

Original Research Article

ASSESSMENT OF THE CURRENT STRESS LEVELS OF MEDICAL UNDERGRADUATES AND THEIR ATTITUDE REGARDING IMPACT OF MEDITATION

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ABSTRACT

Background: As Medical education is competitive, the long duration of courses and exposure to clinical settings potentially causes mental health issues. Sudden exposure to vast medical curriculum following school education causes stress and pressure among the students,^[1] Stress is a perceived imbalance between the demands and capability to respond.^[1] Stress is a subjective experience which creates an obstacle in a person's path of achieving his or her goals. Medical curriculum is very vast and stressful.^[2] Considerable degree of psychological morbidity has been reported among medical students ranging from stress, interpersonal problems and suicidal ideation to psychiatric disorders and they tend to have greater psychological distress than the general population,^[3] Yoga and meditation have become widely accepted as non-pharmacologic modalities for stress and anxiety reduction as well as general health.

Materials and Methods: A cross sectional study done among 300 Undergraduate Medical students and House surgeons of GMC, Mahabubnagar for 2months using semi- structured Questionnaire and data entered in excel and analyzed using SPSS Version20 software.

Results: Majority of the study Participants have Moderate levels of stress (74.3%), 11.6% of the study participants perceived Low stress Levels and 14% of the study participants perceived High stress levels and the average Perceived Stress Scale score among the study participants is 20.9. With regards to the attitude towards Meditation in relieving stress, 59.3% of the study participants have taken part in Meditation programs, of them 92.6% have found Meditation helpful.

Conclusion: This study shows considerable amount of stress among Medical undergraduates and majority had a positive attitude towards meditation.

Keywords: Stress, Undergraduates, Meditation, Attitude.

INTRODUCTION

Stress is a perceived imbalance between the demands and capability to respond,^[1] Stress is a subjective experience which creates an obstacle in a person's path of achieving his or her goals. It creates negative outcomes among the population. Medical education is competitive across the globe. The long duration of the medical and paramedical courses and exposure to clinical settings potentially causes mental health issues. Sudden exposure to the vast

medical curriculum following school education causes stress and pressure among the students to perform better than their peers.

Medical curriculum is very vast and stressful.^[2] As doctors are the very important part of society, medical students must be allowed to learn their trade in a stress-free environment.^[2] Considerable degree of psychological morbidity has been reported among medical students ranging from stress, interpersonal problems and suicidal ideation to psychiatric disorders and they tend to have greater

psychological distress than the general population.^[3] Long term stress may lead to health problems like hypertension, depression and other Non Communicable diseases. The Perceived Stress Scale (PSS) is a classic stress assessment tool to understand the level of stress perceived by the individual in the past one month.^[6]

Yoga and meditation have become widely accepted as non pharmacologic modalities for stress and anxiety reduction as well as general health. Meditation has been shown to improve attention and self-awareness in many populations, including college-aged students.^[4]

So the current study aims to study the current stress levels of medical undergraduates and their attitude regarding Meditation as meditation is a widely accepted non-pharmacologic modality for stress and anxiety reduction in many populations, including college-aged students.^[4]

Aim: To study the current stress levels of medical undergraduates and their attitude regarding the impact of Meditation.

Objectives

1. To assess the current stress levels of medical undergraduate students using ‘Perceived Stress scale’
2. To assess what are the current attitudes of medical undergraduates regarding meditation

MATERIALS AND METHODS

Type of Study: A Cross sectional study.

Study period: 2 months (July-Aug 2023)

Study area: Government Medical College, Mahabubnagar, Telangana.

Sample size: Considering prevalence (P)=59(1), q =41, confidence interval of 95%, Z=1.96 and relative precision (l) = 10%, using Z2 PQ/l2, got sample size as 284.5(rounded up to 300).

Sampling Method: From the total of 850 medical undergraduates, 300 medical undergraduates were selected by simple random sampling. 60 from each year of medical graduation were selected.

Study Population: Undergraduate medical students and House surgeons in Government Medical College, Mahabubnagar.

Study tools: The evolved pre-tested semi-structured questionnaire on demographic data with Perceived Stress Scale.

Inclusion Criteria: First year to final year undergraduate Students and House Surgeons who are willing to participate in the study with consent.

Exclusion Criteria: Those students who are not willing to give consent.

Statistical Analysis: The data collected is entered into excel and analysis is done using SPSS Version 20 and expressed in tables, pie-charts, and significance tests (Chi-square test) applied.

RESULTS

Majority of the study participants are in the age group of 21-25(64.3%), predominantly females (65.3%).85% of the study participants are Hindus, 7.6 % are Christians, 5.3% are Muslims.Of the study participants, 89.3% belong to the upper socio-economic class, and 10.6% belong to the upper middle socio-economic class. [Table 1]

According to Perceived stress scale(PSS), Majority of the study Participants have Moderate levels of stress (74.3%), 11.6% of the study participants perceived Low stress Levels and 14% of the study participants perceived High stress levels as shown in the table.02 and the average Perceived Stress Scale score among the study participants is 20.9. [Table 2] With regards to the attitude towards Meditation in relieving stress and the impact of meditation, among the study participants, 59.3% (178) have taken part in Meditation programs, of them 92.6% (165) have found Meditation helpful in relieving their stress. [Table 6]

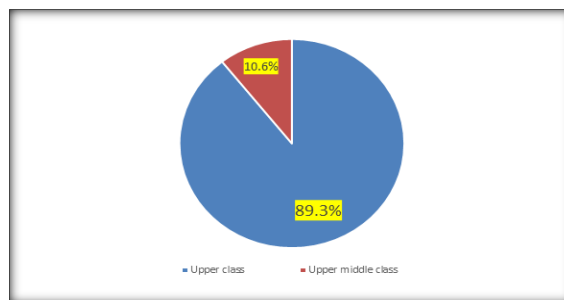


Figure 1: Showing Socio-Economic Status of the study participants

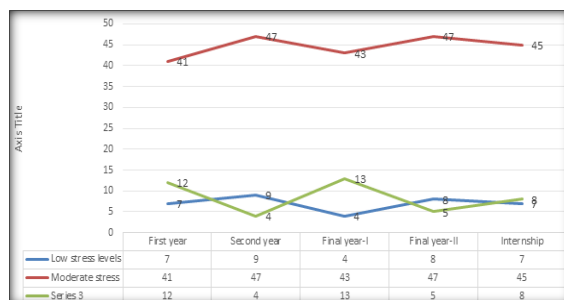


Figure 2: Showing various levels of stress among the study participants.

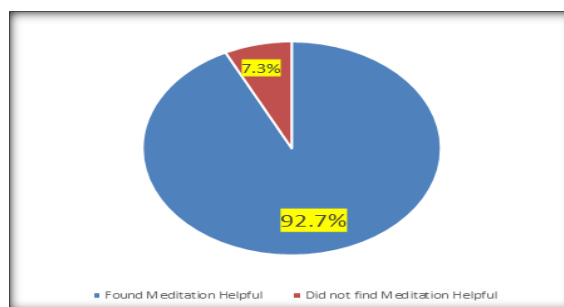


Figure 3: Impact of Meditation among the study participants in relieving stress.

Among the study participants, 89.6% of them felt that Meditation sessions should be included in the college curriculum.

Table 1: Socio-demographic profile of the study participants

Study Variables	Medical Under Graduates Number (n) Percentage(%)
Age (in years) 15-20 21-25	107 35.7% 193 64.3%
Gender Male Female	104 34.7% 196 65.3%
Religion Hindu Christian Muslim Other	255 85% 23 7.6% 16 5.4% 06 2%
SES Upper class Upper middle Middle Lower middle Lower	268 89.4% 32 10.6% -- -- --
Year of study First year Second year Third year Final year Internship	60 20% 60 20% 60 20% 60 20% 60 20%

Table 2: Levels of stress perceived by the study participants

Year of study	Levels of stress					
	Low level Number Percentage		Moderate level Number Percentage		High level Number Percentage	
First year	07	11.6%	41	68.3%	12	20%
Second year	09	15.5%	47	78.3%	04	6.6%
Final year part-1	04	6.6%	43	71.6%	13	21.6%
Final year part-2	08	13.3%	47	78.3%	05	8.3%
Internship	07	11.6%	45	6.6%	08	13.3%
Total	35	11.6%	223	74.3%	42	14%

Table 3: Association between gender and levels of stress

Gender	Low stress	Moderate stress	High stress	Total
Male	17	75	14	106
Female	18	148	28	194
Total	35	223	42	300

p-value is 0.2186. (Insignificant)

Table 4: Association between year of study and levels of stress

Year of study	Low stress	Moderate stress	High stress	Total
First year	07	41	12	60
Second year	09	47	04	60
Final year-I	04	43	13	60
Final year-II	08	47	05	60
Internship	07	45	08	60
Total	35	223	42	300

p-value is 0.2398. (Insignificant)

Table 5: Average PSS score among the study participants

Year of study	Average PSS Score
First year	21.43
Second year	18.75
Final year -I	22.01
Final year- II	19.16
Internship	20.11
Total	20.29

Table 6: Study participants who have ever been a part in Meditation programs

Year of study	Ever participated in Meditation Programs			
	Yes		No	
	Number	Percentage	Number	Percentage
First year	33	55%	27	45%
Second year	38	63.3%	22	36.7%
Final year-I	35	58.3%	25	41.7%
Final year-II	34	56.6%	26	43.4%
Internship	38	63.3%	22	36.7%
Total	178	59.3%	122	40.7%

DISCUSSION

The present study aimed to assess the prevalence of stress among the undergraduate students of GMC, Mahabubnagar, and the results showed prevalence of 11.6% low, 74.3% moderate and 14% high which is similar to the study by Raja.S et al. which shows overall Prevalence of stress was 11% among which low (5%), moderate (82%), and high (12%).^[1]

Similar to the high mean PSS score observed in the current study, high mean PSS score has also been observed in the studies conducted among medical students in the medical colleges of Kolkata and Mangalore.^[15,16] Medical education is stressful and medical students remain as a vulnerable group. It is a fact that medical students experience three times more stress than the general population.^[11,12,13] Similarly, the prevalence of depression and stress was higher among students of medical courses than in paramedical courses. This could be attributed to exposure to a vast curriculum, clinical postings, and more frequent assignments than paramedical students.¹⁴ High prevalence of stress among medical students is a reason to worry as it may influence behavior of students, hamper their learning, and affect patient care after their graduation.^[5] The students should be taught various stress management techniques to improve their ability to cope with the demanding professional course. Stress load of students can be taken care by motivating them to participate in extracurricular activities. Competency-based curriculum can be used as an alternative model of teaching and assessment.^[18,19]

This study showed no significant difference in stress levels between males and females, unlike the study done by Shawaz Iqbal et al. that showed higher scores of depression, anxiety and stress was associated with female gender.^[3]

The current study revealed that Meditation helps in relieving stress which is in common with study done by Satpathy P et al,^[2] common coping strategies to tackle stress were playing games, doing yoga or zumba or meditation or exercise or gym, watching TV, and sleeping to overcome their stress. Similar results have been obtained in a study on medical students by Rani et al.^[17] With regards to attitude of medical under graduates towards meditation, the results were 59.3% had a positive attitude towards meditation which is slightly lower than the study done by Hegde SV et al. that showed 70.1%.^[6]

Perceived stress could be due to multiple factors apart from the curriculum. However, the final year of study and medical course remained independent predictors of stress. This finding points towards additional mental health support for the final year and medical students for their overall betterment.^[1]

CONCLUSION

This study shows that there is considerable amount of stress among the Medical undergraduates. A periodic assessment of mental health status for the betterment of the students and additional mental health care for the medical students are recommended. Majority of the study participants had a positive attitude towards meditation and its effect on stress and intended to practice meditation in the future.

Recommendations

As meditation is a widely accepted non-pharmacologic modality for stress and anxiety reduction and medical undergraduates have a positive attitude towards practice of meditation, meditation sessions should be incorporated into the MBBS curriculum.

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Declarations

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Ethical approval: Taken.

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