



Adverse Effects of Exam Stress on the Health of University Students: An Update

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Abstract

Exam stress is an ongoing worldwide problem that is more common among university students. It affects student's physical and mental health directly or indirectly. This article reveals the nature of exam-induced stress and its impact on student life. The high academic expectations and the continuous pressure to perform various levels of examinations can lead to heightened anxiety levels, which often disturb day-to-day routine life and contribute to multiple health problems such as sleep disturbances, fatigue, headaches, and gastrointestinal issues. These health problems again disturb cognitive functioning and academic performance. As we understand, stress is a prominent factor in the development of anxiety disorders and depression. The article also reveals the role of individual factors -personality traits, coping mechanisms, and social support- in moderating the effects of exam stress to a minimum extent. For welfare of the student community, all institutions of higher academic learning across the world must implement reliable stress management programs. It should include the following parameters such as: time management, mind relaxation techniques, etc. that can be incorporated into daily routines. Overall, this article reveals an in-depth nature of examination stress and the appropriate methods to eliminate stress related issues for effective physical and mental health of students and academic success.

Keywords: Stress; Student Life; Anxiety

Introduction

Stress has become a defining feature of modern times. Due to the fast-paced changes in daily life, people experience stress in various forms and intensity levels. Stress has been described as a strong emotional response to either internal or external changes. Stress encompasses physiological, emotional, and personal reactions to stimuli, occurring when an individual struggles to cope with overwhelming challenges and tasks. This leads to physical and psychological tension. Many professionals view stress as a modern societal illness significantly affecting communication, behavior, and performance. It is often seen as a physiological response to internal and external pressures, a reaction to perceived threats, and a state of heightened fear and anxiety, potentially resulting in depression and other mental health issues [1]. According

to a study by Redhwan, Sami, Karim, Chan, and Zaleha, stressors or causes of stress do not directly lead to stress. Instead, stress arises from an individual's perception and emotional response to those stressors [2].

Stress in university students

University students encounter highly challenging situations throughout their time at the university [1]. Academic stress can be understood as the result of a student's interaction with environmental pressures, their perception and management of academic challenges, and their psychological or physiological reactions to these stressors. This issue is widespread across different countries, cultures, and ethnicities, and should be considered within its specific context. Students often strive for academic success to gain

respect, bring pride to their families, and achieve social mobility, leading to intense academic pressures. This excessive demand can make academic life burdensome and unenjoyable, as the focus shifts primarily to performing well in exams. Stress, whether physical, emotional, or psychological, can disturb both mental and physical well-being, potentially contributing to health issues [3].

Academic stress in students

Physical and chemical factors that contribute to stress include trauma, infections, toxins, illnesses, and various injuries. Emotional triggers of stress are diverse and plentiful. In some cases, a low level of stress can be advantageous, as it can motivate individuals to concentrate, perform well, and approach tasks with energy. However, when students experience high levels of stress, particularly around exams, it can negatively impact both their mental health and lead to physical symptoms [3]. Academic stress arises from academic challenges and excessive workload, often leading to negative emotional responses. It refers to a student's mental state influenced by ongoing social and self-imposed pressures within the school environment, draining their psychological resources [4].

Common sources of academic stress include exams, presentations, projects, and overwhelming academic demands. Personal stressors may involve fear, interpersonal conflicts, high parental expectations, and limited coping mechanisms. Many research studies have demonstrated the increasingly common occurrence of academic stress among university students [4]. The prevalence of academic stress can reach up to 84% among university students in Pakistan [5], while in Western countries like Canada [6], it is reported to be as low as 30%. Research indicates that medical students, in particular, experience higher levels of academic stress and depression [4].

Consequences of stress on students

Stress refers to a state of worry or anxiety and is a normal part of life. It becomes problematic when it overwhelms individuals, leaving them feeling isolated and unable to cope. Moderate stress about exams can be beneficial, as it motivates students to work hard and achieve good results. However, when exam-related anxiety reaches excessive levels, it hampers students' ability to perform to their full potential, leading to increased distress. This

heightened anxiety is often linked to the fear of failure and can have long-lasting negative effects on a student's self-esteem [3].

Common signs of stress in students before an exam include reduced appetite and sleep, food cravings, and sweaty palms. While these symptoms are typically not severe, they can indicate a high level of stress. Research indicates that stress is a major contributor to poor student performance, with some students reporting that their minds go blank during exams [1]. Examination anxiety has been shown to have significant cognitive effects, including impairments in memory and difficulties with recalling information [3].

Symptoms of stress in students during exams can manifest in various ways. Some students may experience their minds going blank, while others might ask numerous questions from the examiner, take excessive time to write their answers or request to defer the exam due to feeling unwell. These behaviors are signs of stress that can be observed during examinations. The literature also highlights additional stress indicators such as anxiety, distractedness, erratic or slow work pace, procrastination, feelings of helplessness about the future, depression from past failures, and avoidance of assignments. Physiological symptoms may include increased respiration and heart rate, heightened muscle tension, elevated blood pressure, and gastric discomfort [1].

Signs of stress before and during exams can include irregular sleep patterns, fatigue, feelings of sadness or isolation, widespread aches, stomach discomfort, and restlessness. Students may also experience difficulty recalling information they have studied, and panic when faced with questions they cannot answer, leading to a blank mind. These symptoms are commonly observed among students experiencing stress [3].

A study by Alduryawish found that 66% of students deliberately skipped breakfast, a concerning statistic. The study also highlighted unhealthy dietary habits, including frequent snacking on fried foods and limited intake of fruits and water. Only 39.5% of students ate three meals a day, and 58% reported worsening eating habits during exams. An inverse relationship was observed between increasing stress levels and poorer eating habits ($p = 0.007$), underscoring the urgent need for intervention. The adverse impact

of stress on eating behavior is well-documented. The interplay between these factors creates a combined effect that negatively impacts students' overall health and academic performance. This is supported by substantial evidence from other research studies. Skipping meals and consuming unhealthy diets are frequently observed behaviors among university students, especially during stressful periods such as exams. This study reveals a strong correlation between elevated Patient Assessment of Constipation Symptoms (PAC-SYM) scores and increasing stress levels ($p < 0.001$), highlighting that stress directly affects gastric function. Additionally, unhealthy dietary practices negatively impact gastric health and bowel function. The study recorded a mean PAC-SYM score of 10.4 ± 8.1 among students experiencing high stress, indicating severe constipation symptoms. These results suggest a significant link between perceived stress and gastrointestinal issues [4].

According to Banerjee, *et al.* [7], approximately 25,000 students aged 18 to 20 take their own lives each year during the exam period, from March to June. The intense stress associated with exams leads to reduced social interactions and a shift towards passive and active leisure activities, which may exacerbate the impact of this stress [3]. In this context, healthy food, breathing exercises, reliable physical activity, social interactions, etc., may relieve students from stress to a certain extent. Students can also need their teachers for counseling or any other kind of support [8].

Conclusion

Stress is a significant and growing issue in modern society, particularly among university students who face considerable academic pressures. While moderate stress can be motivating, excessive stress impairs performance, mental health, and physical well-being. Symptoms of stress, such as anxiety, poor dietary habits, and physical discomfort, are common among students, especially during exams. These symptoms can adversely affect academic performance and overall health. Evidence shows that high-stress levels correlate with unhealthy eating behaviors and gastrointestinal issues, highlighting the need for effective stress management strategies. Addressing academic stress is crucial to improving student health and academic outcomes, necessitating targeted interventions and support systems.

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