

## Prevalence of Stress and Anxiety among Medical Students: a study with Special Reference to Krishna District, Andhra Pradesh.

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### Abstract

Education has always been regarded as stressful environment especially for medical students. The present study aims to explore the stress levels and the effect of stress on various demographic variables among the first and second year MBBS students of Krishna district, Andhra Pradesh. A well structured Questionnaire was distributed to the students for collection of data. The Sample size for the study includes 510 medical students of Krishna district. Findings of the study revealed that 40% of the medical students experienced low to moderate level of stress. Anxiety and depression among the first and second MBBS students was found to be low.

**Key words:** Stress, Anxiety, Depression.

## Introduction

### Stress

According to Robbins (1993) stress is a dynamic condition in which an individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important.

The use of the term 'stress' is now so integrated into our thoughts that it sometimes feels it has always been there. In fact stress, as we currently think of it, is a relatively new concept and is one that continues to evolve.

Medical students are overloaded with a huge amount of information. They have a short span to memorize all the information studied. The overload of information creates a feeling of distress, because of the inability to handle all the information at once and succeed during the examination period. Many medical students struggle with their own capacity to meet the demands of academia.

### Anxiety

The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure."

### Symptoms of Anxiety:

There are several different anxiety disorders, they are: Sweating, Dizziness, Trembling, increased or irregular heartbeat, back pain, restlessness and fatigue, muscle tension, being easily startled, Sleep problems, Not being able to stay calm and still, Cold, sweaty, numb or tingling hands or feet,

Shortness of breath, Dry mouth, Nausea, recurring and ongoing feelings of worry, with or without known stressors, avoidance of certain situations that may cause worry, often affecting quality of life.

## Depression

Depression (major depressive disorder) is a common and serious medical illness that negatively affects how you feel the way you think and how you act. Fortunately, it is also treatable. Depression causes feelings of sadness and/or a loss of interest in activities once enjoyed. It can lead to a variety of emotional and physical problems and can decrease a person's ability to function at work and at home (APA, 2013).

Depression symptoms can vary from mild to severe and can include:

- Feeling sad or having a depressed mood
- Loss of interest or pleasure in activities once enjoyed
- Changes in appetite — weight loss or gain unrelated to dieting
- Trouble sleeping or sleeping too much
- Loss of energy or increased fatigue
- Increase in purposeless physical activity (e.g., hand-wringing or pacing) or slowed movements and speech (actions observable by others)
- Feeling worthless or guilty
- Difficulty thinking, concentrating or making decisions
- Thoughts of death or suicide

## Review of Literature

Chaudhry M.A. et al. (2017), examined Prevalence of Anxiety and Depression among Medical Students of Private Medical College in Pakistan. This cross-sectional study was carried out among 250 students of Combined Military Hospital (CMH) Lahore Medical College, Lahore in 2015. Hospital Anxiety and Depression scale was used for data collection. The rate of prevalence of anxiety was higher among medical students followed by depression in medical students. Study recommended providing sports and recreational facilities to the students in the campus and also colleges should encourage their students to spend time on their social and personal development activities as well.

Garg et al. (2017), examined Stress among medical students: A cross-sectional study from a North Indian Medical University. The total sample size comprises of 251 students. Worry about future endurance and capacity was rated the highest by the respondents of eighth semester, as they were highly concerned about their future. Perceived lack of feedback was considered as the main stressor by the fourth semester students this is due to the widespread of the three semesters in the second year of medical curriculum. Respondents of all the years reported workload as the key factor of causing stress, other stressors included were: feedback and interaction with faculty, non-supportive climate and financial concerns.

Mohamed Fawzy et al. (2017) examined the Prevalence of psychological stress, depression and anxiety among medical students in Egypt. This cross-sectional study High frequencies of depression (65%), anxiety (73%) and stress (59.9%) were reported. Stress scores were significantly higher than depression and anxiety ( $P=0.001$ ). 55.7% were poor sleepers. Stress scores were significantly associated with female sex, depression and anxiety scores.

Kumar SD et al. (2016) examined Depression, anxiety and stress levels among medical students in Mysore, Karnataka, India. The total sample size of the study was 332, which includes the students of both government and private medical colleges of Mysore. Depression, stress and anxiety were significantly

more among girls compared to boys. The results of the study revealed that the prevalence of stress, depression and anxiety experienced by the majority of the respondents was mild; it is due to academic management, life style and cultural background of the respondents. Study recommended helping the students by providing time for relaxation programmes by which students can relieve from the stress.

A descriptive, cross-sectional study was carried out from May 1, 2015, to June 30, 2015, in Kurnool Medical College by Sreedevi A. et al. (2016). Among 200 students of first-year MBBS, 133 were willing to participate and gave consent. Analysis shows that 78.19% of the respondents experienced stress. A substantial proportion of students were found to be stressed, with academic stressors being the major cause of stress.

### Objectives of the Study

1. To analyze the level of stress and factors causing stress among the Medical students in Krishna District of Andhra Pradesh.
2. To assess the level of Anxiety and Depression experienced by Medical students.
3. To study the affect of demographic variables such as Gender, Income and Nativity on Stress, experienced by medical students.

### Research Methodology

Students were introduced briefly to the objectives and the methodological workflow of the study, prior to the administration of the tools, an opportunity to ask questions were provided and clarifications were made. All students present on the scheduled date were approached to participate in the study. 245 students from one of the medical Colleges and 265 students from one more institute in Krishna District participated in the study. The total sample size of the study constitutes 510 students of two medical colleges of Krishna district.

#### Sampling Method

To obtain a representative sample of the total population, convenience sampling method was used in the present study.

#### Methods of Data Collection

Primary data was collected by distributing a pre-tested and a well structured questionnaire among respondents. Secondary data was gathered from the various journals, periodicals and electronic sources.

### Data Analysis and Results

**Table 1: Distribution of Total Sample on Low, Moderate and High Stress**

Level of Stress	Low Stress	Moderate Stress	High Stress	Total
No. of Respondents	306	178	26	510
Percentage (%)	60	35	5	100

On the basis of scoring given, respondents whose score was between 45-90 points was considered as Low stress, score between 90-135 was considered as moderate stress and score between 135-225 was considered as high stress.

From Table1, it is observed that, 60% of the respondent's experienced Low stress, 35% of the sample experienced moderate amount of stress and 5% of the sample experienced high stress.

**Table 2: Mean and standard deviation for the total sample on the factors causing stress**

Stressors	Sample Size (N)	Mean	Standard Deviation
Examinations and Grades	510	2.94	1.23
Fear of failing in Internals/Labs	510	3.03	1.33
Fear of failing in exams	510	3.13	1.39
Vast syllabus	510	3.45	1.22
Fear of ragging/harassment	510	1.36	0.87
Relations with seniors	510	1.30	0.78
Difficulty to cope with English medium	510	1.24	0.67
Patients attitudes towards students	510	1.32	0.82
Inability to afford required instruments	510	1.37	0.88
Adjustment with roommates	510	1.32	0.87
Lack of time to revise	510	3.12	1.32
Problems in memorizing topics	510	3.25	1.35

From the above table it is observed that:

The mean value for the statement 'vast syllabus' is (3.45) is high which shows that it is the major stress causing factor followed by 'problems in memorizing topics' (3.25), 'Fear of failing in exams' (3.13), 'lack of time to revise' (3.12), 'fear of failing in internals/labs' (3.03) and examinations and Grades (2.94).

The following are the factors that cause low stress among the students. They were: Fear of ragging/harassment (1.36), Relations with seniors (1.30), Difficulty to cope with English medium (1.24), etc.

**Table 3: Distribution of Total Sample on Level of Anxiety and Depression**

Level of Anxiety and Depression	Low	Moderate	High	Total
No. of Respondents	277	192	41	510
Percentage (%)	54	38	8	100

On the basis of scoring given, respondents whose score was between 06-12 points was considered as having Low anxiety, score between 12-18 was considered as moderate anxiety and score between 18-24 was considered as high anxiety.

From Table 3, it is observed that 54% of the respondents had low anxiety, 38% of the respondents had moderate anxiety and 8% of the respondents experienced high level of anxiety.

**Table 4: Relationship between Stress and Income**

		Income	Stress
Income	Correlation Coefficient	1.000	.041
	Sig. (2-tailed)	.	.351
	N	510	510
Stress	Correlation Coefficient	.041	1.000
	Sig. (2-tailed)	.351	.
	N	510	510

From Table 4, it is observed that there is no significant relationship was found between stress and the income of the respondents.

**Table 5: Relationship between Stress and Gender**

		Stress			Total
		Low	Medium	High	
Gender	1	104	58	13	175
	2	208	114	13	335
Total		312	172	26	510

From Table 5, the Chi-square value for gender and stress was 2.998, which implied that there was no significant association was found between gender and stress.

**Table 6: Relationship between Stress and Nativity**

		Stress			Total
		Low	Medium	High	
Nativity	1	48	38	4	90
	2	211	102	16	329
	3	53	32	6	91
Total		312	172	26	510

From Table 6, the Chi-Square value for nativity and stress was 4.719, which indicates that there was no significant association between nativity and stress.

## Discussion

It was observed from the findings of the present study that, there was no significant relationship between gender and stress. This finding is comparable with the results of similar study done in India conducted by sreedevi A. et al (2015), which had similar findings. In our study the following stressors were found, they were: Lack of time to revise, fear of failing in exams, internals/labs, examinations and grades, vast syllabus. This finding is similar with a number research reports. Study conducted by Yusoff et al. (2011) found that test/examination, large amount of contents to be learnt, Getting poor marks, Lack of time to review what have been learnt, falling behind in reading schedule, Heavy workload, and having difficulty understanding the content as the major stressors. The findings of Yusoff et al. (2011) are similar to the findings of this study.

Participation of different stakeholders including the institution, parents, and peers is must to address this issue. In order to understand the root causes of stress and to reduce it to a greater extent, Counseling sessions should be conducted on regular intervals to the students. Workshops of stress management and time management should be conducted to enhance the well being of medical students. As the curriculum of medical students is very complex, necessary reforms should be implemented if necessary.

### Limitations of the study

This study is limited to first and second year medical students, even other faculties are not included in this study. As the sample size is small, it might have affected the results of the study. Further studies should take these limitations into consideration.

**Conclusion:** The small proportion of medical students from first and second year MBBS were suffering from stress, depression and anxiety. There was no significant association between stress and demographics (gender, income and nativity). Efforts are required from the different stakeholders such as professors and parents to cater to medical students who were psychologically distressed. A prompt action should be taken to resolve this issue.

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