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PREVALENCE AND SOURCES OF STRESS AMONG MEDICAL STUDENTS

Studying medical science is a demanding task, often leading to exam anxiety among medical students. In education, a high level of exam-related anxiety is often experienced by students. Young minds often bear the brunt of exam stress, affecting mental health. Medical science is a demanding field involving studying, exploring, learning, and continuous assessments. In contrast to other professions, medical students are subject to copious amounts of information to memorize and rigorous testing, which contributes to the students' psychological state. Exam stress isn't confined to the exam day; it encompasses the lead-up, the exam itself, and the aftermath. Recognizing its sources and effects is the first step to effective coping. Feeling stressed is a natural response to exams, and each person experiences it differently. The aim of this study is to review scientific literature in order to analyze the exam anxiety in students.

Search methods. We performed a comprehensive database search in PubMed, Scopus, Embase, and Web of Science up to 2025, using the search string with the combination of following keywords: Exam stress, medical students, exam, studying, education, anxiety. No limitation was implemented on our search results. This paper examines the crisis of student mental health from extreme exam pressure. Understanding the root causes of exam stress can help manage it better and recognizing the signs and implementing coping strategies is essential for a well-rounded approach to success. Identifying the major factors causing anxiety could help the universities to modify their curriculum, teaching strategies, and learning resources that will reduce anxiety among medical students and improve their performance.

Keywords: Exam stress, medical students, exam, studying, education, anxiety.

Problem statement. Medical science is a demanding field involving studying, exploring, learning, and continuous assessments. In contrast to other professions, medical students are subject to copious amounts of information to memorize and rigorous testing, which contributes to the students' psychological state. Studying medical science is a demanding task, often leading to exam anxiety among medical students. Medical education is known to be stressful and demanding, is perceived as stressful. Medical students face significant psychological distress due to academic, financial, and social pressures [5, 6, 3].

Stress is conceptualized as a dynamic process resulting from an individual's appraisal of external demands and the available coping resources [12]. High levels of stress can have negative impacts on the cognition and comprehension of medical students. They can suppress and inhibit learning and in turn

affect academic performance. Stress could lead to anxiety, depression, suicidal thoughts, interpersonal conflicts, sleep disturbances, poor academic and clinical performance, and substance abuse and alcohol.

Students have always been a population vulnerable to stressful situations due to their pursuit of professional achievements in a competitive learning environment [1]. The medical school curriculum requires students to grasp a variety of theoretical, clinical, and patient-related knowledge and skills, leading to a demanding lifestyle that is detrimental to one's physical and emotional health [8, 11].

Analysis of recent research and publications. Studying the recent literature of the last five years, we understood that the findings indicated that exams affected stress and they were affected by stress.

The published educational literature indicates conflicting opinions about the association of Grade Point



Average with anxiety levels. Many studies showed an association between low GPA and high-test anxiety [2].

João Moreira de Sousa et al. found a prevalence of 21.5 % for anxiety symptoms and 3.7 % for depressive symptoms Amongst Portuguese Medical Students. Being a medical student was more significantly associated with symptoms of anxiety ($p = 0.034$) compared with other students. Depressive symptoms were slightly associated with poor academic performance ($p < 0.01$). A percentage of 59.6 % of students with anxiety symptoms and 46.4 % of students with depressive symptoms did not seek medical or psychological care at that time [9].

Study Rajapuram N. et al. (2020) found that over half of the students surveyed experienced severe distress, a rate 20 % higher than that identified in a national cohort from 2007 [10].

The students at the University of Paris in 3 specialties (medicine, pharmacy, and dentistry) show high levels of 7-day anxiety (55 %) and depressive symptoms (23 %), the 12-month prevalence of MDE (26 %), and suicidal thoughts (19 %) [4].

The pooled global prevalence of unspecified, mild, moderate, severe, and extremely severe anxiety symptoms healthcare students is 41 %, 15 %, 22 %, 10 %, and 14 %, respectively. The pooled global prevalence of unspecified, mild, moderate, severe, and extremely severe stress symptoms is 36 %, 15 %, 32 %, 11 %, and 4 % (result 112 studies with 42,331 healthcare students across 43 countries) [7]. Exam stress is common, but it doesn't have to take over life.

Task statement. The aim of this study is to review scientific literature in order to analyze the exam anxiety in students.

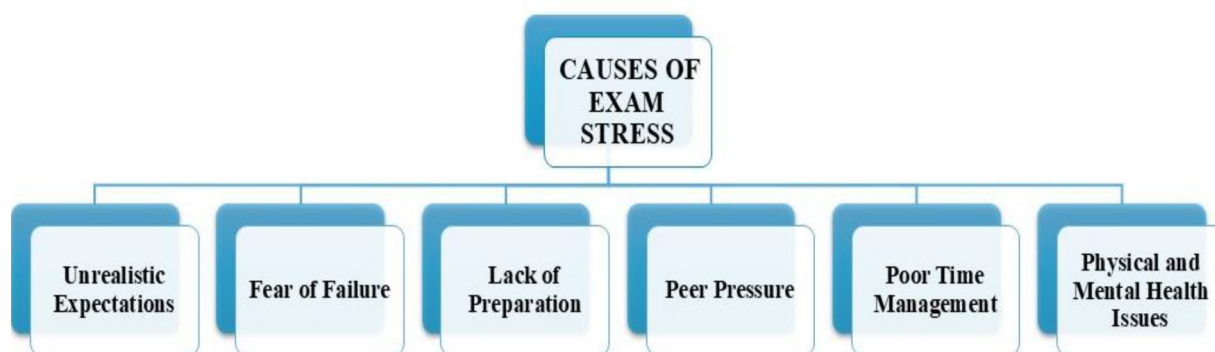


Fig. 1. Causes of exam stress

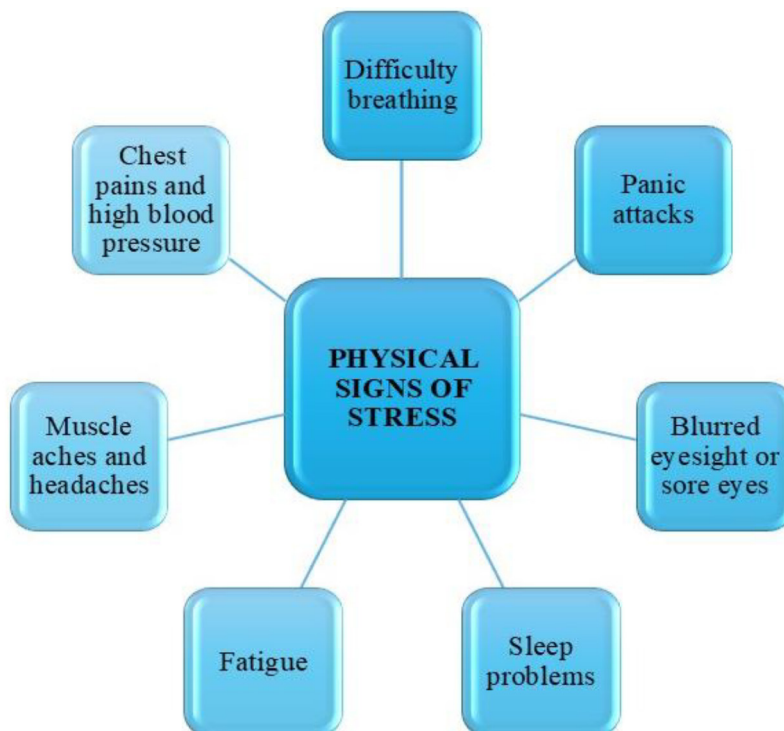


Fig. 2. Physical signs of stress

Outline of the main material of the study. Let's explore the causes of exam stress and effective strategies to combat it.

Causes of exam anxiety

The causes of exam anxiety and academic achievement are multifaceted, involving a set of cognitive stimulants that generate a negative reaction towards anticipated adverse events, affecting both

mind and body. There are many causes of Exam Stress and exam anxiety in students. We each react in our own way to different situations. Common areas of anxiety before an exam are presented in Figure 1.

Signs you might be stressed

Physical signs of stress are the body's natural response to pressure, often caused by the release of hormones like adrenaline and cortisol. During the

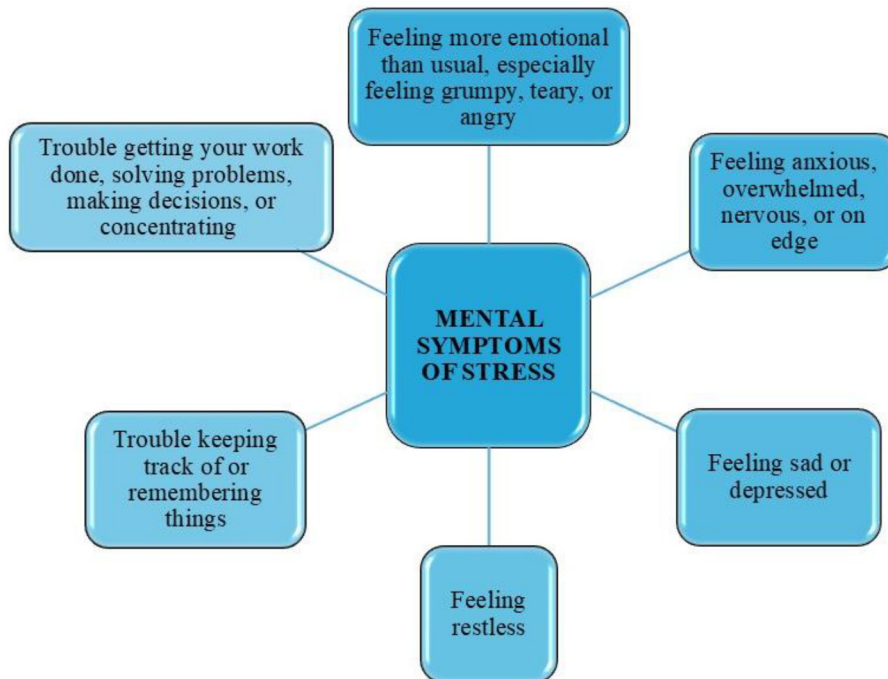


Fig. 3. Mental symptoms of stress

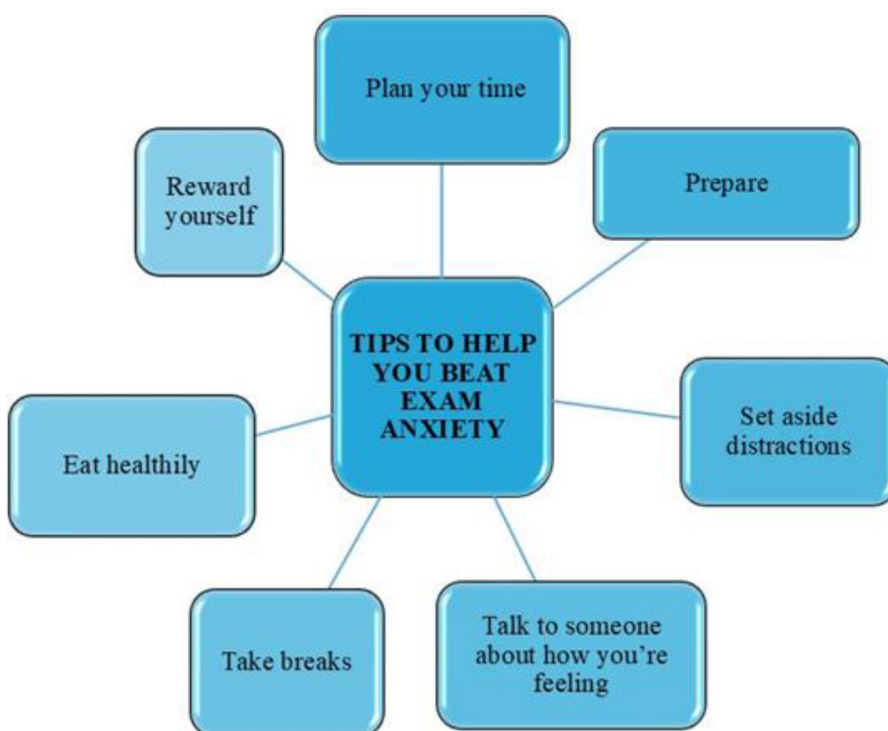


Fig. 4. Top tips to manage exam anxiety

stress response, your body gets increasing your heart rate, breathing rate, and blood pressure (fig. 2).

Stressful situations can also cause or exacerbate mental health conditions, most commonly anxiety and depression, which require access to health care. Behavioral Symptoms of stress: withdrawing socially or avoiding certain people/places, loss of interest in hobbies or things that once brought joy, changes in sleep patterns (e.g., insomnia) or eating habits, using negative coping mechanisms, like drinking or smoking more (fig. 3).

Top tips to manage exam anxiety (fig.4)

Prepare as best you can. Being well-prepared goes a long way to help you feel confident about your study material, which can ultimately keep stress in check.

Getting Adequate Sleep. Adequate sleep is crucial for treating exam anxiety and academic achievement.

Ensuring enough sleep before an exam is essential as anxiety can lead to sacrificing sleep for study, which increases anxiety, tires the nervous system, and decreases concentration and memory. It is important to ensure adequate sleep and a healthy breakfast rich in proteins and vitamins before heading to the exam.

Take care of your body for a healthy mind. When planning your study schedule, prioritize fundamental self-care – this means allocating time first for things like healthy meals, consistent exercise, and social, enjoyable or relaxing activities.

Conclusions. Exams are just one chapter in your life – not the whole story. With the right preparation, mindset, and strategies, manage exam stress. Failure to adequately deal with stress can affect students' lives, but effective coping strategies have shown positive outcomes in reducing the negative effects of stress.

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**Бойцанюк С. І., Денефіль О. В. ПОШИРЕНІСТЬ ТА ДЖЕРЕЛА СТРЕСУ
СЕРЕД СТУДЕНТІВ-МЕДИКІВ**

Вивчення медичних наук – це складне завдання, яке часто призводить до екзаменаційної тривоги серед студентів-медиків. В освіті студенти часто відчують високий рівень екзаменаційної тривоги. Молоді уми несуть на собі основний тягар екзаменаційного стресу, що впливає на психічне здоров'я. Медична наука – це вимоглива галузь, що включає навчання, дослідження, навчання та постійне оцінювання. На відміну від інших професій, студенти-медики повинні запам'ятовувати величезну кількість інформації та проходити ретельне тестування, що сприяє їхньому психологічному стану. Екзаменаційний стрес не обмежується лише днем іспиту; він охоплює підготовку, сам іспит та його наслідки. Розпізнавання його джерел та наслідків – перший крок до ефективного подолання стресу. Відчуття стресу – це природна реакція на іспити, і кожна людина переживає його по-різному. Метою цього дослідження є огляд наукової літератури для аналізу екзаменаційної тривоги у студентів. Методи пошуку. Методи пошуку. Ми виконали комплексний пошук у базах даних PubMed, Scopus, Embase та Web of Science до 2025 року, використовуючи рядок пошуку з комбінацією таких ключових слів: екзаменаційний стрес, студенти-медики, іспит, навчання, освіта, тривога. На результати пошуку не було накладено жодних обмежень. У цій статті розглядається криза психічного здоров'я студентів, спричинена надзвичайним екзаменаційним тиском. Розуміння першопричин екзаменаційного стресу може допомогти краще ним керувати, а розпізнавання ознак та впровадження стратегій подолання є важливим для всебічного підходу до успіху. Визначення основних факторів, що викликають тривогу, може допомогти університетам змінити свої навчальні програми, стратегії викладання та навчальні ресурси, що зменшить тривожність серед студентів-медиків та покращить їхню успішність.

Ключові слова: екзаменаційний стрес, студенти-медики, іспит, навчання, освіта, тривога.

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