

COMMUNICATION BRIEF

Effects of stress on university students

Efectos del estrés en estudiantes universitarios

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Cite as: Tovar Cardozo G. Effects of stress on university students. Salud Integral y Comunitaria 2024; 2:73. <https://doi.org/10.62486/sic202473>

Submitted: 01-12-2023

Revised: 19-02-2024

Accepted: 06-04-2024

Published: 07-04-2024

ABSTRACT

Stress in college students represents a growing concern, given its wide-ranging impact on emotional, psychological, physical, and academic well-being. This article highlights the critical importance of adopting comprehensive approaches to student support, ranging from counseling services and stress management workshops to physical activity and healthy nutrition programs. It highlights the need to strengthen academic skills through effective study techniques and time management to counteract the negative impacts of stress on academic performance. The analysis reveals how stress can induce a negative feedback loop that impairs academic performance and increases stress, highlighting the need for early interventions and supportive resources. In addition, the vital role of the university community in fostering an environment that promotes overall well-being through open communication and mutual support is emphasized. Collaboration among faculty, staff, and students is essential to developing a culture of caring that prioritizes student wellness as fundamental to educational and personal success, making a significant difference in mitigating the effects of stress.

Keywords: Student Wellness; Coping Strategies; Academic Achievement; Mental Health; College Support.

RESUMEN

El estrés en estudiantes universitarios representa una preocupación creciente, dadas sus amplias repercusiones en el bienestar emocional, psicológico, físico y académico. Este artículo destaca la importancia crítica de adoptar enfoques integrales para el apoyo estudiantil, abarcando desde servicios de consejería y talleres de manejo del estrés hasta programas de actividad física y nutrición saludable. Se subraya la necesidad de fortalecer las habilidades académicas mediante técnicas de estudio efectivas y gestión del tiempo, para contrarrestar los impactos negativos del estrés en el rendimiento académico. El análisis revela cómo el estrés puede inducir un ciclo de retroalimentación negativa que deteriora el rendimiento académico y aumenta el estrés, resaltando la necesidad de intervenciones tempranas y recursos de apoyo. Además, se enfatiza el rol vital de la comunidad universitaria en fomentar un ambiente que promueva el bienestar general, mediante la comunicación abierta y el apoyo mutuo. La colaboración entre profesores, personal administrativo y estudiantes es esencial para desarrollar una cultura de cuidado que priorice el bienestar estudiantil como fundamental para el éxito educativo y personal, marcando una diferencia significativa en la mitigación de los efectos del estrés.

Palabras clave: Bienestar Estudiantil; Estrategias de Afrontamiento; Rendimiento Académico; Salud Mental; Apoyo Universitario.

INTRODUCTION

Stress is a universal and multifaceted phenomenon that has accompanied mankind throughout its history,

evolving from a purely biological response to a complex psychosocial challenge in the contemporary world. Its origin goes back to the most basic "fight or flight" response present in humans and in the animal kingdom, initially designed to protect the organism from immediate physical threats. This physiological response, orchestrated by the sympathetic nervous system, prepares the body to face or flee perceived dangers by releasing a cascade of stress hormones, such as cortisol and adrenaline, that increase heart rate, blood pressure and energy availability.

⁽¹⁾ In the modern environment, stress triggers have evolved from tangible physical dangers to more abstract psychological and social challenges, but the underlying physiological response remains strikingly similar.⁽²⁾

The impact of stress on people's overall well-being is profound and ranges from physical effects to psychological and behavioral consequences.⁽³⁾ Physically, chronic stress has been linked to a multitude of health problems, including heart disease, hypertension, diabetes, immune system disorders, and obesity. Psychologically, stress can precipitate or exacerbate conditions such as anxiety, depression, sleep disorders, and concentration problems.⁽⁴⁾ Behaviorally, stressed individuals may experience changes in their eating and sleeping habits, substance abuse, and a decrease in decision-making effectiveness and problem-solving skills.^(5,6) These interconnected effects illustrate how stress can infiltrate and destabilize the most fundamental aspects of daily life, affecting health, interpersonal relationships, job performance, and overall quality of life.

The complexity of stress lies in its dual nature: it is both an innate physiological reaction and a subjective experience influenced by individual perception, life experiences, coping resources, and social and cultural context. This duality explains why what is stressful for one person may be stimulating or insignificant for another. The perception of stress, therefore, is a crucial component in its impact on the individual, mediating between external stressors and the organism's internal response.⁽⁷⁾

In the university setting, stress acquires a particularly relevant dimension. Universities, as indicated by Eslava et al,⁽⁸⁾ are unique environments that bring together individuals at a critical stage of their personal and professional development, subjecting them to a wide variety of academic, social and personal challenges.⁽⁹⁾ University students face the pressures of meeting high academic expectations, managing newly acquired independence, navigating complex interpersonal relationships and, for many, planning for their future careers. These factors, combined with potential financial concerns and adjusting to a new environment, can become significant sources of stress.⁽¹⁰⁾

While stress in the college context can be a motivator that drives students to achieve their academic and personal goals, it also has the potential to become a significant obstacle to their success and well-being.⁽¹¹⁾ Effective stress management therefore becomes a crucial skill for college students, requiring the development of resilient coping strategies, the seeking of social and emotional support, and the utilization of available institutional resources for stress management.⁽¹²⁾ The response of universities to this challenge is equally important, with the need to provide a supportive environment that promotes not only academic excellence, but also the physical and mental well-being of students.⁽¹³⁾

Stress is a constant in the human experience,⁽¹⁴⁾ the impact of which extends across all facets of life, including the university setting. Understanding its origin, manifestations, and effects is critical to developing effective management strategies that enable individuals and communities to thrive despite their challenges.⁽¹⁵⁾ In the context of higher education, this implies a collective commitment to address student wellness holistically, recognizing stress not only as an individual challenge, but as a community concern that requires a coordinated and empathetic response.

METHODS

The present manuscript, following the protocols of Gómez⁽¹⁶⁾ and Vázquez and Martínez,⁽¹⁷⁾ adopts a documentary review methodology with a qualitative approach, focused on the compilation and analysis of a wide range of academic-scientific documents related to stress in university students. This research is based on a documentary and descriptive method, where, as suggested by Álvarez et al.,⁽¹⁾ research reports, theses, scientific articles, books, consultancies and studies have been reviewed to extract relevant information on the causes and effects of stress in the university context. The methodology follows a process structured in several key phases, in accordance with the protocol established by Gómez et al.⁽¹⁸⁾

The initial search phase involved the use of academic platforms and university databases to identify relevant materials that offer discussions and reflections on university stress. This search made it possible to collect a significant corpus of documents that address the topic from various perspectives.

Subsequently, in the classification and systematization phase, an analysis matrix was developed to organize and classify these findings. This process resulted in the identification of two main categories of analysis: the causes of university stress and its effects on students. These categories served as the basis for the results and conclusions phase, where connections and interactions were established between the different components analyzed, thus allowing the development of an informed and critical perspective on the impact of stress on university students.

Following the guidance of Vera⁽¹⁹⁾ and complemented by the contributions of Montenegro,⁽²⁰⁾ this manuscript

is proposed as a detailed, selective and critical study of stress in the university setting. The aim is to contribute new perspectives and understandings that can inform effective stress prevention and management strategies in university students, thus contributing to the existing body of knowledge on this significant and currently relevant topic.

RESULTS AND DISCUSSION

Emotional and psychological effects

The emotional and psychological effects of stress represent one of the most impacted areas in the lives of college students, manifesting through a diverse range of symptoms and disorders that can seriously compromise their well-being and academic performance.⁽²¹⁾ Chronic stress can not only trigger significant emotional problems, such as profound anxiety and depressive episodes, but can also exacerbate irritability and generate a persistent sense of being overwhelmed by daily demands.⁽²²⁾ These negative emotional states are of particular concern in the academic environment, as they can directly undermine students' ability to concentrate on their assignments, absorb and retain new information, and maintain an optimal level of motivation toward their studies and career goals.⁽²³⁾

In addition, stress can disrupt students' emotional balance, affecting their self-esteem and self-confidence, which can lead to a cycle of negativity and hopelessness that makes it even more difficult to recover and effectively manage pressures.⁽²⁴⁾ The feeling of being constantly overwhelmed can lead to a disinterest in active participation within the university community, decreasing involvement in extracurricular, social, and academic activities that are fundamental to an enriching and balanced university experience.

This emotional and psychological impact of stress can also have consequences on students' interpersonal relationships,⁽²⁵⁾ limiting their ability to establish and maintain healthy relationships with peers, faculty, and university staff. Irritability and anxiety can lead to unnecessary conflict or social withdrawal, reducing the opportunities for emotional support and stress relief that these relationships can provide.⁽²⁶⁾

It is crucial, therefore, that educational institutions recognize the importance of addressing the emotional and psychological effects of stress on college students. Implementing support programs, as indicated by Noroña *et al*,⁽²⁷⁾ such as psychological counseling services, stress management workshops, and relaxation and meditation spaces, can be instrumental in helping students develop effective coping strategies. In addition, fostering a culture of mutual care and support on campus can create a more welcoming and less stressful environment, promoting the emotional and psychological well-being of the entire university community.⁽²⁸⁾

Physical effects

The physical effects of chronic stress in college students manifest themselves in a wide and varied manner, negatively impacting almost every system of the human body. This impact goes beyond the immediate symptoms, profoundly affecting students' overall health and well-being. In addition to causing or exacerbating headaches, digestive problems, insomnia and fatigue, prolonged stress can significantly weaken the immune system, making students more vulnerable to a wide range of infections and illnesses. This increased vulnerability can translate into increased academic absences due to illness, which can create a vicious cycle of stress as students try to make up missed material and meet academic obligations.⁽²⁹⁾

In addition, chronic stress can have adverse cardiovascular effects, including increased blood pressure and the risk of developing long-term heart disease. It can also contribute to eating and metabolic disorders, such as obesity or, conversely, unhealthy weight loss resulting from changes in appetite and eating habits. Stress can alter sleep patterns, leading to poor quality sleep or disorders such as insomnia, which in turn affects concentration, learning and mood.

Chronic muscle tension is another physical effect of stress, which can cause persistent pain in the back, neck and shoulders, affecting posture and increasing the risk of injury. In addition, stress can aggravate dermatological conditions such as acne, psoriasis and eczema, affecting not only physical health but also the student's self-esteem and body image.⁽³⁰⁾

It is imperative that educational institutions implement wellness programs that address the physical effects of stress. This could include the promotion of regular physical activities such as sports and relaxation exercises, workshops on healthy nutrition and sleep management, as well as accessible on-campus health services that can provide timely assessments and treatment. Fostering an academic environment that prioritizes physical health and overall well-being can help students better manage stress and minimize its detrimental effects, allowing them to reach their full academic and personal potential.^(31,32,33)

Academic effects

The academic effects of stress on college students constitute a significant issue that impacts not only their immediate performance, but also their long-term educational trajectory.⁽³⁴⁾ When stress impedes concentration and information retention, the learning process is directly compromised, which can trigger a chain of negative

consequences for academic performance. Affected students may experience difficulties in understanding and assimilating new knowledge, which is often reflected in lower grades and in the quality of assignments and projects submitted.^(35,36)

This decline in performance can lead to significant delays in assignment submissions and test preparation, further increasing the level of stress and anxiety in a feedback loop that can be difficult to break. In extreme cases, the cumulative impact of stress on academic performance can lead to college dropout, depriving students of the opportunity to complete their education and achieve their career goals.⁽³⁷⁾

Stress also exerts a noticeable effect on cognitive skills essential for academic success, such as decision making and time planning. Stressed students may find it challenging to prioritize tasks and manage their schedules effectively, resulting in poor time management and ineffective study techniques. The inability to establish and follow a consistent study plan can lead to last-minute study sessions, which are less effective and contribute to impaired physical and mental well-being.⁽³⁸⁾

In addition, stress can affect students' ability to actively participate in academic settings, such as class discussions and group activities. Anxiety generated by the pressure to perform well may cause some students to avoid these valuable learning opportunities, limiting their participation and engagement with course content and peers.⁽³⁹⁾

It is crucial that educational institutions recognize and address the effects of stress on academic performance by implementing student support programs.⁽⁴⁰⁾ This may include academic and psychological counseling services, workshops on study skills and time management, and safe spaces where students can express their concerns and seek help. By fostering a supportive and understanding environment, universities can help mitigate the negative effects of stress and promote a healthier and more productive academic environment for all students.

CONCLUSIONS

Accumulating evidence on the effects of stress on college students highlights the critical need for comprehensive support strategies to be adopted by educational institutions. These strategies should be holistic, encompassing not only emotional and psychological well-being through counseling services and stress management workshops, but also actively promoting physical health through physical activity and healthy nutrition programs. In addition, it is vital to offer resources that strengthen students' academic skills, such as effective study skills and time management, to mitigate the adverse impacts of stress on their academic performance. Implementing an approach that addresses all of these areas can significantly improve students' well-being and academic success.

Stress within the university environment can generate a negative feedback loop, where emotional and psychological stress deteriorates academic performance, in turn increasing stress levels and perpetuating this vicious cycle. This cycle can have severe consequences, including the possibility of college dropout if not adequately intervened. Therefore, it is imperative that universities recognize this destructive cycle and provide early interventions and support resources that allow students to effectively manage their stress before it escalates.

In addition, the role of the university community in identifying and managing stress among students is critical. Creating an environment that promotes overall well-being, through open communication, mutual support among students, and the provision of mental and physical support resources, can have a significant positive impact. Collaboration among faculty, staff, and students is key to developing a culture of caring that places student wellness as an essential pillar of educational and personal success. This collective approach to wellness can make a difference in preventing and mitigating the negative effects of stress on the university community.

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FINANCING

There is no funding for this work.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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