

A Cross-sectional Study on State Anxiety Among MBBS Students of Government and Private Colleges across Andhra Pradesh and Telengana

¹P. Pardha Sai, ²Devesh Reddy, ³Reet Nandy

^{1, 2}MBBS Intern at Konaseema Institute of Medical Sciences and Research Foundation, Amalapuram, Andhra Pradesh, ³Third Professional Year MBBS Student at Konaseema Institute of Medical Sciences and Research Foundation, Amalapuram, Andhra Pradesh

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Abstract

The Bachelor of Medicine and Bachelor of Surgery (MBBS) is the course pursued by undergraduate students to become Doctors in India. This course is conducted as per the NMC guidelines. This study aimed to study the levels of State Anxiety among the students of various government and private medical colleges. State Anxiety is the anxiety that is experienced by an individual as a response to a particular situation and is temporary, whilst Trait Anxiety is suffered by an individual as an inherent character and it's permanent. The first 20 questions of the State-Trait Anxiety Questionnaire, surveyed anxiety levels among 132 medical students across the states of Andhra Pradesh and Telengana. The results were interpreted and analyzed using Microsoft Excel. The highest MSA (Mean State Anxiety) was observed in the students of Deemed Universities, probably due to the excessive financial load up on them, in addition to the exhaustive syllabus; whereas LMS (Least Mean Score) was seen in the students of PPP (Public Private Partnership) Colleges. Moreover, State Anxiety survey among medical students across the years of MBBS in the two provinces reveals that Final Professional Year Part 2 candidates showed maximum MSA, while the least was recorded in Post-Interns. This can, possibly be due to the huge load of syllabi in the final Prof year, that ought to be covered within a limited time. Post-interns on the other hand, have completed their graduation, thereby being comparatively more independent financially. The current study leaves scope for future researchers in the same area but on a different population or sample size as this survey was confined within the states of Andhra Pradesh and Telengana.

Key Words: Government, Private, MBBS, Professional Years, Anxiety

Introduction

Currently, India has several medical colleges, including both Government and Private; there are some Semi-Government, Deemed Universities, and

a unique model called Public-Private Partnership as well. Admission to these colleges takes place through NEET UG entrance exam, and they offer the degree of MBBS (Bachelor of Medicine and Bachelor of Surgery). They train undergraduate students as

Corresponding Author: Reet Nandy, Third Professional Year MBBS Student at Konaseema Institute of Medical Sciences and Research Foundation, Amalapuram, Andhra Pradesh)

E-mail: reet.nandy28@gmail.com

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per guidelines set by the National Medical Council. NMC requires medical students to undergo 5.5 years of rigorous training, consisting of theoretical aspects of the 19 subjects, laboratory skills wherever required and clinical postings where students interact with patients. All these are aimed to ensure that the students can become skilled clinicians after their graduation. But students at times find this tough curriculum and tight schedule quite stressful (Nandy et al, 2024).

Medical students experience higher anxiety levels compared to the general population, with contributing factors including academic demands and lack of support (Dyrbye et al², 2006). A study conducted in Karnataka, India by Kumar et al⁵. (2012) observed 71% of medical students experiencing moderate to severe anxiety levels. Academic workload and performance pressure have been identified as primary stressors contributing to anxiety amongst Malaysian medical students (Yusoff et al¹⁶, 2010). 56% of Malaysian medical students were reported to have suffered from anxiety and lack of coping strategies (Yusoff et al¹⁵, 2011). 41.9% of prospective medical students experienced anxiety, with attributed to academic workload and transition stress (Yusoff et al¹⁴, 2013). Similarly, in Pakistan, 60% students in a private medical university suffered from ennui because of academic pressure and financial concerns (Inam et al³. 2003). 70% of undergraduate medical students experienced anxiety, negatively impacting their academic performance (Vaidya et al¹², 2007). Anxiety prevails in the female students especially in higher academic years (Shawaz et al¹⁰, 2015). Another survey on the students of a govt medical college by Kamboj et al⁴, (2021) yields similar observation. Likewise, 63% of Saudi medical students were reported to suffer from anxiety, with higher rates among females especially those with lower academic performance (Abdulghani et al¹, 2011). 63% medicos in Fayoum University have been detected to suffer from anxiety due to academic stress and lack of recreational activities (Wahed et al¹³, 2017).

Anxiety levels fluctuate throughout the six-year medical program, with peaks during examination

periods (Niemi et al⁷, 2006). According to Raja et al⁹, 2022, 43% students in a private medical college in South India suffer from stress and anxiety with a higher ratio in females and final-year students. A meta-analysis by Quek et al⁸, 2019 revealed a global prevalence of anxiety among medical students at 33.8%, with variations across regions and academic years. Nandy et al⁶ (2024) surveyed on various aspects of medical education and opinions of the medics on the ideal mode of learning.

These studies collectively highlight the global prevalence of anxiety among medical students varying with curriculum pressure, gender and the year of study.

State Anxiety is the anxiety that is experienced by an individual as a response to a particular situation and is temporary. Removal of the alarming stimulus leads to dissolution of anxiety. This is in contrast with the Trait Anxiety, where an individual suffers from anxiety as a trait (as in the name) and it's permanent. Individuals with trait anxiety find even small discomforts greatly alarming and often show physical symptoms like palpitations and rapid breathing (Spielberger et al¹¹, 1983).

The current study intends to check the levels of State Anxiety experienced by individuals studying in medical colleges of Andhra Pradesh and Telengana provinces and investigates whether there is a difference in the levels of anxiety faced by different academic years of Undergraduate medical students from the Government and Private Medical Colleges. The present work differentiates itself from most of the previous survey works in the sample size, population, questionnaire used and its comparative nature.

Materials and Methods

Sample Size: 132 undergraduate medical students, across academic years, both from Govt and Private Medical Colleges from AP and Telengana provinces were surveyed through Google Forms. Each respondent has been explained regarding the intention and modus operandi of the study before

he/she filled up the form willingly. The survey was pursued for two months to obtain the above-mentioned sample size.

Hypothesis: To assess the effect of professional year, type of college, and gender on State Anxiety of Individual

Inclusion Criterion: Undergraduate Medical Students from the states of Andhra Pradesh and Telengana

Exclusion Criteria: Postgraduate Medical Students and Undergraduate Students from other fields were excluded for the study.

Tool: State Trait Anxiety Index (Spielberger et al¹¹, 1983), it is a 40 item Questionnaire which tries to assess anxiety in the subject psychometrically. 20 questions measures State Anxiety while 20 measure trait anxiety.

Ethical Approval: The respective Institution’s Ethical Committee is involved only when working on live human subjects, especially on surgical or pharmaceutical intervention. Survey based works don’t need ethical approval.

Study Period: 2 months, from January 2025 to March 2025.

The STAI questionnaire was circulated among 132 MBBS Students from Government and Private Medical Colleges across the states of Andhra Pradesh and Telengana. Their responses were marked and analyzed using MS Excel.

Demographic Breakdown:

Gender (Table 1)

Female	62
Male	68
Prefer not to say	1

Year of MBBS (Table 2)

First Prof	25
Second Prof	21
Final Prof Part 1 (3 rd yr)	22
Final Prof Part 2 (4 th yr)	23
House Surgeon	21
Post-Intern	19

Type of College (Table 3)

Govt (Central/State/Semi)	63
Pvt (Private/Deemed/PPP)	68

Results

Mean Total Anxiety Score based on Professional Year (Table 4)

Year	Mean Total Score
First Prof	49.92
Second Prof	46.12
Final Prof Part 1 (3 rd year)	48.67
Final Prof Part 2 (4 th yr)	52.15
House Surgeon	46.55
Post Intern	43.85

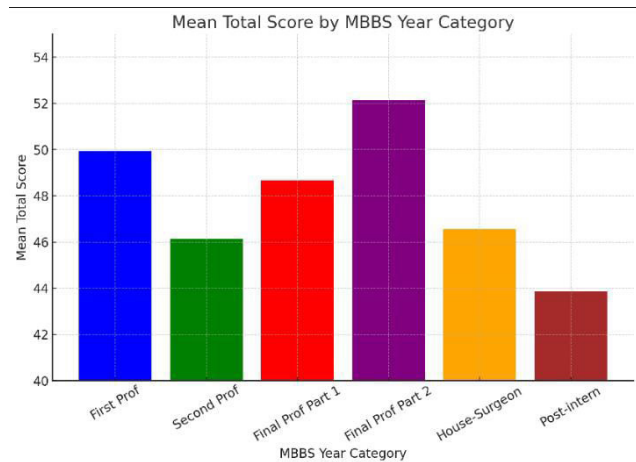


Figure: 1

Mean Total Anxiety Score Based on Type of College (Table 5)

Type	Mean Score
Deemed University	50.00
Government Central	49.67
Government State	48.71
Semi-Government	49.30
Private	47.61
PPP	44.50

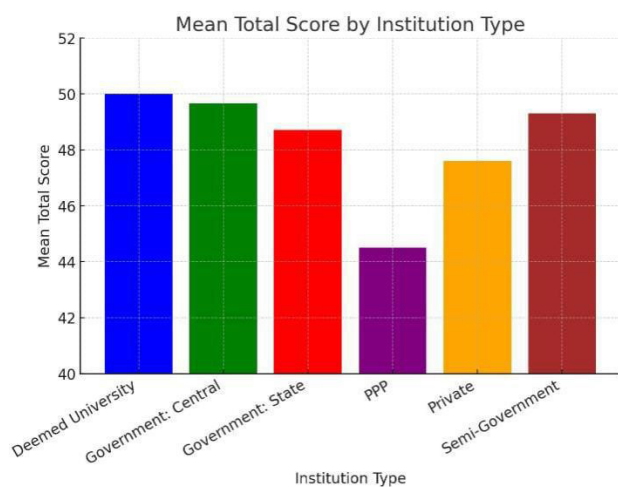


Figure 2

Mean Total Anxiety Score Based on Gender (Table 6)

Gender	Mean Score
Male	48.08
Female	48.07

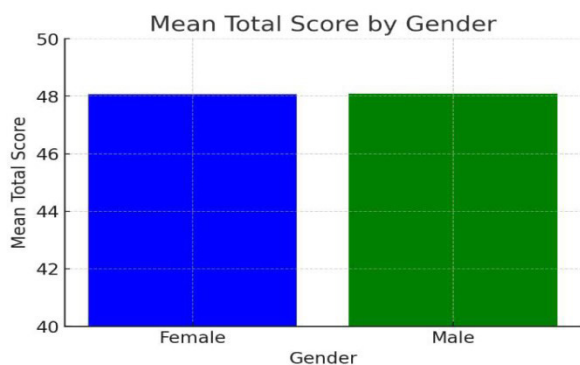


Figure 3

Discussion

The present study shows Final Prof Part 2 (4th yr) students have the maximum mean score of state Anxiety. This can be due to their extensive syllabus with 11 subjects in a span of 1-1.5 years. This finding resembles that of Raja et al⁹ (2022). Post interns showed the least state Anxiety, which can probably be due to the fact that they had already completed their graduation and were eligible to start practicing. Among types of institutions, students from Deemed Universities showed the maximum mean State

Anxiety. This can possibly be due to the high fees that Deemed University students need to pay, as suggested by Yusoff et al¹⁴ (2013). This was followed by Medical Students from Central Government Institutions, possibly because of the increased stress that accompanies the high-quality medical education in the Central Universities respectively. Undergraduate students from Public-Private Partnership (PPP) Colleges showed the least mean state anxiety.

In contrast, to the studies of Shawaz et al¹⁰, 2015, Abdulghani et al¹, 2011, Raja et al⁹, 2022, where female students had greater anxiety, the current study found that gender didn't have much influence over the mean state anxiety of the students.

Conclusion

Final Professional Year Part 2 students have the highest state anxiety compared to other years. Deemed University students show Maximum state anxiety. There is a lack of generalizability as the work was limited to the states of Andhra Pradesh and Telengana. Future research can be conducted on other states, and other populations as well. There is significant scope of research on how to decrease the anxiety level of the undergraduate medical students.

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