented more stress when compared with male students. Health issues were major cause of stress in 28 students which has no significant association while home sickness was cause in 28 students which had significant association with stress level.

Table 3 Association with stress relieving factors (n=41)

Stress relieving activities	Number (N)	Percent (%)
Exercises, gym, yoga	3	7.30%
Internet browsing	5	12.20%
Playing games	9	22.00%
Sleeping	7	17.10%
Spending time with friends	5	12.20%
Watching movies and listening music	12	29.30%
Chi square = 60	P value	0.00

12 students were practicing some of stress-relieving activities such as listening to music and watching movies (29.3%), playing games (9,22%), spending time with friends (5, 12.20%), sleeping (7,17.10%), Internet browsing (5, 12.20%), and exercise, gym, yoga (3,7.30%). These were stress-relieving activities among students.

DISCUSSION

Prevalence of stress among medical students was calculated to be 68.3% (41/60).

Which means that stress is commonly seen in medical students. These findings were similar to other studies^{5,6,7}

The gender-wise distribution of stress is significant in our study.

The major cause of stress in the study is found out to be academic related, which included large content to be learnt, lack of time to revise the subject, poor performance at the examination, and familial stress.^{8,10,13,14} Other non-significant academic factors include conflict with friends, competition with fellow students and health issues. Poor performance in the examinations was accreted mainly due to lack of time for revision as topics for study during first year are vast and time taking. As the study was carried out among meritorious students of medical college who only get admission after passing a tough exam, there would naturally be a competition among students; but, only a few can cope up with such competition in the presence of the above mentioned academic stressors.¹²

These results are similar to previous studies as in our study it was found out that gender variability of certain stress-causing factors was present such as competition with fellow students, conflicts etc.¹¹ It showed that female subjects perceived more stress in the presence of competition and showed greater inter and intrapersonal conflicts. Our study also included the type and measure of stress-coping skills adopted by the students; listening to music and watching movies was the common strategy employed by the students to relive stress. Some were involved in playing games and sleeping to overcome stress.^{2,12}

CONCLUSION

Among first year students prevalence of stress was high and it was mainly related to academic problems. Non academic problems had lesser influence comparatively.

Gender had also influence in stress level of students so there is need of different kind of approach to each gender during intervention. Student stress may affect professional growth & has adverse impact on academic performance contributing to substance abuse and other academic problems. So, addressing these issues by the institution using professional help would help in management of stress among students and also in making their learning a pleasant affair.

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