



An Empirical Correlational Study Of Academic Stress & Depression Among Undergraduate Students

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Abstract- Academic stress can be defined as the tension and psychological pressure caused by academic-related tasks, which include examinations, pressure from parents and teachers, and competition with peers. Academic stress has increasingly become a psychological concern among undergraduate students around the world, especially during the transitional period of university life. This study was conducted to investigate the relationship between academic stress and depression, and also to examine the significant difference in academic stress and depression in the context of the sex variable among undergraduate students. A total of 100 participants were selected using convenience and snowball sampling methods. The research study used the Perceived Academic Stress Scale to measure academic stress, while the Beck Depression Inventory was used to measure depression. Data analysis was done using descriptive statistics, and the relationship between variables was examined using Pearson's correlation. The results suggested that there was a non-significant and weak negative relationship between academic stress and depression. Moreover, the results showed no significant difference in academic stress and depression in the context of the sex variable (male and female). These findings suggest that there is no significant relationship between academic stress and depression, and that sex does not play a significant role in influencing these two variables in the present sample.

Keywords: academic stress, correlational study, depression, undergraduate students.

I. Introduction

Mental health issues have become a serious public health concern globally, especially among youth pursuing higher education. Most young adults experience personal development, intellectual growth, and independence during the university period; however, this is also a period where they may experience mental health challenges. Academic stress has become one of the most disturbing psychological challenges among undergraduate students. This is due to its association with depression. Policymakers and researchers have expressed concern that academic stress levels have been rising among undergraduate students and are significantly affecting their academic, emotional, and physical well-being. This issue has become global, affecting students across diverse social, economic, and cultural contexts. Academic stress can be defined as the tension and psychological pressure caused by academic-related tasks, which include examinations, pressure from parents and teachers, and competition with peers (Xu & Chen, 2010). It is different from general life stress as it is specifically linked to academic performance and educational settings, making it particularly evident in undergraduate students who are in a transitional period between adolescence and adulthood. Students at this stage are expected to take greater responsibility for their lives and actions, adapt to new living and social arrangements, and often begin living away from home while exploring their personal identities. In a student's life, the transition from secondary education to tertiary education (university) is considered a crucial developmental milestone. Undergraduate students face numerous changes, as they are required to adjust to a new academic system that emphasizes independent learning, critical thinking, and consistent performance under pressure. Many students relocate, separate from their families, take on financial responsibilities, and are exposed to unfamiliar social and cultural norms during this transition. Academic stress can be intensified by these changes, especially when students lack effective coping strategies or sufficient institutional support. When students are continuously exposed to academic stress, it can negatively affect their concentration, motivation, academic achievement, and overall mental health (Misra & McKean, 2000).



II. Review Of Literature

Avila-Carrasco, Lorena, et al. "Anxiety, depression, and academic stress among medical students during the COVID-19 pandemic." *Frontiers in Psychology* 13 (2023): The research study aimed to examine the occurrence of academic stress, depression, and anxiety, which resulted in the expression of somatic symptoms and the coping strategies linked to the COVID-19 pandemic. A cross-sectional study with 728 medical students from year 1 to year 5 was conducted. A questionnaire was purposely designed to examine academic stress associated with the pandemic and was administered electronically. A validated scale, the Goldberg Anxiety and Depression Scale, was used, while academic stress was measured using SISCO-II. Both are psychometric tools with established validity and reliability, enhancing construct validity and the reliability of the findings. Prevalence rates were determined using descriptive statistics, and inferential statistical analyses were used to examine the relationship between psychological symptoms, academic stress levels, and demographic variables such as gender. The results showed high prevalence rates, with 81.3% of students reporting depressive symptoms and 67.9% reporting anxiety symptoms. On a gender-based comparison, female students had higher anxiety levels (73.3%) and depression (87.1%) compared to male students, who reported 60.4% anxiety and 73% depression. Additionally, 92% of students reported that their academic performance was negatively affected by the pandemic due to poor concentration, lack of motivation, and increased exposure to stressors. However, being a cross-sectional study limited causal inference and the focus only on medical students restricts the generalizability of the findings to other university populations.

Zheng, K., Chen, Z., & Yu, L. "The Relationship Between Academic Stress and Depressive Symptoms in Middle School Students: A Network Analysis Model." *BMC Psychology* 13, 1145 (2025): The objective of this study was to analyze the relationship between academic stress and depressive symptoms among middle school students using a cross-sectional design. The study emphasized the practical implications for school-based mental health interventions and provided a detailed analysis of academic stress and depressive symptoms. Standardized self-report questionnaires were used to measure academic stress and depression. Descriptive statistics were applied to assess overall levels of academic stress and depression among middle school students. The findings indicated a strong relationship between academic stress and depression. The study also suggested that a theoretical framework based on a systematic model of academic stress and depressive symptoms could further improve understanding, with a focus on symptom networks. However, reliance on self-reported data may introduce response bias, and the focus on middle school students limits the generalizability of the findings to other student populations (Zheng, Chen, & Yu, 2025).

III. Research Methodology

Research Problem

Academic stress is widely considered a normal part of a student's life; however, when it becomes excessive and chronic, it may lead to adverse psychological effects. Existing research indicates a significant positive correlation between academic stress and depression among undergraduate students. Nevertheless, the nature of this relationship may vary depending on gender, coping strategies, support systems, and the academic environment of the student. Despite the growing awareness of student mental health issues, there remains a gap in local empirical research specifically focused on how academic stress impacts depression among undergraduate students. One key concern is that many students continue to suffer silently with their struggles, while institutions or universities may lack adequate data to develop targeted mental health resilience programmes. Additionally, since the researcher collected data from Indian undergraduate students, a language barrier posed a challenge, as it affected effective communication and mutual understanding between the researcher and participants. Moreover, the researcher also faced resistance from some individuals who were not willing to participate in the study, which made the data collection process more difficult.

Research Objective

1. To investigate the relationship between academic stress and depression among undergraduate students.
2. To investigate the significant difference of academic stress and depression in the context of the gender among undergraduate students.



Research Question

1. Is there a correlation between academic stress and depression?
2. Is there a significant difference in academic stress and depression in the context of the gender variable among undergraduate students?

Hypotheses

1. There will be no significant correlation between academic stress and depression
2. There will be no significant difference in academic stress and depression in the context of the gender variable among undergraduate students.

Measure

Data were collected using a structured questionnaire administered through Google Forms. The questionnaire consisted of three sections: demographic information (initials, age, gender, and year of study), and two standardized psychological scales, namely the Academic Stress Scale and the Depression Scale.

Beck Depression Inventory (BDI)

This scale was developed by Aaron T. Beck in 1961 and later revised in 1996 to align with DSM-IV criteria, grounded in cognitive theory. The Beck Depression Inventory is one of the most widely used psychological instruments for measuring the intensity of depression in adults. The scale consists of 21 items, each describing symptoms of depression such as pessimism, sadness, loss of interest, fatigue, and sleep disturbance. Respondents are required to select one option from four statements that best describes how they have been feeling over the past month. The total score reflects the severity of depressive symptoms, with higher scores indicating greater levels of depression. The Beck Depression Inventory has demonstrated high validity and reliability across different populations, making it a suitable measure for the present study.

Perceived Academic Stress Scale (PASS)

This scale was developed by Bedewy and Gabriel in 2015 and is used to measure students' perceptions of stress related to academic workload, expectations, examinations, and pressure from teachers and parents. The scale consists of 18 items and includes two main components: perceived academic stressors and perceived self-efficacy. Students respond using a Likert scale ranging from strongly disagree to strongly agree. A higher score indicates higher levels of perceived academic stress. The Perceived Academic Stress Scale is a valid and reliable instrument specifically designed for student populations, making it an appropriate measure for the present study.

Data Analysis

Data analysis of this study was conducted using the Statistical Package for the Social Sciences (SPSS) and Microsoft Excel. Firstly, the data were screened for normality, missing values, and outliers to ensure quality and suitability for parametric tests. The analysis included descriptive statistics such as mean, standard deviation, minimum and maximum scores, frequency distributions, and percentages (for example, the percentage of students with mild, moderate, or severe depression). This analysis provided a summary of academic stress and depression levels among undergraduate students. The study also included inferential statistics using Pearson's Correlation Coefficient to examine the strength and direction of the relationship between academic stress and depression. This test was considered appropriate as both variables were continuous and normally distributed. A positive correlation indicates that higher levels of academic stress are associated with higher levels of depression, whereas a negative correlation indicates a weak or no relationship between academic stress and depression.

IV. Results

The Pearson Correlation analysis was conducted to investigate the relationship between academic stress and depression among undergraduate student participants. The findings revealed a weak negative correlation between



academic stress and depression, indicating that higher levels of academic stress do not have a strong association with higher levels of depressive symptoms. This suggests that academic stress alone, as an independent variable, may not act as a direct predictor of depressive symptoms, which is the dependent variable in the present study. Thus, there is sufficient evidence to accept the null hypothesis, indicating that there is no significant relationship between academic stress and depression in the present sample. These findings are consistent with previous research studies suggesting that academic stress does not always show a significant relationship with depression. Such studies propose that even when students experience high levels of academic stress, factors such as social support and effective coping strategies can reduce its impact on the likelihood of developing depressive symptoms (Deb & Strodl, 2015; Misra & McKean, 2000). The analysis examining the role of sex revealed no significant relationship between sex and depression, nor between sex and academic stress. The results indicate that levels of academic stress and depression did not differ significantly based on sex; therefore, the second hypothesis is also accepted as null. This implies that sex does not play a significant role in influencing these two variables among the undergraduate students who participated in the study. Previous research has similarly reported that both male and female students may experience comparable levels of psychological stress in educational settings (Bayram & Bilgel, 2008).

V. Conclusion

The findings provide evidence of a weak negative correlation between academic stress and depression, indicating that higher levels of academic stress do not have a strong relationship with higher levels of depressive symptoms. This suggests that academic stress alone cannot be considered a direct cause of depressive symptoms in the present sample. Further analysis examining the role of sex revealed no significant relationship between sex and depression, nor between sex and academic stress. This finding is consistent with the results and contributions of several previous research studies whose work has been reviewed. Overall, the results indicate that academic stress and depression levels do not differ significantly in relation to sex. The study therefore fails to reject the null hypotheses, suggesting that both depression and academic stress are not influenced by sex differences in the present sample. The findings also highlight the importance of considering other psychological factors beyond sex and academic stress when addressing student mental health concerns, as no significant differences were found in academic stress and depression based on gender among undergraduate students.

VI. Limitations

Generalizability of the findings to a wider population is limited due to the relatively small and specific sample size used in the study. As a result, the findings may not accurately represent students from different cultural backgrounds, educational levels, and institutions. The study also relied solely on self-report psychological scales, which may be influenced by inaccurate self-perception or social desirability bias. It is possible that some participants over-reported or under-reported their levels of depression and academic stress. Another limitation is that the study did not include other relevant variables that may influence the relationship between academic stress and depression, such as academic performance, social support, coping mechanisms, and personality traits.

VII. Future Directions

In order to examine changes in academic stress and depression over time, the use of longitudinal research is recommended. This approach would help in understanding the long-term impact and potential causal relationships between academic stress and students' mental health. To better explain the relationship between academic stress and depression, future studies should incorporate relevant psychological variables such as academic performance, social support, coping mechanisms, and personality traits. Including these variables would provide a more comprehensive understanding of the factors influencing this relationship. For future studies to enhance the generalizability of findings, it is strongly recommended that more diverse and larger samples be included. This should involve participants from



different cultural backgrounds, educational levels, and institutions, which would help in providing a broader and more representative understanding of the variables under investigation.

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