

A Comparative Study in the Level of Stress Between the Students of Sports Science and Pharmacy

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Abstract

This research examines the perceived stress levels of students in Sports Science and Pharmacy at Delhi Pharmaceutical Sciences and Research University. The study involved 100 students, with 50 participants from each department, aged 19 to 25. The stress levels were measured using a questionnaire created by the International Stress Management Association (ISMA), consisting of 25 Yes/No questions. Contrary to the initial hypothesis, the results showed no major difference in stress between the two groups. Both sets of students identified academic pressures and concerns about their future as key stressors. The study further emphasized that life events and external situations also influence students' stress levels, highlighting the importance of effective coping strategies and supportive parental relationships. The findings suggest that institutions, parents, and counselors should focus on strategies such as problem-solving training and building healthy family relationships to reduce academic stress and improve well-being. Additionally, tailored workshops and interventions could provide valuable support in managing stress effectively, leading to better academic health.

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Introduction

Stress significantly impacts both psychological and physical health, often increasing the likelihood of chronic diseases such as rheumatoid arthritis, heart disease, and certain cancers, along with mental health challenges like anxiety, depression, eating disorders, and substance abuse. Stress affects not only health but also academic and career outcomes, as it can disrupt performance and persistence among college students.

This research aims to deepen the understanding of stress among university students, who face academic, social, and personal challenges. Universities prepare students to meet the demands of the global workforce and contribute to innovation, but this preparation also introduces stress. Stress is described as a condition that triggers negative emotions and thoughts. Different individuals react to stress in varied ways. Some students see educational challenges as opportunities to learn and grow, while others feel overwhelmed, leading to helplessness and inadequacy. According to Whitman (1985), stress can affect learning by either enhancing competence or causing a sense of failure.

Stress triggers physiological responses, releasing hormones like adrenaline and cortisol, which accelerate heart rate, slow digestion, and redirect blood flow to muscles, preparing the body to confront challenges. However, prolonged stress can damage mental and physical health. For instance, emotional stress from relationships, financial concerns, or living situations can lead to physical health problems, and existing health conditions may intensify stress. Stress is subjective, influenced by individual experiences, personality, and environmental factors. It is an inevitable part of life, arising from constantly evolving situations that require adaptation. Researchers from psychology, sociology, and medicine have long studied this complex phenomenon.

Stress occurs when people perceive an imbalance between the demands placed on them and their ability to respond effectively. This response depends on several factors, including the extent of the demands, personal characteristics, available coping strategies, and social support. Stress responses are activated when individuals feel threatened,

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leading to anxiety. In academic settings, students face multiple pressures related to their aspirations, academic goals, and expectations from family and society. Effective coping mechanisms are essential for students to manage these demands and reduce the impact of stress on their well-being.

The Nature of Stress and Coping

Research involving both Indian and international students shows that adjustment problems among university students often stem from stress and insufficient coping mechanisms. Students with poor coping skills may struggle with academic and personal adjustment, highlighting the importance of strategies that reduce or modify stressful conditions. Coping strategies play a vital role in helping students adapt to stress, and the development of these strategies is critical for maintaining mental well-being.

Technological and scientific progress has made individuals more sensitive and critical, contributing to stress. Stress is now commonly used to describe any pressure that requires a response, often resulting in strain. As noted by Lazarus (1968, 1984), stress arises when individuals perceive excessive demands that disrupt physiological, social, or psychological systems. Cognitive appraisal, or the evaluation of stressful situations, determines how individuals respond to stress. Levi (1972) suggested that stress could contribute to disease under certain conditions.

The inability to respond effectively to stress can have serious consequences, including exhaustion of personal and social resources. As Scot and Howard (1970) observed, stress occurs when usual coping mechanisms fail, and the consequences of not adapting become severe. If individuals cannot restore balance, their energy is consumed by attempts to manage the disturbance.

Research also indicates that genetic factors may influence stress responses. Children with parents who have psychiatric disorders may have a higher risk of developing similar problems. Although personality traits are not entirely inherited, there is some evidence that genetics play a role in shaping personality. Stress can lead to

various health problems, including headaches, fatigue, emotional outbursts, and increased dependence on substances like alcohol or tobacco.

Stress During Adolescence

Adolescence is a period of rapid change, making it a particularly stressful time for both teenagers and parents. Stress can arise from both biological changes and social interactions within families, peer groups, schools, and society. Academic stress, as described by Torabi and Perera (2006), occurs when students feel overwhelmed by educational demands. D’Zurilla and Sheedy (1991) also noted that higher education introduces unique challenges that can exceed students’ ability to cope, potentially leading to emotional and psychological difficulties.

When students cannot effectively manage academic stress, they may experience negative outcomes, including poor mental health. Researchers such as Arthur (1998) and MacGeorge et al. (2005) found that inadequate coping strategies could result in anxiety and depression. Stressful life events, such as time pressures or interpersonal conflicts, can further exacerbate stress levels, increasing the risk of poor academic performance and perpetuating a cycle of stress and maladaptive coping.

Lazarus and Folkman (1984) highlighted the dual role of the social environment as both a source of stress and a provider of support. Students’ interactions with peers, roommates, faculty, and family members influence their stress levels. In new environments, peer pressure can be a significant stressor, especially when students feel pressured to conform to group norms that conflict with their personal beliefs.

Research Methodology

This study, titled "Comparison of Stress Levels Between Students of Sports Science and Pharmacy," aims to compare stress perceptions between these two student

groups. The hypothesis suggests that there would be a notable difference in stress levels between the two groups.

The sample for the study included 100 students—50 from Sports Science and 50 from Pharmacy—enrolled at Delhi Pharmaceutical Sciences and Research University. All participants were between 19 and 25 years old. The study focused solely on stress as the variable of interest.

A questionnaire developed by the ISMA, consisting of 25 Yes/No questions, was used to measure stress levels. The survey was distributed via email to students in both departments, and responses were analyzed using SPSS software. A T-test was applied to determine whether the two groups experienced different levels of stress.

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Data Collection and Analysis

The study collected data from 100 students, evenly divided between the Sports Science and Pharmacy departments. Students, aged between 19 and 25, were enrolled at Delhi Pharmaceutical Sciences and Research University. The stress levels of participants were measured using a questionnaire created by the International Stress Management Association (ISMA). This survey contained 25 Yes/No items, designed to capture students' stress levels. Participants were asked to fill out the questionnaires, and the data was collected through emails and analyzed using SPSS statistical software.

Descriptive Statistics

The survey yielded responses from 50 students in each discipline. The statistical comparison between the two groups—Sports Science and Pharmacy—was conducted using a T-test to determine if there was any significant difference in stress levels. The table below presents the descriptive statistics of stress levels across both disciplines.

Table 4.1: Descriptive Statistics of Stress Levels

Group	N	Mean	Standard Deviation	t-value
Sports Science	50	12.38	4.06	0.819
Pharmacy	50	13.08	4.48	0.819

The mean stress score for students in Sports Science was 12.38, with a standard deviation of 4.06. Pharmacy students had a slightly higher mean score of 13.08, with a standard deviation of 4.48. However, the T-test value was found to be 0.819, which is lower than the critical value of 1.98 at 98 degrees of freedom (100 participants - 2). Additionally, the significance value (p-value) of 0.435 exceeds 0.05, indicating that the difference in stress levels between the two groups is not statistically significant.

Graphical Representation of Results

Figure 4.1: Graphical Representation of Mean Stress Levels

(A bar graph showing the mean stress scores—12.38 for Sports Science and 13.08 for Pharmacy students.)



Interpretation of Results

The findings from the data analysis demonstrate that no significant difference exists in stress levels between students from Sports Science and Pharmacy. Although the mean score for Pharmacy students was slightly higher, the T-test confirmed that the difference was not statistically meaningful. This indicates that both groups of students experience similar levels of stress despite studying in different academic disciplines.

The hypothesis that physical activity might correlate with lower stress levels was also tested. Contrary to expectations, the results showed no significant link between physical activity and reduced stress among students. Regardless of their academic field, students identified academic pressure and concerns about future career prospects as their primary sources of stress.

Discussion

The study highlights several critical findings. First, the results challenge the assumption that students in physically active fields, such as Sports Science, experience

lower stress levels than those in more academically demanding fields like Pharmacy. Both groups reported stress stemming from academic workloads, future uncertainties, and social pressures, showing that these stressors are universal among students.

Another significant insight is the role of life events and interpersonal relationships in shaping students' stress experiences. Effective coping strategies and parental involvement emerged as essential factors in managing academic stress. Students with stronger support systems from parents, teachers, and peers tend to handle stress more effectively. Schools and universities should emphasize the development of problem-solving skills and foster positive student-parent relationships.

Implications for Educational Institutions and Counselors

Educational institutions can use the findings of this study to design interventions that address students' stress levels. By offering workshops tailored to students' needs, institutions can equip them with the tools to manage stress better. Schools can also organize regular counseling sessions, including group and career counseling, to support students. Educators play a crucial role in guiding students toward effective problem-solving strategies, helping them replace emotion-focused coping with more constructive approaches.

Parents also have a pivotal role in students' stress management. Studies show that positive parental attachment serves as a protective factor, reducing the likelihood of mental health issues. Parents can provide emotional stability during stressful periods, helping students maintain a balanced outlook on academic challenges.

Conclusion

This research aimed to compare stress levels between students of Sports Science and Pharmacy, with the hypothesis that there would be a significant difference in stress levels between the two groups. However, the results did not support this hypothesis, revealing that students in both fields experience similar stress levels. The findings suggest that academic stress is not limited to specific disciplines; instead, it affects

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students across the board, driven by academic pressure, future career concerns, and social factors.

The study underscores the importance of developing effective coping strategies and building support networks to help students manage stress. Educational institutions should focus on providing problem-solving training and fostering healthy relationships between students and parents. Workshops, counseling sessions, and other interventions can play a crucial role in enhancing students' well-being and academic performance.

This concludes the full paraphrased content of the original document, including all tables, results, and analysis. Let me know if you need further assistance or additional modifications.

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