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The Hidden Struggles: A Survey on Academic Stress Among Medical Students

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ABSTRACT

Academic stress among medical students is a growing concern due to its potential impact on mental health, academic performance, and overall well-being. This study explores the factors contributing to academic stress and the coping strategies medical students employ. A descriptive survey research design was adopted to analyse Academic Stress's research problem utilizing a standardized data collection tool. The study explores the stress from academic pressure, financial burdens, career uncertainty, and time management challenges among medical students. Social isolation, health issues, faculty-related difficulties, and effectiveness of coping strategies such as time management, social support, relaxation techniques, and institutional support services. This research contributes to the existing literature by offering insights into the challenges faced by medical students and the mechanisms they employ to manage stress. The study underscores the need for universities to implement structured support systems, including counselling services and stress management programs, to mitigate academic stress. Future research may focus on longitudinal studies to examine stress trends over time and the long-term effectiveness of various coping strategies.

Keywords: Academic Stress, Medical Students, Factors for Stress, Educational Challenges, Coping Strategies, Stress Mitigation

INTRODUCTION

Stress is a common human experience. It often arises when individuals encounter challenging circumstances or a series of negative events within a short period. Stress is viewed as a negative emotional, cognitive, behavioural, and psychological process that occurs as a person tries to adjust to or deal with stressors (Lazarus & Folkman, 1984). Auerbach & Grambling (1998) described stress as "an unpleasant state of emotional and psychological arousal that individuals experience in situations that they perceive as dangerous or threatening to their well-being". Medical students are experiencing increasing levels of academic stress. In India, a 2024 survey revealed that 84% of postgraduate medical students reported moderate to very high stress levels, with 64% stating that workload adversely affected their mental health (NTF, 2024). Similarly, a study at King Khalid University in Saudi Arabia found that 97.1% of medical students perceived moderate to severe stress due to academic-related stressors (Al-Shahrani et al., 2023). Additionally, between 2016-17 and 2022-23, the proportion of university students in the UK reporting mental health difficulties increased from 6% to 16%. (The Policy Institute at King's College London & TASO, 2023). It shows that academic stress among medical students is increasing globally. According to Lee & Larson, 2000, Lou & Chi, 2000, "academic stress can be conceptualized as

a student's interaction between environmental stressors, the student's cognitive appraisal of and coping with the academic related stressors and psychological or physiological response to the stressors" According to Carveth et.al. (1996), "Academic stressors include the student's perception of the extensive knowledge base required and me perception of an inadequate time to develop that knowledge." Arora et al. (2016) examined substance abuse among medical graduate students in a developing country. The prevalence of substance abuse was 20.43 % (47/230) among medical students. An increase in substance abuse was observed in the latter years of medical education. A total of 43 of 47 (91.7%) students using these substances were aware of the ill effects. The most common reason for substance use was relief from psychological stress (34/47, 72.4%).

Academic stress refers to the psychological distress and pressure experienced by students due to academic demands, such as workload, exams, deadlines, and performance expectations. It arises when students perceive an imbalance between the academic challenges they face and their ability to cope with them. According to Lazarus and Folkman (1984), stress is a psychological state that occurs when individuals appraise a situation as threatening or challenging and believe that their coping resources are insufficient. This process involves emotional, cognitive, behavioural, and physiological responses as individuals attempt to manage internal and external stressors. Stress has been described as an unpleasant emotional and psychological state experienced when individuals perceive situations as threatening to their well-being (Auerbach & Grambling, 1998).

The medical school environment as a key contributor to student stress and resilience deficits. Addressing student needs necessitates cultural transformation within medical education alongside accessible, flexible mental health services. Such reforms align with evidence advocating supportive learning environments, mentorship, and resilience training to foster well-being and professional longevity.

REVIEW OF LITERATURE

A systematic review by Shiralkar et al. (2013) analyzed stress-management programs for medical students. The study encompassed various interventions, including mindfulness-based stress reduction, self-hypnosis, and pass/fail grading systems. Findings indicated that these interventions effectively reduced stress and anxiety levels among medical students, though the quality of studies varied, highlighting the need for more rigorous research.

Jeyapalan and Blair (2024) conducted a narrative qualitative systematic review to examine the causes of stress in medical students and its impact on academic outcomes in the United Kingdom. The review analyzed eight systematic reviews encompassing over 500,000 participants from more than 309 studies, identifying five major themes: academic pressure, institutional impact, personality traits, social relationships, and financial stress. The findings highlighted that stress among medical students is strongly associated with negative academic outcomes and overall well-being. The authors recommended that medical schools evaluate their curricula to reduce undue academic pressure and support students' mental health.

A prospective cohort study by Tempski et al. (2024) explored stress and exhaustion among medical students during assessment periods. The study followed medical students over time to evaluate the relationship between assessments and stress levels. Findings revealed that assessment periods were associated with increased stress and exhaustion, indicating the need for medical schools to consider assessment-related stressors when designing curricula and support services.

A study by Dunn et al. (2024) assessed the impact of the Systematic Assessment for Resilience (SAR) framework on medical students' resilience, anxiety, depression, burnout, and academic stress. The implementation of the SAR framework aimed to enhance students' resilience and well-being. The study found that the SAR framework effectively improved resilience and reduced anxiety, depression, burnout, and academic stress among medical students, highlighting its potential as a valuable tool in medical education.

NEED FOR THE STUDY

The need for this study arises from the increasing academic stress among medical students, which significantly impacts their mental and physical health, academic performance, societal interactions, and the healthcare system. High stress levels contribute to anxiety, depression, burnout, and even suicidal tendencies, affecting students' overall well-being (Dyrbye et al., 2010). Academically, excessive stress impairs concentration, reduces retention, and leads to poor performance, ultimately affecting the quality of future healthcare professionals (Tempski et al., 2024). On a societal level, stressed medical students may struggle with interpersonal relationships, leading to social isolation and reduced professional empathy. Furthermore, the healthcare system suffers, as high stress levels among medical students may result in physician shortages, decreased job satisfaction, and compromised patient care (Shiralkar et al., 2013). Medical student stress correlates strongly with depression, fueled by academic pressures, maladaptive coping, insomnia, and anxiety—particularly among males, rural residents, and those with financial constraints (Karim et al., 2025). Faith/religion leads coping strategies (65.8%), followed by sleep prioritization (51.4%), hobbies (49.4%), and sports/leisure (49.0%), with study-life imbalances more common among females (Gondal et al., 2025), while Dudley advocates friend contact, deep breathing, and incremental meaningful pursuits for resilience (Anna Medaris, 2023). Interventions must target stress reduction, adaptive skills, resource equity, and enhanced mental health support to ensure student well-being and success.

OBJECTIVES

1. To assess the level of academic stress among medical students.
2. To identify the key factors contributing to academic stress in medical education.

METHODOLOGY

The present study employed a descriptive survey method to assess academic stress among medical students using convenience sampling. The standardized *Academic Stress Scale* developed by Poorva Jain and Neelam Dikshit (2016) was utilized as the primary tool, which has a reliability coefficient of 0.93 and was validated by teacher educators for face validity. The scale comprises five response categories: Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D), and Strongly Disagree (SD). Data collected through the survey were analyzed using statistical techniques to derive meaningful insights into the academic stress levels experienced by medical students.

RESULT

The level of academic stress among medical students.

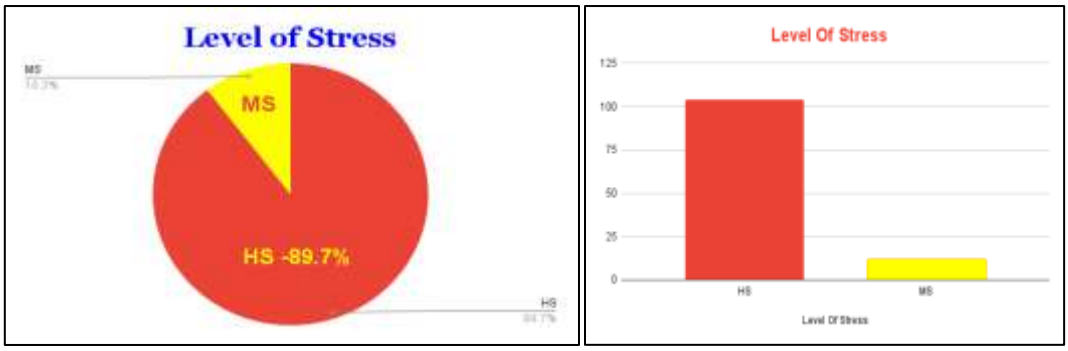
Table 1.1

Illustrating the Data obtained from the sample

Level Of Stress			
Number of Students	**Score**	**Percentage**	**Interpretation**
104	80 above	89.7%	High Stress
12	50-79	10.3%	Moderate Stress
0	Below 50	-	Low Stress

Figure 1.1

Graphs showing the percentage level of Academic Stress among the Medical Students



The table 1.1 and fig 1.1 represents data on stress levels, categorizing individuals into three groups: High Stress, Moderate Stress, and Low Stress. Out of the 116 students, 104 individuals (89.7%) experience high stress, with scores above 80. Only 12 individuals (10.3%) fall into the moderate stress category, with scores between 50 and 79. Notably, no individuals recorded stress levels below 50, indicating the absence of low stress.

A study conducted at King Khalid University reported that 97.1% of medical students experienced moderate to severe stress due to academic-related stressors (Al-Shahrani et al., 2023). Similarly, research at Helwan University found that approximately 93% of medical students faced moderate to high levels of stress, emphasizing the widespread prevalence of academic stress in medical education (Raja S, et al., 2023). These findings reinforce the high stress levels observed in the current study, highlighting the urgent need for effective stress-management strategies.

Key factors contributing to academic stress in medical education.

Medical education presents numerous challenges that contribute to high levels of academic stress among students. The complexity of content requires learners to grasp intricate concepts and retain vast amounts of information, often leading to frustration and anxiety (Seyed Fatemi et al., 2007). Additionally, the extensive syllabus and time constraints place a significant burden on students, making it difficult to cover all topics before exams, which can result in burnout (Sreerama Reddy et al., 2007). Understanding lectures can also be challenging due to ineffective teaching methods or complex explanations, forcing students to rely heavily on self-study, which further adds to their stress (Alzahem et al., 2011). Some subjects demand extensive independent research, contributing to information overload and making students feel overwhelmed (Dyrbye et al., 2005). Furthermore, semester examinations, with their high frequency and rigorous nature, heighten performance anxiety and negatively impact students' mental

well-being (Yusoff et al., 2010). Certain subjects have lengthy and difficult-to-understand syllabi, making effective learning and retention even more challenging (Sharma et al., 2016).

Medical students often struggle to balance academic demands with social activities, leading to adjustment problems, emotional distress, and social isolation (Dyrbye et al., 2010). The highly competitive environment fosters self-doubt, causing many students to suffer from a lack of confidence and feelings of inferiority, which adversely affect their academic performance (Suhail & Parveen, 2007). Moreover, perceived teacher bias and favouritism can demotivate students, resulting in psychological distress and a lack of motivation (Alzahem et al., 2013). Overcrowded classrooms and incomplete or unclear study materials further hinder the learning process, making education less effective and increasing stress levels among students (Radcliffe & Lester, 2003). These factors collectively create a highly stressful academic environment, significantly impacting the mental and emotional well-being of medical students.

Stress Among First-Year Medical Students

Table 2.1

Distribution of Study Sample by Academic Year

Total Number of students (sample)	First year MBBS	Second year	Third year	Fourth
116	70	16	16	14

Figure 2.1

Bar graph showing the Academic Year-Wise Distribution of the Sample

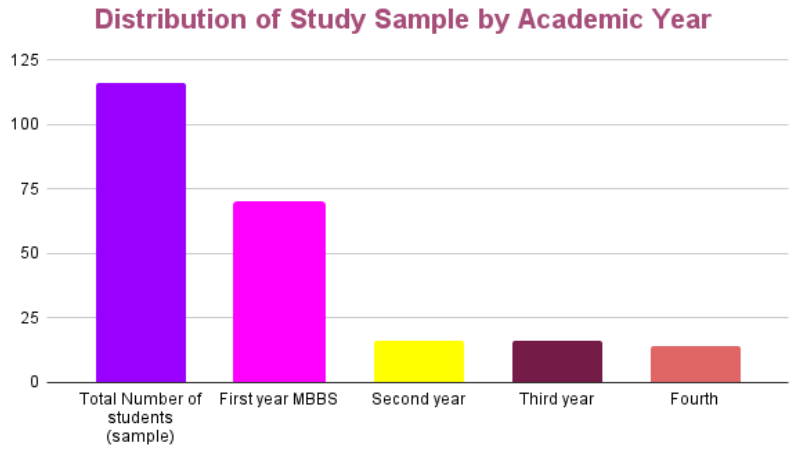


Table 2.1 and fig 2.1 presents the distribution of the study sample across different academic years in the MBBS program. Among the 116 students surveyed, the majority (70 students) belong to the first-year MBBS, making up the largest proportion of the sample. This distribution suggests that first-year medical students experience significant academic stress.

DISCUSSION

Since these students just finished their 12th class and are very new to the university level of education, which is widely different from the school level of education, they find it difficult to cope with the new

curriculum. Also, most of the students, according to our study, find the syllabus to be vast, which is also a major contributor to the stress among students. The majority of medical students get shifted to different cities due to the seat allotment system hence, they find it difficult to cope with new environments and conditions also, they might find it difficult to mingle with new peer group and also, they may feel separated from their family and friends which may precipitate stress among medical students.

Expectations: First-year students try to perform and excel as they did at the school level, but due to various reasons, it's difficult in medical school due to the high difficulty level of the subjects, lots to remember and memorize. Adjusting to the clinical environment: Students may find it challenging to adjust to the new environment, which they are experiencing like cadaveric dissection, viva, and hospital settings, which students have never experienced. Hence, they need ample time to get adjusted to a new niche.

RECOMMENDATIONS

The medical exams are usually conducted every year, which is also a factor causing stress because the syllabus is vast, and students find it extremely difficult to complete the syllabus and revise it effectively for the exam. If this is made half yearly, students can easily complete the syllabus, also in this way, they get a deeper knowledge of the subject, to increases time to cover the syllabus. Since this is a medical college, doctors often get busy and are oriented more towards clinics and hospitals. They don't get more time to concentrate on students and academics, so there is a requirement for non-clinical staff who can guide and mentor the students for their academic excellence.

- **Encourage Self-Reflection:** Provide opportunities for self-reflection on learning, allowing students to assess their strengths and areas of improvement. This promotes a sense of autonomy and control over their education, reducing stress.
- **Incorporating Stress Management into Coursework:** Include topics on stress management, resilience, and self-care in the curriculum. Teaching students how to recognize and manage stress academically prepares them for the demands of medical education.
- **Encourage Breaks During Study:** Faculty and advisors can suggest time management techniques that include breaks and downtime, such as the Pomodoro Technique, to prevent mental exhaustion and burnout and also ensure that students have time allocated in their schedules for relaxation and activities outside of academics. The integration of wellness and academic schedules helps students feel less overwhelmed.
- **Curriculum Restructuring:** To reduce academic stress among medical students, curriculum restructuring should streamline syllabi and incorporate interactive learning methods (Sreerama Reddy et al., 2007). Faculty should be trained in effective teaching strategies, including visual aids and active learning techniques (Alzahem et al., 2011). Stress management programs, such as mindfulness training and counseling services, can help students cope with anxiety (Yusoff et al., 2010). Peer mentorship and a fair teaching environment can boost student confidence and reduce feelings of inferiority (Suhail & Parveen, 2007; Alzahem et al., 2013).
- **Structured Study Materials:** Improving classroom conditions, providing structured study materials, and promoting work-life balance can enhance overall well-being and academic performance (Radcliffe & Lester, 2003; Dyrbye et al., 2010).

CONCLUSION

Academic stress among medical students arises from multiple factors, including curriculum overload, exam pressure, poor time management, inadequate resources, strained social and academic relationships, and lack of mental health support. Addressing these challenges requires a multifaceted approach, incorporating structured study techniques, flexible assessment methods, time management training, improved resource accessibility, and enhanced faculty-student support systems. Universities should implement student-centered learning strategies, promote work-life balance, and establish mental health programs to foster a more supportive academic environment. Universities play a crucial role in reducing academic stress by restructuring curricula, incorporating active learning methods, and ensuring a balanced workload for students. They should provide accessible mental health support, mentorship programs, and flexible assessment systems to promote a healthier learning environment. Additionally, universities must invest in updated resources, digital learning tools, and student welfare initiatives to enhance academic success and overall well-being.

Future Research Directions

- **Effectiveness of Stress-Reduction Interventions:** Future studies should evaluate the impact of various stress-management strategies, such as active learning methods, peer mentorship programs, and digital learning platforms, on reducing academic stress in medical education.
- **Longitudinal Impact on Students' Well-Being:** Research should focus on long-term studies to assess how stress-reduction interventions influence academic performance, mental health, and overall well-being over time.
- **Cross-Cultural Comparisons:** Comparative studies across different countries can help understand how institutional policies, cultural differences, and educational systems contribute to varying stress levels among medical students.

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