Original Research Article

A STUDY ON STRESS FACTORS AFFECTING UNDERGRADUATE MBBS STUDENTS IN A TERTIARY CARE MEDICAL COLLEGE AND HOSPITAL

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A B S T R A C T

Background: The life of a medical student is highly stressful in spite of the mentor-mentee program and remedial actions. The aim of the present study is to study the stress factors affecting undergraduate MBBS students in a tertiary care medical hospital and college.

Materials and Methods: It was a descriptive cross-sectional survey for a period of 3 months. A self-administered, pre-designed, pre-tested anonymous questionnaire based on the Medical Students Stressor Questionnaire (MSSQ) was distributed among the students after obtaining an informed written consent. The MSSQ grouped stressors into six domains, Respondents scored by assigning a value of 0-4 for each of the responses. An overall score in each domain 0 to 1.00 was designated as mild, 1.01 to 2.00 as moderate stress, 2.01 to 3.00 as high stress and 3.01 to 4.00 as severe stress. Data was analysed using SPSS 20.0 version and Microsoft Excel.

Results: A total of 200 medical students participated in the study including female (79.5%) and male (20.5%) students. The mean score of stress was highest in Academic related stressors (ARS) followed by Group activity related stressors (GARS) and Intra-Interpersonal stressor (IRS). 43.5% and 30.5% of the students were in high stress due to ARS and IRS respectively. Students who participated in sports activities had a lower stress level than who did not participate. Females had higher stress levels than males in all domains.

Conclusion: This study highlighted the different stressors among medical students and invites more prospective studies and more proactive measures in this field.

Keywords: Stress, Medical Student Stressor Questionnaire, Medical students

INTRODUCTION

The life of a medical student is highly stressful as proved in various studies. The stress is not only present during the examination but throughout the tenure affecting them emotionally and mentally. Although faculty members continuously monitor the performance of students under the Mentor-mentee program and take remedial actions wherever required but there has not been many systematic studies in this area. This study was carried out with the objective to study the stress factors affecting undergraduate MBBS students in a tertiary care medical hospital and college.

MATERIALS AND METHODS

It was a type of descriptive survey with cross-sectional design and for a duration of 3 months. A self-administered, pre-designed, pre-tested anonymous questionnaire was distributed after obtaining an informed written consent from everyone. Students not giving consent were excluded from the study. Information was collected on a form having two parts. Part 1 contained basic

socio-demographic variables and Part 2 contained a pre-validated and standardized survey questionnaire instrument, viz., the MSSQ.[1] The Medical Students Stressor Questionnaire (MSSQ) was developed and used to identify the stressors of medical students as well as measure the intensity of stress caused by the stressors. The six domains of stress measured by the MSSQ were developed based on various studies. The items of MSSQ were selected from literature review related to stress research.[1] The items on MSSQ represent 40 events that were identified to be the most probable source of stress in medical students. The MSSQ grouped stressors into six domains, viz., Academic related stressors (ARS), Intrapersonal and interpersonal related stressors (IRS), Teaching and learning-related stressors (TLRS), Social related stressors (SRS), Drive and desire related stressors (DRS), Group activities related stressors (GARS).[1]

Respondents were requested to assess each event in them during the recent weeks by choosing from five responses and were scored by assigning a value of 0-4 for each of the respective responses. An overall score in each domain 0 to 1.00 was designated as mild, 1.01 to 2.00 as moderate stress, 2.01 to 3.00 as high stress and 3.01 to 4.00 as severe stress.[1] Data was analyzed using SPSS 20.0 version and Microsoft Excel.

RESULTS

A total of 200 medical students participated in the study where 33.5% belonged to 3rd year. 51.5% were in age group of 21-22 years, followed by 32% in 19-20 years. More than half of the participants were female 159 (79.5%) as compared to the male students 20.5%. While 31.5% scored between 55-59.9% marks in last university summative examination, 26% scored between 65-69.9 %, with a failure rate of 4%. 48.5% of the students visited library in a frequency of 1-3 times a week, while

44% never visited library. 43% of them were involved in regular sports activities, while 53% participated in cultural activities. Occasional smoking and alcohol consumption were found in 16% and 35.5% respectively. The mean score of Academic related stressors (ARS) was found to be 2.04 with a standard deviation of 0.727 followed by Group activity related stressors (GARS) (mean1.61. SD 0.801) and Intra-Interpersonal stressor (IRS) (mean 1.56, SD 0.829). [Table 1] 43.5% of the students were in high stress due to ARS and 30.5% were in high stress due to IRS. 45% and 44% of students were in moderate stress due to TLRS and SRS respectively while 12.5% of students were in high stress due to DRS. 47% of the study population were in moderate stress due to GARS (Fig.1) Females had higher stress levels than males in all stressors domains.

Students who participated in sports had a moderate stress level (mean= 1.91) than who did not participate in sports activities (mean=2.13) in ARS which was significant. A similar trend is seen in other stressors with participants involved in sports activities having lower stress scores in all stressors except TLRS and GARS. [Table 2]
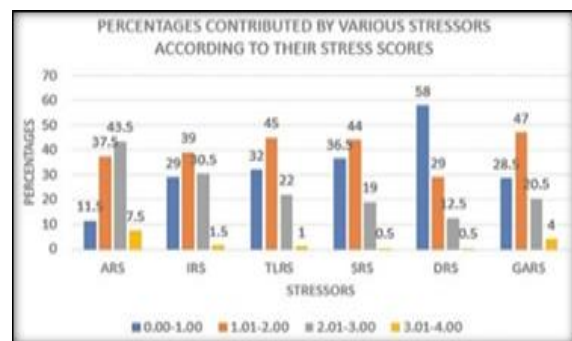

Figure 1: Percentages contributed by various stressors according to their stress scores in all six domains

Table 1: Mean, standard deviation, variance and range of stress scores in all the six domains (n=200)

Table 1	Six Domains					
	ARS	**IRS**	**TLRS**	**SRS**	**DRS**	**GARS**
Mean	2.04	1.56	1.51	1.40	1.11	1.61
Standard Deviation	0.727	0.829	0.769	0.731	0.846	0.801
Variance	0.529	0.688	0.591	0.534	0.716	0.642
Minimum	0	0	0	0	0	0
Maximum	3.62	3.29	3.14	3.17	3.67	3.75

Table 2: Mean stress scores in students (n=200) who were and were not involved in sports activities

Table 2	Students involved in sports	Students not involved in sports
ARS	1.91	2.13
IRS	1.51	1.60
TLRS	1.46	1.54
SRS	1.41	1.39
DRS	1.14	1.09
GARS	1.49	1.68

Abbreviations

ARS: Academic related stressors, IRS: Intrapersonal and interpersonal related stressors, TLRS: Teaching and learning-related stressors, SRS: Social related stressors, DRS: Drive and desire related stressors, GARS: Group activities related stressors.

DISCUSSION

Our study involved a higher percentage (79.5%) of female students and 27.5% belonged to age group of 23-24 years is comparable to studies done in Maharashtra, wherein male students were 59% and mean age less than our study.[2] It could be attributed to higher rate of admission of females in our institute. The mean score of academic related stressor was found to be 2.04 (high stress) which was quite high compared to study done at Maharashtra, where mean score was 1.61(moderate stress).[2] This could be attributed to difficult hilly terrain, long class hours, erratic weather conditions with limited scopes for entertainment and rigid CBME curriculum. 43.5% of the students were in high stress which is quite low compared to 84% in severe stress in a study done at Malaysia due to Academic related stressors.[4] Our study revealed only 30.5% were in high stress due to Intra and Inter-personal stressors which was quite lower than study done at Malaysia where 56% of participants were in severe stress. The higher stress level could be due to difficulty in socializing with people and different cultural background, changes in lifestyle and adjustment to peers. Other stress scores due to different stressors were lower than study done at Malaysia but higher than similar studies done at India.[2,4-6]

CONCLUSION

This study highlighted the different stressors and its relative importance in the lives of medical students. However, the limitation of this study in its cross-sectional design invites more proactive and prospective studies in this direction. The stress levels of the students could be significantly brought down by redesigning the medical curriculum and a modular term 'Stress management program' aiming towards a holistic approach for the students to cope with stress. A proactive feedback system, more rigorous mentor-mentee program, counselling whenever necessary and encouraging students in sports and extracurricular activities could play a significant role in combatting stress.

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