



## Level of stress amongst Medical students: A cross sectional study.

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<b>KEYWORDS</b>	

### Background:

Medical education is perceived as being stressful. It is characterized by many psychological changes in students. Medical students encounter multiple anxieties in transformation from insecure student to young knowledgeable physician. There is a growing concern about stress in medical training. Studies have observed that medical students experience a high incidence of personal distress during their undergraduate course. High levels of stress may have a negative effect on mastery of the academic curriculum. Stress, health and emotional problems increase during the period of undergraduate medical education. This can lead to mental distress and has a negative impact on cognitive functioning and learning

Stress as defined by Hans Selye is the "non specific response of body to any demand upon it" During stressful conditions the body responds by releasing various hormones like adrenalin and cortisol, latter being the major hormone responsible for coping with stress besides DHEA (Dehydroepiandrosteronid-ione).

Medical students undergo high stress levels causing high suicide rates in them. As per some studies done on the impact of stressful conditions in students life majority of medical students (175/238--73%) perceived stress[1]. Stress was found to be significantly more in Second and Third MBBS students rather than First MBBS levels ( $p < 0.05$ )[1]. Stress was not found to differ significantly on the basis of sex, stay at hostel, mode of travel, time spent in travel every day, medium of study in school, place of school education[1]

Stress plays a very important role in hampering the overall development of a child and its effect can be seen from an early age. Stress was found to be significantly more in students having more than 95% of marks at 12th Standard as compared to others [1] Peer stress and achieving higher academic excellence are some cause of stress in medical students.

Physical factors were found to be significantly more in Second and Third MBBS students as compared to First MBBS students[1]. Emotional factors were found to be significantly more in First MBBS students as compared to Second & Third MBBS students.[1] Generally seen stress is more common in medical students who have dominant strategy of coping as positive reappraisal, accepting responsibility and problem solving. Stress is less common in medical students who have dominant strategy of coping rather than escaping and distancing from difficult situation. Family and friend are perceived social supports and may act like stress busters for students in many instances. Stress was not found to be significantly more in students having their personality factor contributing to stress (Type A--52/67) as compared to others (Type B--123/171)[2]. This indicates that the stress was not trait oriented but was process oriented ( $p = NS$ ).

Some studies have also shown significant rise in blood pressure and pulse rate of students specially during stress full conditions prior to examination. [3]

Hence stress related disorders are frequently seen in not only the school going group but also the professional students leading to increased suicide rates frustrations and inability to cope with the stressful situations.

### Objectives:

1. To determine the prevalence of self-perceived stress among under graduate medical students.
2. To ascertain levels of stress in MBBS students, who are not exposed to examination.
3. To asses levels of stress in students just prior to examination [theory or viva].
4. To compare the stress levels in two groups.

### Material & Methods:

This study will be conducted in Era's Lucknow Medical College & Hospital. This Medical College is a premier medical and a research center in North India. The uptake capacity of this medical college is 100 students per year.

Study Design: Cross sectional study

Study period: 3 months

Subjects: 26 Students of Semester2 [08-09]

Inclusion Criteria: Students of Semester 2 [08-09]

Exclusion Criteria: All students other than Semester 2 [08-09]

Study Questionnaire: State trait anxiety inventory of Spielberg

Statistical Analysis: The statistical analysis will be done by appropriate statistics with the help of Statistician.

Ethical Consideration: Ethical permission will be taken from the Institutional committee ELMCH&H.

Study Sample & Methodology : All the second semester undergraduate students in the Medical College will be asked to complete the self-administered "State trait anxiety inventory" questionnaires during the academic year 2010. Filled questionnaires will be collected before three months of the examination period so as minimize the extra stress symptoms. The same questionnaire will be distributed a week before the examination. The data so obtained will be compared and analysis will be done. All students who participate in the study will be informed about the objectives of the study and information about the instrument will be explained. The participation will entirely be on voluntary basis. All students will be guaranteed the confidentiality.

Statistical Analysis: Data will be entered in Microsoft Excel and analyzed using SPSS version 12.0 statistical software. Pearson's chi-square test and odds ratio will be used to observe and quantify an association between the categorical outcome and different study variables. Student's t-test for independent samples will be used to compare the mean values of study variables in relation to stress. A p-value of < 0.05 will be considered statistically significant.

Result:

Score	2 <sup>nd</sup> Year Non Exam	2 <sup>nd</sup> Exam
0-20	1	0
21-45	2	6
46-70	7	8
71-90	6	3
91+	10	9
	26	26

Chi-Square = 0.913

P = 0.339

The non exam going students of second year share similar levels of stress as compared to exam going batch .the comparison between the two groups shows a non significant result p=0.339.This is probably due to the increasing day to day mental pressure to perform well, peer pressure, monetary concerns, which may affect the student body adversely.

Discussion

Stress amongst medical students is not paid much attention too. Intelligent students are not always the most composed. This study aimed to look at both male and female students of medical field and the effects of stress in areas such as academic, social, financial and their everyday life. It is clear that

medicine is not a easy branch to pursue and has way more stress than most other career options. It can be a health hazard for many young and impressionable fresh medical students.[6] A review of the literature of stress and health identified some common causes or triggers of stress, like peer pressure, parental pressure, pressure to deal with extra academic burden with more of theoretical knowledge as promoted by our Indian Medical education system than practical knowledge..[5] Medical educators and those with responsibility for curriculum development should be more aware of the stresses of medical life and take prophylactic actions for the prevention of short and long term stress related problems for medical students. The curriculum is overloaded with information, and the hospital environment presents with multiple hurdles 'rather than opportunities for assessing progress' is an important sources of stress. Many students struggle with questions about their ability to endure the demands of education. [7]In our study we saw that stress was a constant factor in the MBBS students and that no change in the level of stress during exams or in the intervening periods showed how much stress the students were under always.

Conclusion:

Hence we can clearly see that there is a rising amount of stress in the ongoing medical curriculum. No change in the levels of stress between exam going period and non exam going period shows that the students are in stress round the clock which is harmful for their body and mind .A more student friendly curriculum with less stress on rote learning and more on practical knowledge is needed. Healthy doctors mean a healthy healthcare system and since this is a profession requiring long hours of study and hospitals duties, aim should be to make it less stressful and more productive.

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