

Are Hostelites Better-off than Non-Hostelites - A Comparison of Stress Anxiety and Depression Amongst Undergraduate Medical Students in a Multiethnic Setting

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ABSTRACT

Medical education is an intense and challenging journey that often subjects students to high levels of stress, anxiety, and depression. Living environments play a vital role in shaping their psychological well-being, especially for those studying away from home. This study aimed to evaluate and compare the prevalence of stress, anxiety, and depression among hostelite and non-hostelite (day scholar) medical students at a private medical college in Mauritius. A cross-sectional, questionnaire-based survey was conducted among students from Semesters 1 to 9 using the Depression, Anxiety, and Stress Scale (DASS-21). Data were collected from both male and female participants residing in hostels and off-campus. Findings revealed that Stress, anxiety and depression were found to be higher in non-hostelites (53%, 68%, 41%) as compared to hostelites (50%, 62%, 34%). Levels of stress, anxiety and depression were found to be higher in non-hostelite Mauritian students (53%, 78%, 41%) as compared to their hostelite Indian (46%, 74%, 40%) and South African (46%, 77%, 38%) counterparts. Females (hostelites and non-hostelites) reported high levels of stress, anxiety and depression (59%, 78%,

47%) as compared to males (hostelites and non-hostelites) (47%, 68%, 40%). The findings underscore that medical students experience considerable psychological distress influenced by both living arrangements and gender. The study emphasizes the need for universities to develop targeted mental health support strategies tailored to the specific challenges faced by hostelites and non-hostelites, fostering a healthier academic environment conducive to both emotional well-being and professional growth.

Keywords: Hostelites, Non-Hostelites, Medical Students, Mental Health, DASS 21.

INTRODUCTION

Driven by passion and ambition, students often leave their home countries to enrol in medical universities around the world. Away from home, they often stay in hostels or university accommodations, where they must learn to manage their daily lives from cooking and budgeting to balancing chores and studies. Alongside the demanding medical curriculum, these students develop resilience, adaptability, and life skills that prepare them not only for their careers but also for life beyond the classroom [1]. Global medical education offers various

advantages such as access to advanced healthcare systems, exposure to diverse patient populations, and in some cases, more affordable or accessible entry requirements compared to home institutions. Living in hostels becomes a crucial part of their journey, offering not only a place to stay but also a community of fellow students from various cultures [2].

Pursuing a medical degree is one of the most demanding and life-changing journeys a student can undertake, often accompanied by intense academic pressure, long hours, and emotional exposure to patient suffering and death. These constant stressors can take a serious toll on students' mental health, making their living environment a crucial factor in emotional well-being [3].

Balancing rigorous academic schedules, language barriers, cultural differences, and life away from family can be challenging affecting physical as well as mental health. According to the World Health Organization, mental health is "a state of well-being" in which a person recognizes their own potential, can manage everyday stressors, works effectively and efficiently, and can contribute to their community. Highly demanding medical curriculum which requires the medical students to become proficient in knowledge, skills and attitude, to deal with professional changes, tends to put a psychological pressure on the students. Therefore, being overworked and sleep deprived, medical students are considered as a vulnerable group prone to mental illness. Stress, anxiety and depression are comparatively higher in medical students as compared to peers of the same age group in other courses [4]. The living situation, such as whether a student is a hostel resident or a day scholar, significantly affects the amount of social support they receive, which in turn can influence their mental health. Hostelites, who live on campus, typically have more access to peer support, while day scholars may experience isolation due to commuting. Trying to cope with academic, environmental changes and evolution to

medical school can be daunting leading to mental health issues which can have a negative impact on the student's ability to concentrate and focus causing lower academic and clinical performance and in future, hindering their ability to develop a rapport with the patients. In addition to academic pressures, students also face social, emotional, and family-related stressors that contribute to their mental health struggles. Worryingly, medical students are more likely to resort to unhealthy coping mechanisms like substance abuse and are at a greater risk of suicidal thoughts compared to their peers in other academic fields [5-13].

A 2016 systematic review published in JAMA reported that, on average, 27.2% of medical students deal with depression or depressive symptoms. Studies done globally in various countries have demonstrated similar results and highlighted the gravity of the health problem issues in medical students. While these issues are acknowledged, there is a lack of research that compares the mental health outcomes and social support structures of hostel residents with those of day scholars. This deficiency emphasizes the necessity for a more thorough investigation into how living conditions influence levels of stress, anxiety, and depression, particularly among medical students. Furthermore, it is essential to examine the impact of social support in mitigating these mental health difficulties to develop effective interventions.

MATERIALS & METHODS

The study was conducted at a private medical college in Mauritius. The medical school consists of students mainly from Mauritius, India and South Africa. 584 MBBS students from first year to fourth year (semester 1 to semester 9) were included in the study. Age of the participants was between 18-25 years. Participation in the study was voluntary. Prior to data collection, informed consent was obtained from all the participants, and they were explained about the purpose of

the study. Participants were divided into hostelites and non-hostelites. Analysis was also done to compare males and females and based on Ethnicity as Mauritians, South Africans and Indians for better reach. Data was collected using the DASS 21 Questionnaire (Depression Anxiety and Stress Scale). This scale was developed in 1995 by Lovibond, S.H. Lovibond, P.F. and equates to good validity and reliability. The DASS-21 questionnaire categorizes each condition into five subcategories, namely, normal, mild, moderate, severe and extremely severe. Permission was obtained from concerned lecturers, and the questionnaire was distributed in the classroom before or after the class activity. The participants were given 30 -40 minutes to fill up the questionnaire. The exercise was conducted during the teaching period. Data was categorically entered in excel

sheets for analysis. It was processed using SPSS-21 software. The mean scores for the responses from the entire sample on the items of the DASS-21 were calculated and organized into a table. Additionally, the severity of disturbance for each sub-scale (ranging from normal to extremely severe) was determined using frequency counts and percentage distribution.

By comparing the mental health outcomes and stress levels between hostelites and day scholars, this study aimed to provide insights into the role of living arrangements in the psychological well-being of students.

RESULT

Table 1: Comparison between hostelites and non-hostelites showed that stress, anxiety and depression were more predominant in non-hostelites (53%, 68%, 41%) as compared to hostelites (50%, 62%, 34%).

Variable	Hostelites	Non-Hostelite	Sig.
Stress			
Mild	17%	17%	<.001
Moderate	13%	17%	
Severe	7%	15%	
Extremely severe	2%	4%	
Anxiety			
Mild	24%	18%	<.001
Moderate	21%	15%	
Severe	11%	14%	
Extremely Severe	19%	31%	
Depression			
Mild	17%	14%	.007
Moderate	18%	27%	
Severe	10%	8%	
Extremely Severe	7%	12%	

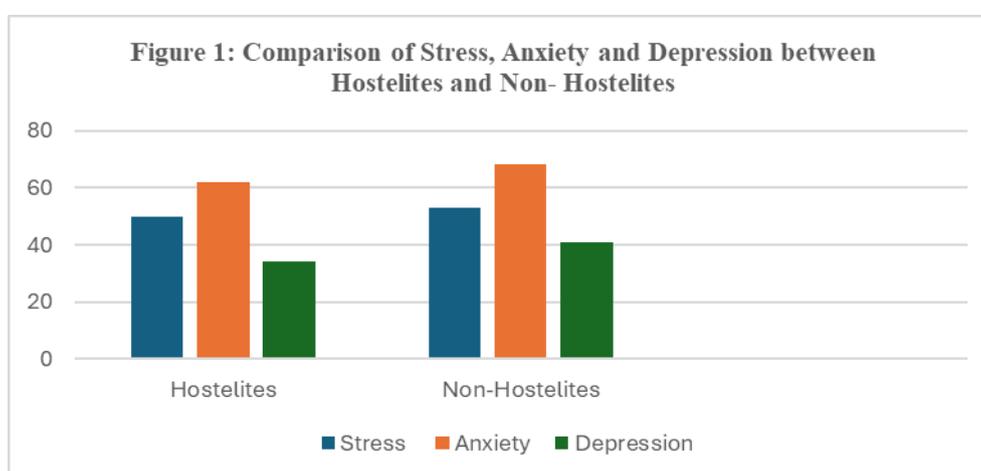


Table 2: The levels of stress, anxiety and depression were found to be higher in Mauritian students (53%, 78%, 41%) as compared to South African (46%, 77%, 38%) and Indian students (46%, 74%, 40%).

Table 2: Distribution of grades of stress anxiety and depression				
Variable	Nationality			Sig.
	Mauritian	South African	Indian	
Stress				
Mild	19%	12%	17%	.001
Moderate	19%	18%	13%	
Severe	18%	11%	8%	
Extremely severe	2%	5%	3%	
Anxiety				
Mild	19%	21%	23%	.012
Moderate	14%	18%	19%	
Severe	13%	18%	11%	
Extremely Severe	34%	21%	21%	
Depression				
Mild	12%	12%	17%	.019
Moderate	32%	23%	18%	
Severe	10%	4%	10%	
Extremely Severe	12%	11%	7%	

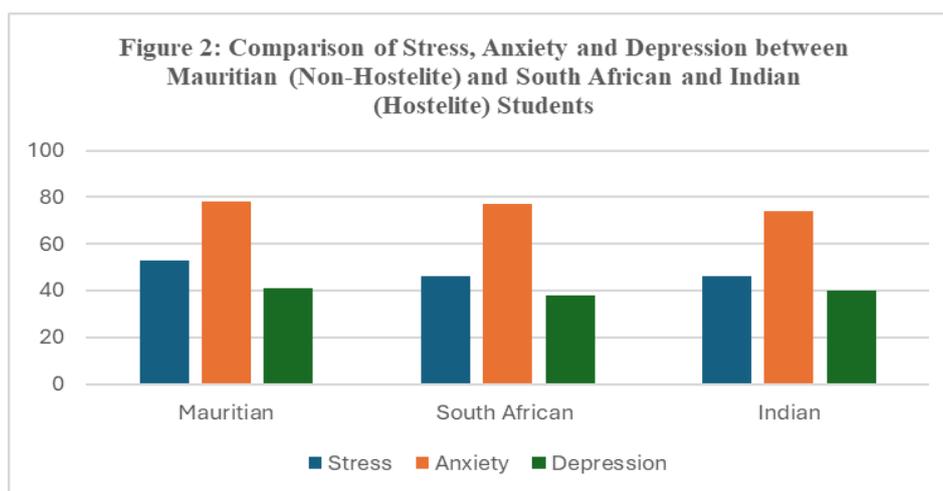
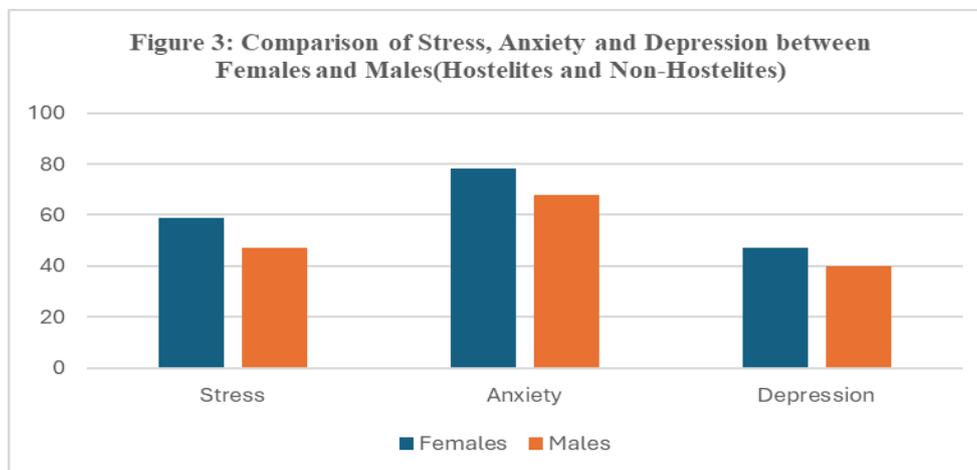


Table 3: Overall, it was found that the prevalence of stress, anxiety and depression was higher among female students (59%, 78%, 47%) (hostelites and non-hostelites) as compared to male students (47%, 68%, 40%) (hostelites and non-hostelites).

Table 3: Distribution of grades of stress anxiety and depression			
Variable	Gender		Sig.
	Males	Females	
Stress			
Mild	16%	18%	<.001
Moderate	13%	16%	
Severe	8%	12%	
Extremely severe	1%	4%	
Anxiety			
Mild	23%	21%	.006
Moderate	19%	18%	
Severe	10%	14%	

Extremely Severe	20%	25%	
Depression			
Mild	14%	17%	.071
Moderate	20%	21 %	
Severe	11%	8%	
Extremely Severe	6%	11%	



DISCUSSION

Stress, anxiety, and depression are commonly reported among medical students. However, the impact of these mental health challenges can vary significantly between students who live in hostels (hostelites) and those who live at home (non-hostelites). Some of the likely reasons for high levels of stress, anxiety and depression in our study maybe due to a change in the environment and cultural differences as most of the students studying in the medical college in Mauritius belong to other countries. Other social, economic, and personal factors like inability to cope with the vast syllabus, demanding curriculum, inefficient time management, peer pressure, high expectation from parents leading to a fall in academic performance, fear about future capabilities, pedagogical inadequacies and lack of help seeking behaviour maybe the likely contributing factors. A similar study highlighted students' three top concerns: academic performance, the pressure to succeed, and post-graduation plans leading to a deterioration in mental health [13].

The effect of stressors on an individual differs based on both the nature of the stressor and the personal traits of the

individual experiencing it. For medical students, the challenges of adjusting to a new environment, being separated from home, and the drive to achieve academically often result in increased anxiety and stress, making them susceptible to psychological challenges [19].

Social support is crucial in alleviating stress and fostering favourable mental health results. It includes emotional, practical, and informational backing, as well as access to assistance, empathy, and resources from one's social network. The type of living situation, such as residing in a hostel or being a commuter student, can greatly affect the amount of social support a student receives, which may subsequently influence their mental health. Students living in hostels typically have better access to peer support, while commuter students may experience feelings of isolation due to their travel routines [23,24]

Our study shows that levels of stress, anxiety and depression are predominantly higher in non-hostelites as compared to hostelites. These results are contradictory to the study done in Nepal which shows that hostelites are more susceptible to stress. On the other hand, it compares with the study done by Shendarkar [3] who found that

independent living might be an important stress causing factor. The non-hostelites are predominantly the Mauritian students living at home. Parental pressure, inability to cope with a different kind of syllabus, managing things on their own like, cooking, cleaning, and commuting long distances to be in time for early classes leading to fatigue might result in stress, anxiety and depression. It has been suggested that depression and anxiety increase as students go on to their advanced medical training. The only exception to this trend occurs in the first year where the prevalence of depression and anxiety is greater than in any other year. This could be due to a number of exclusive stress variables which the first year students have to face, regarding their progress from the high school to a medical university, undue stress of studies, unfamiliarity with academic procedures and tough schedules, managing a new time table with their personal lives, the process of making new friends, and increased expectations from family and faculty [22, 23].

This study's findings are consistent with those of El-Gilany et al. [11], who showed that students studying in their home country were more anxious and stressed than their expatriate counterparts. Several studies conducted in various state-run medical colleges in the Kingdom of Saudi Arabia have reported a high prevalence of depression, anxiety, and stress, where the students are predominantly Saudi nationals. In our study the Mauritian students exhibited comparatively higher stress, anxiety and depression as compared to their Indian and South African counterparts. It is assumed that students studying in their home countries with their parents or guardians have a good support system where they are well supervised in terms of sustenance, education, and a better sense of security, which is important for psychological well-being; however, this might not be the case. Environmental problems, less time for recreational activities, and academic workload were considered major stressors. In contrast, a

comparative study between students in Saudi Arabia and Egypt in their respective home countries showed that Egyptian students had lower levels of stress, anxiety, and depression. [19]. The study by Moores and Popadiuk [20] showed that despite challenges, international students tend to do well. They proposed four basic aspects that help international students adapt: connecting with others, maintaining a foundation (preserving identity, support from family and friends at home, etc.), embracing the process, and discovering strengths within. The studies conducted by Hunley [21] focusses specifically on the mental health of US students studying abroad. Though the students experience more psychological distress and loneliness in a foreign country but positive coping mechanisms and active engagement and participation in their education helped to alleviate the distress.

Regarding gender differences, this study reported that the prevalence of stress, anxiety and depression was higher in female students as compared to male students. It might be since female students tend to be more competitive, concerned about working hard, trying to secure higher marks and lesser physical activity. Due to physiological differences such as genetic vulnerability, hormonal levels, differential sensitivity, females and males respond to stress differently [14,15]. Females tend to exhibit a greater degree of affection, compassion and sensitivity to others needs which can affect their behaviour towards life's experiences which might make them more vulnerable to Stress and pain as compared to males [16, 17].

For hostelites, living in a hostel is not just about accommodation, it becomes a lifestyle, a support system, and often a second home where peer support plays a vital role in coping with daily stress. In contrast, non-hostelites may benefit from the comfort and stability of home life but may also feel socially disconnected from campus life and peer networks. Given these differences, the mental well-being of both hostelites and non-hostelites must be taken

seriously, as each group faces unique challenges that can impact their overall health and academic performance.

This study highlights the significant prevalence of stress, anxiety, and depression among medical students, with non-hostelites reporting notably higher levels of psychological distress. However, these findings also emphasize that mental health challenges affect medical students universally, regardless of their residential status. The lack of adequate mental health support, as reported in numerous international studies, further underscores the necessity for systemic changes in medical education.

CONCLUSION

Medical schools must prioritize the mental well-being of all students by integrating mental health monitoring and wellness programs into the curriculum from the outset. Such programs should be inclusive and designed to provide continuous support for every student, irrespective of whether they live in campus-hostels or off-campus housing. Promoting open, stigma-free conversations about mental health, coupled with access to confidential counselling and peer support, can create a safer, more supportive environment.

By addressing these needs, medical institutions can not only improve the well-being of students but also foster better academic performance and long-term professional development. The implementation of comprehensive mental health strategies is essential to equipping future healthcare professionals with the resilience required to navigate the demands of their rigorous training and subsequent careers.

Declaration by Authors

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