

## Study of Psychological Stress among Under Graduate Medical Students of Sri Venkateswara Medical College, Tirupati.

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### **Abstract:**

**Background:** Psychological stress among medical students is common when compared to other professional courses. The prevalence of stress among medical students affects not only their academic performances but also to some extent their health.

**Objective:** The present study was undertaken to determine the prevalence of self – perceived psychological stress among Under-Graduate medical students, to identify probable factors responsible for it and to suggest possible interventions.

**Materials and Methods:** A cross sectional study using self administered questionnaire was conducted among a sample of undergraduate students chosen from III Semester-MBBS of Sri Venkateswara Medical College, Tirupati.

**Results:** In this study 3.12% of the students had Mild stress, 55.6% had moderate stress and 41.2% had severe stress. Major factors responsible for stress identified in this study were increased work towards exam by 80.62% students, vast syllabus by 70% students, even after trying best, not getting expected marks by 68.2% students, less time for revision by 63.2% students, fear of failure in exams by 59.3% students. It was found in our study that there is no gender discrimination towards stress. There is no significant difference in stress between hostellers and day-scholars.

**Conclusion:** This study showed that majority of undergraduate students had experienced stress. Both academic and emotional factors are responsible for this stress. Proper guidance and counseling by faculty may help to alleviate the stress among medical students.

**Key Words:** Probable factors, Psychological Stress, Undergraduate Medical Students.

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### I. Introduction

Stress refers to physical, mental and emotional strains or tensions on a person. The term 'stress' was first employed in the 1930's by the endocrinologist Hans Selye. Stress also indicates the consequence of the failure of an human to respond appropriately to emotional or physical threats whether they may be either actual or imagined. Selye published in 1975 a model dividing stress into eustress and distress. Where stress enhances function (physical or mental, such as through strength training or challenging work), it may be considered eustress. Persistent stress that is not resolved through coping or adaptation, is called distress, this may lead to anxiety or depression .

The academic environment in medical colleges is very stressful which promotes competition among medical students rather than co-operation. High level of stress among medical students has been reported in various studies. The academic demands of medical education have placed the students at the time of their life when they are also involved in issues related to life style and careers. It is also reported that stress during medical education can affect the patient care negatively.

Various stress factors reported in studies among medical students are academic demands, exams, inability to cope, helplessness, increased psychological pressure, mental tension and too much work load. Different studies conducted worldwide among medical students have reported prevalence of stress ranging from 27-73%. Retrieving knowledge about presence of stress is therefore important in itself and if found should be given attention for timely intervention. Studies on psychological morbidities are very few in our state .

This study therefore has been planned to identify the prevalence of psychological stress and possible factors responsible for it among undergraduate medical students, so that appropriate intervention strategy can be proposed to reduce psychological stress and enhance student's abilities.

## II. Materials And Methods

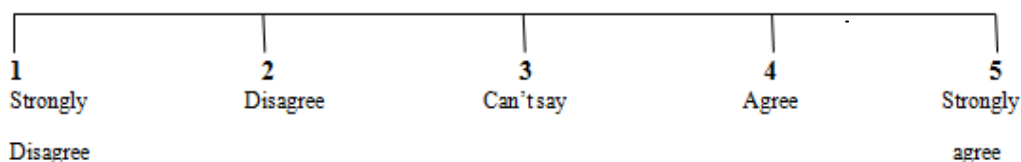
A Cross sectional study using quantitative methodology was conducted among undergraduate medical students of Sri Venkateswara Medical College, Tirupati.

The target population were undergraduate students of III Semester- MBBS of Sri Venkateswara Medical College, Tirupati. Taking into consideration the prevalence of anxiety and depression from various studies conducted previously at approximately 40%, our sample size came as 160. Data was collected in the month of May 2015.

Verbal consent was taken from the students before giving over the questionnaire. The data for present study was taken through a special designed self – reporting questionnaire related to psychological stress with each stress factor having grading from 1 to 5 according to severity. The questionnaire consisted of 25 item list which was given to a sample of 160 students.

According to Likerts scale, the options given were ‘strongly disagree’, ‘disagree’, ‘neutral’, ‘agree’ and ‘strongly agree’.

### Likert Scale Rating – 5 point



The response strongly disagree had assigned a value of zero and strongly agree the highest score five. Score less than or equal to 3 is considered as mild stress and score greater than 3 is considered as a stress for individual factor. They were requested to fill the questionnaire with full assurance about the confidentiality and anonymity that data would be used only for scientific purpose.

The questionnaire was then given to 160 students and analyzed. The total score for all the questions ranged between 0 and 125. A score less than 54 is mild stress, a score between 55 and 81 indicates moderate stress and a score between 82 and 125 indicates severe stress.

Score	Response
<55	MILD STRESS
≥55 to ≤85	MODERATE STRESS
>85 to ≤125	SEVERE STRESS

Data were entered in Microsoft excel worksheets and analyzed using the EPI 6. The analysis part composed of 2 parts, Descriptive and analytical part. Descriptive statistics such as frequency, percentage was applied for, general characteristics, prevalence of stress and various factors responsible for stress. Analytical statistics such as Chi-square Test was used to determine the association between various stress factors and presence of stress. Testing of hypothesis was performed at 95% level of significance.

## III. Results

Total 160 students were enrolled for the study. Out of these 160 students, 96.8% of students had stress. Among them 55.6% had mild to moderate stress and 41.2% had severe stress.

**Table-1: Distribution of Level of Psychological Stress among Undergraduate Medical Students (N=160)**

Stress Experienced	Frequency	Percentage (95% CI)
Mild Stress	5	3.12% (0.0135 - 0.0711)
Moderate Stress	89	55.6% (0.4789 - 0.6311)
Severe Stress	66	41.2% (0.3391 - 0.49)

Figures in the square brackets indicate 95% CI of proportions.[CI – Confidence Interval.]

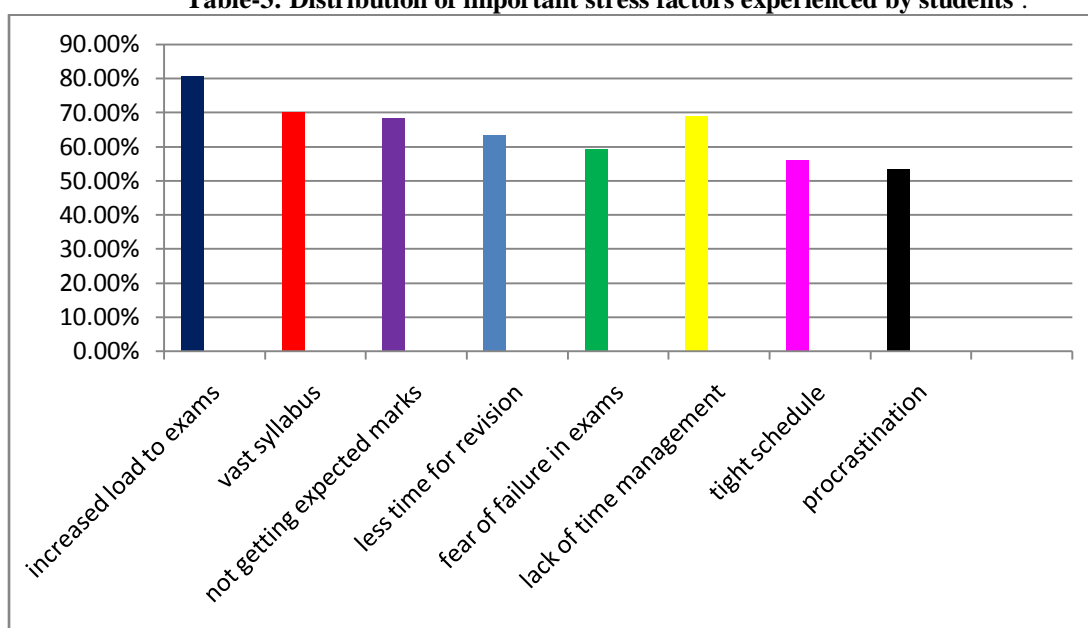
When the relationship between level of stress and gender was determined using appropriate statistical method, it was found that there is no significant difference of stress experienced among male and female students. (p value 0.19) There was no significant difference between hostellers and day-scholars.(p value 0.90). 62.5% of III Semester-MBBS students responded that difficulty in covering portions daily was a stress factor.

**Table-2: Gender wise Distribution of Psychological Stress among Undergraduate Medical Students (N=160)**

Gender	Mild Stress	Moderate Stress	Severe Stress
Male	4 (80%) [0.3755 – 0.9638]	40 (44.95%) [0.3503 – 0.5527]	36 (54.55%) [0.4262 – 0.6598]
Female	1 (20%) [0.0362 – 0.6245]	49 (55.05%) [0.4473 – 0.6497]	30 (45.45%) [0.3402 – 0.5738]
Total	5 (100%)	89 (100%)	66 (100%)

Figures in the square brackets indicate 95% CI of proportions ( P value = 0.19)

**Table-3: Distribution of important stress factors experienced by students :**



#### IV. Discussion

Medical education renders significant amount of stress to the students. In this study, 96.8% of medical students had stress. The study revealed that 41.2% of students are having severe stress. Medical students have stress not only because of medical education but also due to their traditional life style i.e less time for sports and for recreation, etc.

It was found in our study that there is no gender discrimination towards stress. There is no significant difference in stress between hostellers and day-scholars.

Majority of the students had severe stress because of increased load towards exams (80.62%), vast syllabus (70%), even after trying their best, they were not getting expected marks (68.2%), less time for revision (63.2%), fear of failure in exams (59.3%), tired feeling after tight schedule from 9 am to 5 pm (56%), habit of postponing work (procrastination)(59.3%). Hence there is a need to intervene in to the causative factors of stress.

Medical Council of India also suggests foundation course of 1 month duration after admission in to Medical college to prepare a student to study medicine effectively. Interaction between students and faculty 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.

It is also important for academic staff especially lecturers to be aware of the presence of these symptoms in their students. Greater emphasis should be placed on health programs including stress management to help students cope up with the stress of medical education. These programs should in fact be implemented in all universities. The ultimate aim is to help medical students understand what is required of them and to adapt to

the stressful environment as quickly as possible. It is also important to target prevention strategies at the students who have mild or moderate level of psychological stress in order to prevent the development of more serious conditions.

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 introduced as extra curricular activities to relieve stress among medical students.

Recommendations suggested are modifying the curriculum to provide a more student-friendly campus, teaching and assessing methods, establishing a student counseling center in the campus with qualified and experienced staff, improving the facilities for extracurricular activities in the campus to reduce psychological stress, and strengthening and activating a tutorial system and a student oriented teaching system by making the classes more interactive in the colleges.

## **V. Conclusion**

This study has found that majority of undergraduate students experienced stress. There is no gender discrimination towards stress. There is no significant difference in stress between hostellers and day-scholars. Both academic and emotional factors are responsible for this stress. Proper guidance and counseling by faculty may help to alleviate the stress among undergraduate medical students.

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