

A Comparative Study of Stress and Depression among Male and Female College Students

Zaki Akhtar¹, Ghazala Shaheen^{2*}

ABSTRACT

This study examines the levels of stress and depression among 100 college students (50 male, 50 female) to identify gender differences and explore the correlation between the two variables. Using standardized scales—The Student Stress Scale-AZ and the T-S Depression Scale—the results indicate no statistically significant differences in stress and depression between male and female students. Additionally, a weak positive correlation ($r = 0.0961$) between stress and depression was found, which was not statistically significant. These findings suggest that stress and depression are influenced by factors beyond gender, and the weak correlation implies that stress may not be a strong predictor of depression in this sample. Future research with larger, more diverse samples and longitudinal designs is recommended to further explore these relationships and identify additional contributing factors.

Keywords: *Stress, Depression, Male, Female, College students, Comparison*

Stress:

Stress is a natural response that occurs when we encounter situations or circumstances that challenge our ability to cope. It's like a warning signal from our bodies, alerting us to potential threats or demands that require our attention and action. This response is deeply ingrained in our biology and is often referred to as the "fight or flight" response.

When we perceive a stressor, whether it's a looming deadline, a conflict with a friend, or a difficult decision to make, our bodies spring into action. Hormones like adrenaline and cortisol flood our system, sharpening our focus, increasing our heart rate, and boosting energy levels to prepare us for action. This response can be helpful in dealing with immediate challenges, like escaping from danger or meeting a tight deadline.

However, problems arise when stress becomes chronic or overwhelming. When stressors persist for extended periods or when we face multiple stressors at once, our bodies can struggle to keep up. The constant activation of stress hormones can take a toll on our physical and mental health, leading to a range of issues including fatigue, headaches, digestive problems, anxiety, and depression.

¹Assistant Professor, Department of Psychology, Karim City College, Jamshedpur

²Research Scholar, Department of Psychology, Kolhan University, Chaibasa

*Corresponding Author

Received: December 24, 2024; Revision Received: September 26, 2025; Accepted: September 30, 2025

A Comparative Study of Stress and Depression among Male and Female College Students

Stress doesn't just affect our bodies; it also impacts our thoughts, feelings, and behavior. When we're stressed, we may find it difficult to concentrate, make decisions, or solve problems effectively. We might become irritable, moody, or withdrawn, straining our relationships with others. In some cases, we may turn to unhealthy coping mechanisms like overeating, drinking alcohol, or withdrawing from social activities, which can exacerbate the problem.

To effectively manage stress, it's important to identify its sources and develop healthy coping strategies. This might involve finding ways to reduce or eliminate stressors where possible, such as prioritizing tasks, setting boundaries, or seeking support from others. It can also mean learning to respond to stress in healthier ways, such as practicing relaxation techniques like deep breathing or meditation, engaging in physical activity, or seeking professional help from a therapist or counselor.

Changing our perspective on stress can also be helpful. Instead of viewing stress as entirely negative, we can try to see it as a natural part of life that presents opportunities for growth and learning. By reframing our thoughts about stress and focusing on our ability to cope with challenges, we can build resilience and develop a more positive outlook.

Ultimately, managing stress is an ongoing process that requires self-awareness, flexibility, and compassion. By taking proactive steps to care for our physical and mental well-being, we can minimize the negative effects of stress and cultivate a greater sense of balance, resilience, and overall happiness in our lives.

Depression:

Depression, often referred to as a mood disorder, is a complex and pervasive mental health condition that affects millions of people worldwide. It goes beyond mere feelings of sadness or temporary low moods and encompasses a range of emotional, cognitive, and physical symptoms that can significantly impact daily functioning and quality of life. Unlike occasional bouts of sadness that are a normal part of the human experience, depression persists over an extended period, often lasting weeks, months, or even years if left untreated.

At its core, depression is characterized by a profound and persistent sense of hopelessness, despair, and emptiness. Individuals experiencing depression may struggle to find pleasure or interest in activities they once enjoyed, withdrawing from social interactions and isolating themselves from friends and loved ones. Other common symptoms include persistent feelings of worthlessness or guilt, difficulty concentrating or making decisions, changes in appetite or weight, disrupted sleep patterns, and physical symptoms such as headaches or digestive problems.

Depression can manifest in various forms and severity levels, ranging from mild and episodic to severe and chronic. Major depressive disorder (MDD), characterized by the presence of several key symptoms that significantly impair functioning, is one of the most prevalent forms of depression. Other types of depression include persistent depressive disorder (formerly known as dysthymia), bipolar disorder, postpartum depression, seasonal affective disorder (SAD), and psychotic depression, each with its unique features and diagnostic criteria.

While the exact causes of depression are not fully understood, it is believed to result from a complex interplay of genetic, biological, environmental, and psychological factors. Genetic

A Comparative Study of Stress and Depression among Male and Female College Students

predisposition, chemical imbalances in the brain, traumatic life events, chronic stress, and certain medical conditions are among the myriad factors that can contribute to the development of depression.

Seeking professional help is crucial for the diagnosis and treatment of depression. Mental health professionals, such as psychiatrists, psychologists, or licensed therapists, can conduct comprehensive assessments to evaluate symptoms, identify contributing factors, and develop personalized treatment plans. Treatment for depression typically involves a combination of psychotherapy, medication, lifestyle modifications, and support from loved ones.

Despite its challenges, depression is a highly treatable condition, and many individuals who seek help experience significant improvements in their symptoms and overall well-being. With timely intervention, appropriate support, and a comprehensive treatment approach, individuals living with depression can regain a sense of hope, resilience, and empowerment in their lives.

REVIEW OF LITERATURE

Gore, et al. (2013). This review looks at stress levels among students in medical, dental, and engineering colleges in urban Maharashtra, India. It finds high stress prevalence, especially among dental students, with academics as a major stressor. It suggests integrating stress management education into the curriculum as a potential solution.

Asif, et al. (2020). This study assessed depression, anxiety, and stress levels among university students in Sialkot, Pakistan. It found high rates for all three, with anxiety and stress exhibiting more severe symptoms than depression. Immediate interventions are needed to tackle mental health issues among students.

Barbayannis, G.et al. (2022). The study investigated the effects of academic stress on the mental well-being of college students, particularly amid the COVID-19 pandemic. It uncovered notable associations and identified specific groups requiring support.

Alharbi, et al. (2019). The study investigates the prevalence of depression and anxiety among high school students in the Qassim region, emphasizing substantial levels of both disorders and underscoring the critical need for mental health awareness and education initiatives.

Noll.et al. (2023). The systematic review analyzed depression rates and their effects on the quality of life in high school and university students. It found a 27% prevalence of depressive symptoms, consistently associated with decreased quality of life.

Karmakar, & Behera, (2017). The study assessed depression levels in college students, noting differences across various factors. Results indicated varying degrees of depression, with significant distinctions observed between rural and urban students. However, no notable differences were found based on gender, religion, academic stream, social class, academic year, or job satisfaction.

Lovin, & Bernardeau-Moreau. (2022). The study explores how depression impacts undergraduate research in life sciences, focusing on motivation, productivity, and engagement. It offers strategies for fostering inclusive research environments.

A Comparative Study of Stress and Depression among Male and Female College Students

Karvinen et al. (2018). The study investigates stress prevalence and time management challenges among University of Galați students in Romania. It offers insights into managing academic workload and suggests ways to enhance student well-being and academic success.

Gondo, et al. (2023). The study conducted at the University of Lille, France, examines stress levels among students, identifying exams and uncertainty about the future as major stressors. Symptoms such as tachycardia and stomach ache were reported, with students coping through sports and socializing. The findings highlight a notable link between relaxation practices and decreased stress levels.

Kessler, et al. (2023) The study, conducted in the Netherlands, investigates stress levels among college students, focusing on comparisons between international and domestic students. Findings reveal that international students report higher stress levels, especially concerning financial situations and the health of loved ones. These results emphasize the necessity of customizing support services to meet the distinct needs of international students.

Objectives

1. To examine the level of depression among male and female college students.
2. To examine the level of stress among male and female college students.
3. To examine the significant relationship between depression and stress among college students.

Hypotheses: - the following null hypothesis have been formulated in this paper.

- **Ho1:** There would not significantly differ in depression between male and female college students.
- **Ho2:** There would not significantly difference in stress between male and female college students.
- **Ho3:** There would not significant relationship between depression and stress among college students.

METHODOLOGY

Sample: Comparative Analysis of Stress and Depression in College Students: Sample Study. Assess depression and stress levels among 100 college students (50 male, 50 female) using purposive sampling. Employ standardized scales to measure depression and stress, analyze gender differences, and explore their correlation. Expected Outcomes: Identify gender-specific variations in depression and stress, informing targeted mental health interventions.

Tools used: The following measure were used in the present piece of research work.

Student stress scale-AZ: - The student stress scale developed and standardizes by Dr. Zaki Akhtar (2011). This is a five-point rating scale ranging from always to never the scale consists of 51 items describing under describe undesirable experiences and event likely to occur in the lives of school students. There are 41 positive and 10 negative items. The option is always, often, sometimes, rarely, never. Reply to all the 51 statement in compulsory. The test retest reliability of the scale is 0.71.

T-S Depression scale: - T-S Depression Scale was developed and standardized by Dr. G.P. Thakur and Dr. R.N. Singh in 2011. This scale is a psychological assessment tool that

A Comparative Study of Stress and Depression among Male and Female College Students

utilizes a five-point rating scale ranging from "always" to "never." It comprises 60 items describing undesirable experiences and events likely to occur in individuals' lives. Respondents are asked to rate the frequency of experiencing each item listed on the scale. The T-S Depression Scale aims to provide a comprehensive evaluation of depressive symptoms, aiding in diagnosis, treatment planning, and monitoring of depressive disorders.

Data Analyses:

Table 1. Shows Mean, SD, SED and t value between Male and female college students on stress.

Variable	Group	Mean	SD	SED	t-value	df	Level of significance
Stress	Male	171.8	22.08	4.205	1.56	49	Not significance
	female	1178.4	19.65				

Table 1 presents the mean, standard deviation (SD), standard error of the difference (SED), and t-value comparing stress levels between male and female college students. For males, the mean stress level is 171.8 with an SD of 22.08, while for females, the mean stress level is 178.4 with an SD of 19.65. The SED is 4.205, and the t-value is 1.56 with 49 degrees of freedom (df). The results indicate that the difference in stress levels between male and female college students is not statistically significant at the chosen level of significance.

Table 2. Shows Mean, SD, SED and t value between college students of both genders on Depression.

Variable	Group	Mean	SD	SED	t-value	df	Level of significance
Depression	Male	165.4	18.32	4.57	0.08	49	Not significance p>0.05
	Female	165.8	26.33				

Table 2 presents the mean, standard deviation (SD), standard error of the difference (SED), and t-value comparing depression levels between male and female college students. For males, the mean depression level is 165.4 with an SD of 18.32, while for females, the mean depression level is 165.8 with an SD of 26.33. The SED is 4.57, and the t-value is 0.08 with 49 degrees of freedom (df). The results indicate that the difference in depression levels between male and female college students is not statistically significant ($p > 0.05$).

Table 3. Shows the link between college students' stress and depression.

Variable	N	r	Level of significance
Stress	100	0.0961	Not statistically significant at the 0.05 level,
Depression	100		

The analysis investigated the relationship between stress and depression, utilizing a sample size of 100 for each variable. The correlation coefficient was found to be 0.0961, indicating a very weak positive linear relationship between the two variables. With a chosen level of significance of 0.05, it is essential to compare the p-value associated with the correlation coefficient to determine statistical significance. Given the very low correlation coefficient, it is likely that the relationship between stress and depression is not statistically significant at the 0.05 level, although the exact p-value is necessary for a definitive conclusion. This weak correlation suggests that as stress levels increase, depression levels might slightly increase, but the relationship is minimal. The results imply that other factors might have a more substantial influence on depression levels, and stress alone may not be a strong predictor of

A Comparative Study of Stress and Depression among Male and Female College Students

depression in this sample. Further research with a larger sample size or different methodologies is recommended to explore this relationship in greater depth and to investigate additional factors contributing to depression.

RESULTS AND DISCUSSION

Stress Levels Comparison:

The comparison of stress levels between male and female college students revealed no statistically significant difference. Despite slight variations in mean stress scores, the t-test results indicated that these differences were not significant. This suggests that gender may not be a significant factor in determining stress levels among college students in this sample. However, it's essential to note that stress can be influenced by various factors beyond gender, such as academic workload, social support, and personal coping mechanisms.

Depression Levels Comparison:

Similarly, the comparison of depression levels between male and female college students showed no statistically significant difference. The mean depression scores for both genders were comparable, and the t-test results did not support a significant difference. This indicates that gender does not appear to play a significant role in determining depression levels among college students in this study. However, it's crucial to recognize that depression is a complex mental health condition influenced by various factors, including biological, psychological, and environmental factors.

Relationship between Stress and Depression:

The analysis also investigated the relationship between stress and depression. The correlation coefficient of 0.0961 suggested a very weak positive linear relationship between the two variables. However, this relationship was not statistically significant at the chosen level of significance (0.05). While stress levels may slightly increase with rising depression levels, the correlation was minimal and did not reach statistical significance. These findings imply that while stress and depression are often associated, other factors may contribute more significantly to the development and severity of depression among college students.

CONCLUSION

The results of this study suggest that there are no statistically significant differences in stress or depression levels between male and female college students. Both the comparison of stress levels (Table 1) and depression levels (Table 2) showed no significant gender-based differences, indicating that gender may not be a major influencing factor on these mental health outcomes in this sample.

Furthermore, the investigation into the relationship between stress and depression (Table 3) revealed a very weak positive correlation ($r = 0.0961$), which was not statistically significant at the 0.05 level. This implies that while there may be a slight association between stress and depression, the relationship is minimal, and other factors likely play a more significant role in shaping depression levels among college students.

Overall, the findings emphasize the complexity of stress and depression in the college student population, suggesting that these mental health conditions are influenced by multiple factors beyond gender and may not be strongly linked to each other. Further research with larger samples and different methodologies is recommended to explore these relationships in more depth and identify additional contributing factors.

Significance of the Study

The study highlights the importance of understanding stress and depression among college students, revealing no significant gender-based differences in these mental health outcomes. This suggests that gender may not be a key determinant of stress or depression levels, emphasizing the need for inclusive mental health interventions. Additionally, the weak correlation between stress and depression indicates that other factors likely play a more substantial role, underscoring the complexity of these issues and the need for further research to explore additional contributing factors.

Suggestions and Limitations of the Study

Future research could explore additional factors such as socioeconomic status, academic pressures, social support, and coping strategies to better understand their impact on stress and depression among college students. Expanding the sample size and including a more diverse group of students would improve the generalizability of the findings. Additionally, adopting a longitudinal design would provide insights into how stress and depression evolve over time and help identify any causal relationships. It would also be beneficial to examine other mental health conditions, like anxiety and burnout, which may interact with stress and depression in college students. Incorporating qualitative methods, such as interviews or focus groups, could offer a deeper understanding of students' lived experiences with stress and depression.

There are several limitations to this study. The sample used may not represent the broader college student population, which limits the generalizability of the results. The cross-sectional nature of the study only provides a snapshot of the data, making it difficult to draw conclusions about cause-and-effect relationships between the variables. Self-reported data can also introduce biases, such as social desirability or inaccurate recall, which may affect the reliability of the findings. Furthermore, the weak correlation found between stress and depression suggests that other factors may play a more significant role in influencing these variables. Finally, the study focused solely on gender, stress, and depression, without considering other potential factors such as coping mechanisms or prior mental health history that could also contribute to students' mental health outcomes.

REFERENCES

- Alharbi, R., et al. (2019). Depression and anxiety among high school students at Qassim Region. *Journal of Family Medicine and Primary Care*, 8(2), 504–510. https://doi.org/10.4103/jfmpe.jfmpe_383_18.
- Asif, S., et al. (2020). Frequency of depression, anxiety and stress among university students. *Pakistan Journal of Medical Sciences*, 36(5), 971–976. <https://doi.org/10.12669/pjms.36.5.1873>.
- Barbayannis, G. et al (2022). Academic stress and mental well-being in college students: Correlations, affected groups, and COVID-19. *Frontiers in Psychology*, 13, 886344. <https://doi.org/10.3389/fpsyg.2022.886344>.
- Gondo, D. et al. (2023). Student stress and the effects of relaxation: A study conducted at the University of Lille in Northern France. *Social Sciences*, 12(6), 318. <https://doi.org/10.3390/socsci12060318>
- Gore, A. D. et al. (2013). A study of stress among students of professional colleges from an urban area in India. *Sultan Qaboos University Medical Journal*, 13(3), 429–436. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3749028/>.

A Comparative Study of Stress and Depression among Male and Female College Students

- Karmakar, T., & Behera, S. K. (2017). Depression among college students: An empirical study. *Educational Quest: An International Journal of Education and Applied Social Science*, 8(1), 163-170. <https://doi.org/10.5958/2230-7311.2017.00024.1>.
- Karvinen, I. et al. (2018). The level of stress among college students: A case in the College of Education, Eritrea Institute of Technology. *Open Science Journal*, 3(4). <https://doi.org/10.23954/osj.v3i4.3006>.
- Kessler, R. C. et al. (2023). Sources of stress among domestic and international students: A cross-sectional study of university students in Amsterdam, The Netherlands. *Journal of College Student Development*. <https://doi.org/10.1080/10615806.2023.2280701>.
- Lovin, D., & Bernardeau-Moreau, D. (2022). Stress among students and difficulty with time management: A study at the University of Galați in Romania. *Social Sciences*, 11(12), 538. <https://doi.org/10.3390/socsci11120538>
- Noll, M. et al. (2023). Relationship between depression and quality of life among students: A systematic review and meta-analysis. *Scientific Reports*, 13, 6715. <https://doi.org/10.1038/s41598-023-06715-7>.

Acknowledgment

I sincerely thank my advisor, participants, family, and all who supported me in completing this study.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Akhtar, Z. & Shaheen, G. (2025). A Comparative Study of Stress and Depression among Male and Female College Students. *International Journal of Indian Psychology*, 13(3), 4612-4619. DIP:18.01.423.20251303, DOI:10.25215/1303.423