

EXPLORING STRESS FACTORS AMONG MEDICAL UNDERGRADUATE STUDENTS: A SURVEY ON ACADEMIC, ENVIRONMENTAL, PERSONAL, AND PSYCHOLOGICAL STRESS FACTORS IN STUDY POPULATION OF A TERTIARY CARE ACADEMIC INSTITUTION

Dr. Ankur Sharma ^{1*}, Dr. Nirupma Gupta ², Dr. Prajna Paramita Samanta ³,
Aditi Krishna ⁴, Aashna Mittal ⁵, Abhishek Soni ⁶ and Aditi Goyal ⁷

¹Department of Anatomy School of Medical Sciences & Research.

*Corresponding Author Email: sharma.ankur@sharda.ac.in

² Professor, Department of Anatomy School of Medical Sciences & Research.

³ Professor, Department of Anatomy, Kalinga Institute of Medical Sciences.

^{4, 5, 6, 7} MBBS Student Batch 2022, School of Medical Sciences & Research.

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Abstract

In the challenging realm of student life, students face a myriad of stressors, impacting their academic and personal lives. This prospective study explores stress factors among first-year MBBS students, employing a comprehensive questionnaire-based approach. The findings reveal a mean Perceived Stress Scale (PSS) score of 25.53 ± 5.55 , with academic factors being most common followed by personal factors. A comparison with other studies underscores variations in stress levels, emphasizing the influence of socio-cultural factors. Academic stressors, including fear of failure and high exam frequency, emerges prominently. Environmental stressors encompass home sickness and cultural differences, while personal factors involve maintaining mental, physical, and social balance. The study emphasizes on targeted interventions, such as counseling and faculty support, to address the diverse stressors faced by medical students. Through understanding and proactive measures, the aim is to cultivate a more compassionate and resilient academic environment.

Keywords: Medical Education, Undergraduate Medical Students, Stress.

INTRODUCTION

In today's competitive driven world, students feel a lot of stress. They worry about doing well in college and competing with others. Figuring out the future and dealing with money can be tough. It's important to support them and help them manage all these challenges. Striking a balance between academic goals and personal responsibilities demands effective time management and emotional strength. Educational institutions and support networks play pivotal roles, acting as guides through the complex challenges, nurturing a more harmonious and fulfilling academic experience. ^[1]

The medical students navigate an especially demanding path, grappling not only with intense training but also the profound impact of stress on their personal and professional lives. The consequences of unmanaged stress extend beyond academic realms, casting shadows on mental well-being and potentially leading to harmful paths like addiction. This stressful journey persists from undergraduate studies to clinical practice, with some teetering on the edge of burnout, risking long-term challenges. ^[2, 3]

This study aims to shed light on the factors contributing to stress among medical students, emphasizing the importance of preventive measures and strong support systems. Globally, untreated stress profoundly affects 10-20% of children and adolescents, manifesting as mental disorders.^[4] Foremost among these challenges is depression, a pervasive force that becomes a primary contributor to Disability Adjusted Life Years (DALY) in young lives.^[5] The toll of chronic stress extends beyond emotional struggles, encompassing issues like substance abuse, strained relationships, heightened anxiety, and even the threat of suicide. These concerning statistics underscore the urgent need for comprehensive mental health interventions tailored to address the unique struggles faced by young minds.^[6, 7]

In this intricate landscape, the study seeks to provide valuable insights, advocating for measures to proactively address stressors and establish robust support networks.

MATERIALS AND METHODS

The present study is a prospective questionnaire-based research initiative conducted among first-year MBBS students at the School of Medical Sciences and Research, Greater Noida. To facilitate data collection, a well-structured questionnaire was designed and distributed through Google Forms, reaching students via WhatsApp and email platforms. The questionnaire covered various aspects, including academic experiences, learning methodologies, support systems, and overall satisfaction with the educational environment. A total of 419 responses were obtained, providing a comprehensive dataset for analysis. The stressors were divided into Academic, Environmental, Personal, and Psychological Stressors. The perceived level of stress was classified as:

1. Never
2. Almost never
3. Some times
4. Often
5. Very often

The Perceived Stress Scale (PSS) was calculated by summing the scores of all the items in the scale that an individual has responded to. In the present study, the levels of stress were represented on a scale from 1 to 5 for each factor. The PSS score for an individual was obtained by adding up their responses across all the items they answered.

The study received ethical approval from the institutional committee.

RESULTS

The first-year professional students enrolled in the MBBS course responded, with a total of 419 responses. Among them, there were 176 males and 243 females. The responses were graded from 1 to 5 as per the perceived level of stress and its contributing factors. The results are shown in **Table 1** and **Table 2**.

Table 1: Factors Contributing to Stress Levels among Medical Undergraduate Students (Sample Population; n=419)

Category of Stressor	Factors	Level of Stress									
		1		2		3		4		5	
		n	%	n	%	n	%	n	%	n	%
Academic	How much stressed you feel from the vastness of the academic syllabus?	12	2.86	9	2.15	98	23.39	156	37.23	144	34.36
Academic	How much stressed do you feel from high frequency of examination?	8	1.91	35	8.35	141	33.65	136	32.46	99	23.57
Academic	How much stressed do you feel from fear of failure?	32	7.64	31	7.40	75	17.90	106	25.30	175	41.76
Academic	How much stressed do you feel from the teaching process in SMS&R?	18	4.30	65	15.51	179	42.72	94	22.43	63	15.04
Academic	How much stressed do you feel after receiving comments from teachers regarding academics /attendance?	34	8.11	45	10.74	133	31.74	127	30.31	80	19.09
Academic	How much stressed do you feel from the guilt of not performing better in academics?	13	3.10	20	4.77	74	17.66	124	29.59	188	44.89
Environmental	How much stressed are you because of home sickness?	94	22.43	91	21.72	108	25.77	64	15.27	62	14.82
Environmental	How much stressed do you feel from facing wide cultural differences?	201	38.19	106	20.05	50	9.54	30	5.69	32	6.53
Environmental	How much stressed do you feel from ambience of hostel/college?	93	22.15	93	22.15	120	28.64	48	11.46	65	15.60
Environmental	How much stressed do you feel from quality of food and water?	31	7.39	52	12.41	88	21.00	85	20.29	163	38.90
Environmental	How much stressed do you feel from behavior of seniors and classmates in SMS&R campus?	121	28.88	101	24.11	95	22.67	50	11.94	52	12.40
Environmental	How much stressed do you feel from pressure of adjustment with roommate?	177	42.29	69	16.47	74	17.66	36	8.59	63	14.99
Academic	How much stressed you are due to your communication skills?	122	29.12	106	25.30	88	21.00	61	14.56	42	9.02
Personal	How much stressed do you feel to maintain balance between mental, physical and social health?	28	6.68	61	14.56	126	30.07	99	23.63	105	25.06
Academic	How much stressed do you feel from high expectations of parents/peers regarding your performance?	43	10.26	61	14.56	102	24.34	95	22.67	118	28.18
Personal	How much stressed do you feel from concern regarding your physical appearance?	82	19.57	81	19.29	118	28.16	59	14.09	79	18.89
Personal	How much stressed do you feel from FOMO (Fear of Missing Out)?	77	18.38	99	23.63	101	24.11	62	14.86	80	19.02

Personal	How much stressed do you feel from financial burden on parents/guardians/siblings?	28	6.68	42	10.02	84	20.05	97	23.15	168	40.10
Psychological	How much stressed do you feel after entering into medical college?	22	5.25	51	12.17	128	30.55	117	27.92	101	23.11
Psychological	How much stressed do you feel from the impression of studying into private medical college?	32	7.64	37	8.78	88	21.00	105	24.80	157	37.76
Psychological	How much stressed do you feel from disturbed sleep cycle after arriving in SMS&R?	28	6.68	49	11.69	132	31.50	92	21.95	118	28.18
Psychological	How much stressed do you feel from your low self-esteem because of academic performance?	50	12.89	79	20.05	106	26.25	90	22.29	94	18.52
Environmental	How much stressed do you feel from investing time in friend-zone relationship?	174	41.53	77	18.38	80	19.14	38	9.02	50	11.94
Personal	How much stressed do you feel from guilt of using drugs/alcohol?	323	77.09	21	5.01	28	6.68	12	2.86	35	8.35
Environmental	How much stress do you feel about being passive smoker?	267	63.72	29	6.92	43	10.26	25	5.97	55	13.05

Table 2: Frequency Distribution of Stressors among Students (Sample Population; n=419)

Which among the various stressors, stresses you the most?	Academic		Environmental		Personal		Psychological stressors	
	n	%	n	%	n	%	n	%
	236	56.32	32	7.63	90	21.4	61	14.2

The present survey data reflects varying stress levels among students across different stressor categories. Academic stressors, particularly fear of failure and pressure from academic expectations, were found to be higher, impacting approximately one-third to over 40% of the students. Environmental stressors, such as cultural differences, hostel ambiance, and adjustment pressures, affected a considerable percentage of respondents, with cultural differences impacting nearly 40% of students. Personal stressors related to physical appearance, financial burdens, and fear of missing out affected around a quarter to nearly 30% of the participants. Psychological stressors, including disturbed sleep cycles and low self-esteem due to academic performance, affected approximately a quarter to over 30% of the students. Lastly, substance-related stressors like guilt over drug/alcohol use and passive smoking had impact on a significant majority i.e. half to nearly 80% of respondents.

DISCUSSION

The present study explores the perceived level of stress and its contributing factors among third-year medical students. The study encompasses various stressors grouped into academic, environmental, personal, and psychological categories. The mean Perceived Stress Scale (PSS) score of 25.53 ± 5.55 , with academic factors predominantly impacting students' life followed by personal stressors.

The findings of this study are compared with other research studies, providing valuable insights into the stress levels of medical students. The mean PSS score in the present study (25.53 ± 5.55) is higher than the score reported in a study conducted in Tamil Nadu by Sakthivel et al (17 ± 6.5)^[8] and lower than a study by Chowdhury et al conducted in Kolkata (29.58 ± 6.6).^[9] The current study doesn't show a significant gender-related stress difference. However, when compared to Gade et al's study in Nagpur, a notable gender-stress link emerges.^[7] The identification of academic and psychosocial stressors as the primary sources of stress among the students in this study is consistent with Gupta et al's findings in Kolkata,^[10] where 94% of students reported academic-related stressors. Similar results were reported by Chowdhury et al,^[9] Panchu et al,^[11] and Melaku et al,^[12] emphasizing the prevalence of academic stressors in medical education. The geographical location of a college might contribute to varying stress levels. In states where the pace of life is slower, stress may be lower compared to colleges in metropolitan areas with a faster pace. The environment and lifestyle of a region can impact students, influencing their stress levels. Factors such as noise, traffic, and the overall lifestyle pace can play a role in shaping the stress experiences of students, highlighting the importance of considering regional context when addressing stress in college settings.

CONCLUSION

The present study contributes to the growing body of research on stress among medical students. The comparison with other studies highlights the variability in stress levels and the importance of considering socio-cultural factors. The findings emphasize that academic stressors are the chief cause and hence need for targeted interventions, such as counseling and support from faculty to address the issues.

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