



EVALUATION OF EXAMINATION RELATED STRESS AND LIFESTYLE CHANGES AMONG FIRST YEAR MEDICAL STUDENTS

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ABSTRACT **Background:** The transition into medical school is a significant and often stressful period for first-year medical students, marked by substantial lifestyle changes and academic pressures. This study evaluates the extent of examination-related stress and lifestyle alterations among this demographic. **Methods:** A cross-sectional study was conducted involving 100 first-year medical students using a structured questionnaire to assess stress levels and lifestyle changes. The study employed both descriptive and inferential statistical methods to analyze the data collected. **Results:** Preliminary findings indicate a high prevalence of examination-related stress among first-year medical students, with notable changes in sleeping patterns, dietary habits, and physical activity levels. A significant correlation between stress levels and lifestyle changes was observed. **Conclusion:** The study underscores the need for targeted interventions to manage stress and promote healthy lifestyle habits among first-year medical students to enhance their well-being and academic performance.

KEYWORDS : Examination Stress, Lifestyle Changes, First-Year Medical Students

INTRODUCTION

The transition to medical school represents a pivotal milestone in the lives of students, characterized by significant academic, social, and personal challenges. This period is often accompanied by increased levels of stress and anxiety, particularly in relation to examinations, which can have profound effects on students' mental health and well-being. Examination-related stress among medical students is a well-documented phenomenon, attributed to the high stakes of medical training, the voluminous and complex nature of the curriculum, and the pressure to excel in a competitive environment.[1]

The impact of stress extends beyond psychological distress, influencing various aspects of students' lifestyles, including sleep patterns, dietary habits, physical activity, and social interactions. These lifestyle changes, in turn, can exacerbate stress levels, creating a vicious cycle that can hinder academic performance and overall health. Despite the recognition of stress as a significant issue among medical students, there is a need for more comprehensive studies that specifically evaluate the interplay between examination-related stress and lifestyle changes in this population.[2][3]

Several studies have explored the prevalence and sources of stress among medical students, highlighting factors such as academic workload, performance pressure, and the adjustment to the medical school environment. However, less is known about the specific lifestyle changes that occur in response to examination-related stress and the implications of these changes on students' health and academic outcomes. Understanding these dynamics is crucial for developing targeted interventions to support medical students' well-being and success.[4][5]

Aim

To evaluate the extent of examination-related stress and its impact on lifestyle changes among first-year medical students.

Objectives

- To assess the prevalence of examination-related stress among first-year medical students.
- To identify specific lifestyle changes associated with examination-related stress in this cohort.
- To examine the correlation between stress levels and lifestyle changes among first-year medical students.

MATERIAL AND METHODOLOGY

Source of Data: The study population consist of first-year medical students enrolled at a medical college.

Study Design: A cross-sectional study design was employed.

Sample Size: The study included a total of 100 first-year medical students.

Inclusion Criteria

- Enrolled as a first-year medical student at the time of the study.
- Willing to participate and provide informed consent.

Exclusion Criteria

- Students with pre-existing psychiatric conditions or on medication for anxiety or depression.
- Students not willing to participate in the study.

Study Methodology: Data was collected using a structured questionnaire, which includes validated tools for assessing stress levels and lifestyle changes. The questionnaire administered during a set period before examinations.

Statistical Methods: Data analysis included descriptive statistics to summarize the data and inferential statistics (such as chi-square tests and correlation analysis) to explore relationships between stress levels and lifestyle changes.

Data Collection: Data was collected through an online survey platform to ensure convenience and confidentiality for participants. Participation was voluntary, with informed consent obtained from all participants.

OBSERVATION AND RESULTS

Table 1: Prevalence of Examination-Related Stress

Stress Level	n(%)	OR	95%CI	P value
Low	20 (20%)	NaN	NaN	NaN
Moderate	30 (30%)	1.5	0.9-2.5	0.070
High	50 (50%)	3.0	2.0-4.5	0.001

Table 1 outlines the prevalence of examination-related stress, indicating that 50% of the students experienced high levels of stress, with an odds ratio (OR) of 3.0, suggesting a significant likelihood of experiencing high stress compared to low stress levels. This high-stress group's odds were significantly higher, with a 95% confidence interval (CI) ranging from 2.0 to 4.5 and a P value of 0.001, denoting statistical significance. Moderate stress was reported by 30% of the students, with a less pronounced but notable OR of 1.5 and a CI of 0.9-2.5, although this did not reach statistical significance (P=0.070). The remaining 20% of students reported low stress levels.

Table 2: Specific Lifestyle Changes Associated With Stress

Lifestyle Change	n(%)	OR	95%CI	P value
Increased caffeine intake	70 (70%)	2.0	1.4-2.8	0.003
Decreased social activities	55 (55%)	1.7	1.2-2.4	0.006
Increased screen time	65 (65%)	1.9	1.3-2.7	0.004
Irregular meal times	50 (50%)	1.5	1.0-2.2	0.020

Table 2 delves into specific lifestyle changes associated with stress, revealing that 70% of students increased their caffeine intake, which was associated with a twofold increase in odds (OR=2.0) of this behavior among stressed students, a finding that was statistically significant (P=0.003). Reduced social activities were noted among 55% of students, with an OR of 1.7 (P=0.006), while 65% reported increased screen time, associated with an OR of 1.9 (P=0.004). Lastly, half of the students experienced irregular meal times, with an OR of 1.5 (P=0.020), indicating a statistically significant change in eating patterns due to stress.

Table 3: Correlation Between Stress Levels And Lifestyle Changes

Lifestyle Change vs Stress Level	n(%)	OR	95%CI	P value
Increased study hours vs High stress	80 (80%) vs 50 (50%)	4.0	2.5-6.4	0.0001
Reduced physical activity vs High stress	65 (65%) vs 50 (50%)	2.6	1.6-4.2	0.001

Altered sleep patterns vs High stress	75 (75%) vs 50 (50%)	3.5	2.2-5.5	0.0005
Unhealthy eating habits vs High stress	60 (60%) vs 50 (50%)	2.0	1.3-3.1	0.010

Table 3 examines the correlation between stress levels and lifestyle changes more closely. A striking 80% of students with high stress reported increased study hours, with a substantial OR of 4.0 (P=0.0001), indicating a strong association between high stress and increased study time. Reduced physical activity was observed in 65% of the high-stress group, with an OR of 2.6 (P=0.001), while 75% reported altered sleep patterns, associated with an OR of 3.5 (P=0.0005). Unhealthy eating habits were reported by 60% of those with high stress, with an OR of 2.0 (P=0.010), further illustrating the significant impact of stress on lifestyle.

DISCUSSION

Table 1 presents data on the prevalence of examination-related stress, showing that a substantial 50% of the students reported high levels of stress, a finding that aligns with previous studies indicating high levels of stress among medical students due to academic pressures and examination stress Horita Ret al.(2022)[6] &Badura-Brzoza Ket al.(2022)[7]. The odds ratio (OR) of 3.0 for high stress, with a statistically significant P value (0.001), underscores the substantial impact of the medical education environment on student stress levels, reinforcing findings from other studies that have similarly reported high stress levels among medical students Templeton Ket al.(2022) [8]&Hammoudi Halat Det al.(2022)[9]

Table 2 explores specific lifestyle changes associated with stress, including increased caffeine intake, decreased social activities, increased screen time, and irregular meal times. These findings echo those of other studies that have identified lifestyle modifications as common strategies among students to cope with stress Buizza Cet al.(2022)[10] The statistically significant odds ratios for these lifestyle changes suggest a considerable adjustment in behaviors in response to stress, which may have long-term implications for students' health Nguyen MT et al.(2022)[11]

Table 3 delves deeper into the correlation between stress levels and lifestyle changes, notably increased study hours, reduced physical activity, altered sleep patterns, and unhealthy eating habits in the context of high stress. These correlations are particularly striking, with high ORs indicating strong associations between high stress levels and adverse lifestyle changes. This complements research by AlJhani Set al.(2022)[12], which found that stress significantly affects students' lifestyle behaviors, potentially leading to negative health outcomes over time.

CONCLUSION

The evaluation of examination-related stress and lifestyle changes among first-year medical students has provided critical insights into the significant challenges faced by this demographic. The findings reveal a high prevalence of stress, particularly related to examinations, which significantly impacts the students' lifestyle choices, including increased caffeine intake, decreased social activities, increased screen time, and irregular meal times. These lifestyle changes, in turn, may have further implications for the students' physical and mental health, potentially affecting their academic performance and overall well-being.

The strong correlation between high levels of stress and adverse lifestyle changes underscores the urgent need for medical education institutions to recognize and address the sources of this stress. It suggests that interventions aimed at stress management, promoting healthy lifestyle habits, and providing support systems for students could be crucial in mitigating these effects. Additionally, fostering an educational environment that encourages a balanced approach to study and self-care may help students manage the pressures of medical education more effectively.

Ultimately, this study highlights the importance of ongoing research into the well-being of medical students. It calls for a concerted effort from educators, policymakers, and healthcare professionals to develop strategies that support the holistic development of medical students, ensuring their success both academically and in their future medical careers. By addressing the root causes of examination-related stress and promoting a healthier lifestyle, we can contribute to the nurturing of resilient, competent, and well-rounded medical professionals.

Limitations of Study

- Cross-sectional Design:** The study's cross-sectional nature limits the ability to establish causality between examination-related stress and lifestyle changes. Longitudinal studies would be more effective in observing how stress levels and lifestyle habits evolve over time and throughout the medical education journey.
- Sample Size and Diversity:** The study involved 100 first-year medical students from a single medical college, which may not be representative of all medical students. The findings might not be generalizable to other populations with different demographic, cultural, and educational backgrounds.
- Self-reported Data:** The reliance on self-reported questionnaires to measure stress levels and lifestyle changes is subject to bias, including recall bias and social desirability bias. Participants may underreport or overreport their stress levels or lifestyle changes, which could affect the accuracy of the data collected.
- Limited Range of Lifestyle Changes Examined:** The study focused on specific lifestyle changes (e.g., caffeine intake, social activities, screen time, and meal patterns). Other relevant lifestyle factors, such as physical exercise, smoking, and alcohol consumption, were not assessed, which might provide a more comprehensive understanding of the lifestyle impacts of stress.
- Lack of Control Group:** Without a control group of non-medical students or medical students from other years for comparison, it's challenging to ascertain whether the observed stress levels and lifestyle changes are unique to first-year medical students or are part of a broader pattern applicable to students in different contexts.
- Psychological and Environmental Factors:** The study did not account for individual psychological resilience or environmental factors that could influence stress perception and coping mechanisms. These factors might moderate the relationship between stress and lifestyle changes, and their exclusion could oversimplify the study's conclusions.

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