

A STUDY ON PERCEIVED STRESS AND SOURCES OF STRESS AMONG FIRST YEAR MEDICAL STUDENTS IN SHIVAMOGGA

MYTHRI G¹, MANJUNATH ML² & GIRISH BABU M³

¹Post Graduate, Department of Physiology, Shivamogga Institute of Medical Sciences, Karnataka, India

²Professor and Head, Department of Physiology, Shivamogga Institute of Medical Sciences,
Karnataka, India

³Associate Professor, Department of Physiology, Shivamogga Institute of Medical Sciences,
Karnataka, India

ABSTRACT

Background

Medical profession, although a noble profession, is not spared from the stress and suicidal tendencies. It is a well known fact that the medical professionals and students are going through substantial stress and the same has been validated and ratified through different media.

Aims and Objectives

To determine the prevalence of stress in first year medical students in Shivamogga Institute of Medical Sciences, Shivamogga and to identify the stressors among these students.

Materials and Methods

A cross-sectional, questionnaire based survey was conducted among 100 First Year MBBS students aged between 18-20 years at Shivamogga Institute Of Medical Sciences, Shivamogga using Perceived Stress Scale and a questionnaire to identify the sources of stress.

Results

Out of 100 students, 61% were under stress (score ≥ 14) and 39% were not stressed (score < 14) according to the Perceived Stress Scale. Females were significantly more stressed out compared to their male counterparts (p -value <0.05). The most important stressor is academic related being the large amount of content to be learnt followed by tests and examinations.

Conclusions

This study has found that majority of First year undergraduate students experience stress. Mainly academic and social related factors are responsible for this stress. Proper guidance and counseling by faculties may help to improve the present scenario.

KEYWORDS: Stress, Medical Students, Stressors

Received: May 20, 2017; **Accepted:** Jun 01, 2017; **Published:** Jun 10, 2017; **Paper Id.:** TJPRC:IJNPNPJUN20175

INTRODUCTION

Stress is a state of mental or emotional strain or tension resulting from adverse or disturbing circumstances. It is not only a jolt or a reaction but rather it is a procedure by which we see and adapt to ecological threats and difficulties. The word "stress" was initially utilized by the endocrinologist Hans Selye in the 1930's.

Like any other profession, medical profession is also not spared from the stress and strains. . It is a well known fact that the medical professionals and students are going through substantial stress and the same has been validated and ratified through different media. Various studies have demonstrated that the medical population is the most distressed compared to the general population.

A stressor is characterized as an individual or ecological occasion that causes emotional stress / strain. Stressors of medical professionals were classified into six different classes; educational related stressors, interpersonal and intrapersonal related stressors, teaching and learning-related stressors, social interaction and behaviour related stressors, drive and desire related stressors, and group activities related stressors⁴

The negative effects of emotional and physical distress on medical students include impairment of functioning in class-room performance and clinical practice, stress-induced disorders and decaying performance. Perceived therapeutic stress and strain has additionally been connected to mental pain and to inevitable health related medical issues

Efforts are therefore directed towards identifying the specific causes of stress in this specialized population so that effective preventive measures can be instituted both at individual as well as at the institutional level. There is a paucity of studies undertaken in India on this subject. Hence the current study was planned to assess perceived stress levels amongst the health care students in a medical institution in South India and to find out the causes/ determinants thereof

MATERIALS AND METHODS

A cross-sectional questionnaire based survey was conducted among 100 First Year MBBS students aged between 18-20 years who have been admitted to Shivamogga Institute Of Medical Sciences, Shivamogga during the academic year 2014-15. The study was conducted during February- March of 2015, almost 6-7 months after the students have joined MBBS after obtaining ethical clearance from the Institutional Ethical Committee.

Details of the study protocol were explained to the students who volunteered for the study and informed consent was obtained. The tests was carried out on the students in small batches of 20-30. They were be given a questionnaire to be filled by themselves individually. The students were be explained the aim of the study and the fact that their co-operation in the form of giving honest answers is necessary. Students were also assured that their anonymity would be maintained.

The questionnaire consists of three parts: The first part consisting of the general information, the second part to assess the perceived stress using a Likert type self rated questionnaire and the last part to identify the source of stress (stressors), broadly classified into Academic Related Stressors, Inter-personal and Intra-personal related stressors, Learning and Teaching related Stressors, Social Related Stressors, Drive and Desire Related Stressors, and Group activity Related stressors. Perceived Stress Scale Scoring was done as follows: Each item was rated on a 5-point scale ranging from never (0) to almost always (4). Scores around 14 are considered average. Scores of 20 or higher are considered high stress. Statistical analysis was done using Epi Info 7 by using Chi-square test. P values <0.05 were considered statistically

significant.

RESULTS

100 First year MBBS Students involved in this study, included 62 males and 38 females. Likert Type Scoring was used and the Median Score in The study was 14. Out of total these 100 students, 61 students have reported to have stress, i.e. Likert Type Score ≥ 14 and 39 students were not under stress, i.e., score < 14 (Table 1 and Figure 1).

Among 61 students, 37 students had mild to moderate stressor experience and 24 students had severe stressor experience. i.e, around 37% of the students were under severe stress and 24% of the students under mild to moderate stress. (Table 2 and Figure 2). Out of the 61 students under stress, 28 were females and 33 were males i.e., 73.68% females were under stress whereas only 53.23% of the males were under stress. (Table 3 and Figure3). Majority of the students (65%) listened to music and rest of them watched movie, practice yoga and involved in spirituality to relieve stress.

Table 1: Prevalence of Psychological Stress among First Year MBBS Students

Stress Test Score	No. of Students	% of Students
>14 (Under stress)	61	61%
< 14 (No stress)	39	39%
Total	n= 100	100 %

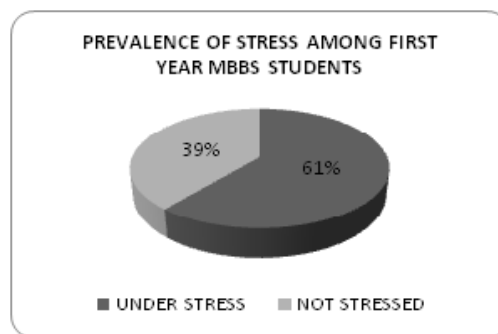


Figure 1: Prevalence of Stress among First Year MBBS Students

Table 2: Distribution of Stress Levels among First Year Medical Students

	No. of Students	Percentage (%)
NOT STRESSED	39	39%
MILD-MODERATE STRESS	37	37%
SEVERE STRESS	24	24%
Total	n=100	100 %

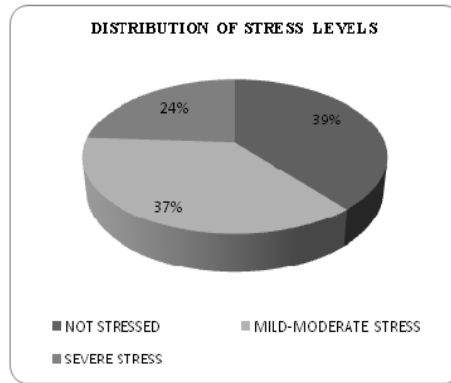


Figure 2: Distribution of Stress Levels among First Year MBBS Students

Table 3: Association of Psychological Stress with Gender

	Stress Test Score > 14	Stress Test Score < 14	Odds Ratio Value (95% Confidence Interval)	X ²	P-Value
FEMALES	28 (73.68%)	10 (26.32%)	2.4606 (1.0230-5.9183)	4.145	=0.041 (<0.05) SIGNIFICANT
MALES	33 (53.23%)	29 (46.77%)			

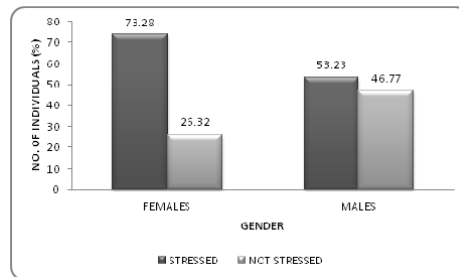


Figure 3: Association of Stress with Gender

When the relationship between level of stress and gender was determined using, Chi-Square test, it was found that the female students reported significantly higher levels of perceived stress than their male counterparts (p value <0.05) i.e., females are 2.5 times likely to be under stress compared to their male counterparts (since Odd’s Ratio value is 2.46).

A questionnaire containing all possible stressors was given to identify the source of stress. The significant stress causing factor was found to be academic related. The most frequently [number of respondents (percentages)] occurring sources of stress reported by students is as follows. 80 % said it was due to large amount of content to be learnt. 78% said stress was due to tests/examinations followed by 75% individuals complaining stress was due to lack of time to review what has been learnt. The other academic related stressors being Falling behind in reading schedule (70%), self-expectation(65%), Unable to answer the questions from the teachers(60%),Unjustified grading process(58%), Quota system In examinations (57%), Heavy workload(55%). The next important source of stress was found to be Social Related stressors which were due to Lack of time for family and friends (60%) and Frequent interruption of my work by others (58%) Table 4. Shows the various stressors the medical students are exposed to and how much each of them had an impact in their stress levels.

Table 4: Sources of Stress Reported by Students

	No	Items	No. of Respondents (%)
	Social Related Stressors:	1.	Lack of time for family and friends
2.		Unable to answer questions from patients	30
3.		Talking to patients about personal problems	12
4.		Facing illness or death of patients	28
5.		Working with computers	20
6.		Frequent interruption of my work by others	58
Academic Related Stressors	No	Items	No. of Respondents(%)
	1.	Tests/ examinations	78
	Table 4: Contd.,		
	2.	Falling behind in reading schedule	70
	3.	Large amount of content to be learnt	80
	4.	Having difficulty understanding the content	45
	5.	Getting poor marks	49
	6.	Quota system In examinations	57
	7.	Lack of time to review what has been learnt	75
	8.	Need to do well (self-expectation)	65
	9.	Learning context- full of competition	32
	10.	Unable to answer the questions from the teachers	60
	11.	Heavy workload	55
	12.	Unjustified grading process	58
13.	Not enough medical skill practice	50	

Table 5

	No	Items	No. of Respondents (%)
	Intra-Personal & Inter-Personal Related Stressors	1.	Conflicts with other students
2.		Poor motivation to learn	30
3.		Verbal or physical abuse by other student (s)	13
4.		Verbal or physical abuse by other teacher(s)	24
5.		Verbal or physical abuse by other personnel(s)	15
6.		Conflict with personnel (s)	13
7.		Conflict with teacher (s)	18

Table 6

	No	Items	No. of Respondents(%)
	Group Activity Related Stressors:	1.	Participation in class discussion
2.		Participation in class presentation	48
3.		Need to do well (imposed by others)	35
4.		Feeling of incompetence	30

Table 7

Teaching and Learning Related Stressors	No	Items	No. of Respondents(%)
	1.	Teacher-lack of teaching skills	45
	2.	Not enough study material	25
	3.	Inappropriate assignments	25
	4.	Lack of guidance from teacher(s)	35
	5.	Not enough feedback from teacher(s)	32
	6.	Uncertainty of what is expected from me	40
	7.	Lack of recognition of work done	36
Drive and Desire Related Stesors ₂	No	Items	No. of respondents(%)
	1.	Unwillingness to study medicine	15
	2.	Parental wish for you to study medicine	20
	3.	Family responsibilities	30

DISCUSSIONS

The benefit of PSS (Perceived Stress Scale) is that it can be connected to an extensive variety of settings, to various subject types and incorporates things measuring responses to stressful circumstances. Medical education renders significant amount of stress to the students. In this study also 61% of First year medical students had stress. The study revealed that 41.2% of students are having severe stress which is comparable to other studies. A study from Agha Khan University, Pakistan has reported that more than 90% of its students experienced stressed at one time or the other during their course ⁹A similar study from India reported that 73% of the students had perceived stress at some point or the other during their medical schooling ¹⁰ Saipanish reported that 61.4% of students in a Thai Medical School had come across some degree of stress as calculated by the Thai Stress Test ¹¹. In addition, private life may conflict with professional life and this may cause stress.

Medical students go through not only the stress imposed by medical education but also routine everyday life stressor which may explain the level of severe stress noted among medical students. It was found in our study that females were 2.5times more likely to develop stress.

The reasons that can be attributed to the severe stress among 1st year students are large content of the text to be learnt, tests/examinations and no sufficient time to review what has been learnt,. These calls for introducing early intervention strategies so that students who are entering in the medical education system can learn to cope with the pressure induced by medical education timely.

Interaction between students and faculties should be encouraged so that the signs of stress can be detected and addressed at the earliest. Prevention strategies should take into consideration the wide variety of factors that are inducing stress among students. Adding electives can also allow flexible learning options in the curriculum and may offer a variety of options including clinical electives, laboratory postings or community exposure in areas that students are not normally exposed as a part of regular curriculum. This will also provide opportunity for students to do project, enhance self directed learning, critical thinking and research abilities.

It is possible that few students have already an inherent tendency of taking stress and their entry in M.B.B.S course may be aggravating it. Such students should be identified by psychological screening tests at the time of their entry

only. Recreation facilities should be provided within the campus for the students as it is proved that inadequate social activity and impaired psychological health are interlinked and also that leisure activities can reduce stress among students. Relaxing exercises, yoga and meditation should be studied to relieve stress among medical students.

LIMITATIONS

Cross-sectional design of our study is a limitation since associations presented lack temporality. Forthcoming studies are important to consider the relationship between event stressors and rate of stress.

The study was done only in first year medical students and did not involve the students of other phases. The main reasons that surfaced were the sensitive and personal nature of the study as well as the length of questionnaire.

CONCLUSIONS

This study has found that majority of First year undergraduate students experience stress. Mainly academic and social related factors are responsible for this stress. Proper guidance and counseling by faculties may help to improve the present scenario. A physician is like a flower in the society. For spreading its fragrance into the society, it needs to be nurtured healthily providing a sound mental built up from the curricular activities supported adequately by their families.

ACKNOWLEDGEMENTS

We thank all the first year students who have participated in this study and a special thanks to our Assistant Professors in the Department Of Physiology Dr Shireen Swaliha Quadri, Dr Nandini BN and Mr Pramod Kachri Jagtap for their constant support and guidance.

REFERENCES

1. Rosenham DL, Seligman ME. *Abnormal psychology*. 2nd ed. New York: Norton, 1989.
2. Leo Goldberger and Shlomo Breznitz. *Handbook of stress: Theoretical and Clinical aspects*. Free press 1982;987
3. Lloyd, C. & Gartrell, N.K. *Psychiatric symptoms in medical students*. *Comprehensive Psychiatry* 1984; 25: 552-565.
4. Muhamad SBY, Ahmad FAR, Mohd JY. *The development and validity of the Medical Student Stressor Questionnaire (MSSQ)*, *ASEAN J Psychiatry (Jan-June) 2010; 11(1)*. Available online at <http://www.aseanjournalofpsychiatry.org/oe11105.htm>
5. Fish C, Nies MA: *Health promotion needs of students in a college environment*. *Public Health Nurs* 1996, 13:104-11.
6. Niemi PM, Vainiomaki PT: *Medical students' academic distress, coping and achievement strategies during the pre-clinical years*. *Teach Learn Med* 1999, 11:125-34.
7. Shendrakar AT, Patil V: *A Study of Stressors in Medical College Students (Hostelites) in Northern Maharashtra*. *J Indian Acad Forensic Med*.2013,35:227-29
8. Shaikh BT, Kahloon A, Kazmi M, Khalid H, Nawaz K, Khan N, Kha S: *Students, stress and coping strategies: a case of Pakistani medical school*. *Educ Health (Abingdon)* 2004, 17:346-53
9. Supe AN: *A study of stress in medical students at Seth G.S. Medical College*. *J Postgrad Med* 1998, 44:1-6.
10. Saipanish R: *Stress among medical students in a Thai medical school*. *Med Teach* 2003, 25:502-6.
11. Cohen S, Williamson G: *Perceived stress in a probability sample of the United States*. *The Social Psychology of Health: Claremont Symposium on Applied Social Psychology Newbury Park, CA: SageSpacapam S, Oskamp S* 1988, 31-67.

