The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 13, Issue 3, July- September, 2025
DIP: 18.01.410.20251303, DOI: 10.25215/1303.410
https://www.ijip.in

Research Paper

Peers Under Pressure: Examining the Link Between Peer Relationships and Academic Stress in Young Adults

Arunima Baidya[1]*, Dr. Anindita Mukherjee[2]

ABSTRACT

A person's formation of peer connections is a significant turning point in their life. Our connections with our peers during our early years, adolescence, and early adulthood can have a significant influence on our academic success and general stress levels. The current study attempted to determine the interrelationship between academic stress and peer relationships in young adults. The study aims to investigate whether there is a correlation between academic stress and peer relations among young adults. This study was conducted on 100 participants from Kolkata and its surroundings. A purposive sampling technique was used. The dimensions of peer relationships have been measured by Peer Relationship Scales (Faith Aydogdu, 2022), and Academic Stress has been measured by the Academic Stress Scale (Dalia Bedewy & Adel Gabriel, 2015). Descriptive statistics, Spearman correlation, and Kruskal-Wallis H test were used as statistical techniques. Results indicated a significant negative correlation between peer relationships and academic stress (Spearman's rho = -0.230, $p < 0.05$), suggesting that strong peer connections may buffer the impact of academic demands. Further, the Kruskal-Wallis H test revealed significant mean differences in peer relationship scores across different levels of academic stress, with a moderate effect size. These findings underscore the importance of fostering supportive peer networks to enhance student resilience and well-being. By highlighting the dynamic interplay between social support and academic stress, the study offers practical insights for educators and mental health professionals seeking to develop targeted interventions that promote holistic student development.

Keywords: *Peer Relationships, Academic Stress, Young Adults*

In recent decades, academic stress has emerged as a prevalent concern among young adults navigating the transition to higher education. The increasing competitiveness of undergraduate and graduate programs, combined with mounting expectations from family and institutions, places considerable strain on students' psychological well-being. Simultaneously, this developmental stage is characterized by the formation and maintenance of peer relationships, which serve as critical sources of emotional support and identity validation. Peer bonds can function as double-edged swords in the context of academic life. On one hand, close friendships and study groups offer students practical assistance, coping

[1]Guest Lecturer, Sister Nivedita University, Kolkata, West Bengal
[2]Assistant Professor (Grade 2), Department of Psychology, Sister Nivedita University, Kolkata, West Bengal
*Corresponding Author

Received: July 19, 2025; Revision Received: September 26, 2025; Accepted: September 30, 2025

strategies, and a sense of belonging that can mitigate the negative effects of intensive coursework. On the other hand, these same connections may generate additional pressure through social comparison, fear of judgment, or the internalization of peers' high standards—thereby exacerbating stress levels. Despite growing acknowledgment of both academic stress and the psychosocial importance of peer networks, few studies have systematically investigated how these domains interact. Existing research tends to treat academic stressors and social relationships in isolation, overlooking the dynamic interplay that may influence young adults' mental health outcomes and academic performance.

By illuminating these connections, the study offers evidence-based insights for designing targeted interventions within educational settings.

Academic Stress

Academic stress occurs when a set of academic-related demands exceeds a student's existing capability to manage and adapt to these demands (Wilks, 2008). Academic stress is defined as an emotional tension that students face, the state of mental or emotional strain due to the demanding circumstances of academic life. According to Gadzella and Masten, there are two categories into which parts of academic stress can be separated: (a) academic stressors, which include feelings of irritation, involvement in the dispute, pressure, change, and self-imposed (self-imposed desire). (b) Responses to pressures in the classroom are divided into four groups: physiological or physical reactions, emotional or emotional reactions, behavioral or behavioral reactions, and cognitive assessments. While moderate stress can improve attention, memory, and immunological function, prolonged or excessive stress affects both cognitive and immunological problems. Prolonged stress can make the hippocampus more vulnerable to injury, with rats exhibiting a reduction in hippocampal volume and memory deficits (Kim et al., 2017). Excess stress in short-term academic contexts, such as taking a high-stakes college admission test, might hinder information processing and execution (Beilock, 2008). Academic stress can also lead to unhealthy coping techniques, such as problematic smartphone use, especially among students with low levels of problem-focused coping (Xu et al., 2019). These directly lead to decreased academic achievement, which causes even more academic stress. Researchers have shown that academic stress is related to the students' academic achievement, retention, and graduation rates (Dang, 2007). The literature has also shown that the feeling of academic stress affects students socially, psychologically, and physically. So, students under high academic stress would feel that they may lose confidence, feel a sense of loneliness, and experience mood swings or agitation (Dang, 2007). Also, severe psychological problems such as depression and anxiety may occur (Misra & McKean, 2000). Anxiety, according to de Botton (2005), "is the handmaiden of contemporary ambition." Competition-related perceptions among students and in the classroom also result in an extrinsic, performance-oriented approach to learning (Dweck, 2000), which has been connected to decreased motivation, a rise in procrastination, and a rise in academic dishonesty (Eccles & Wigfield, 2002; Senko, Durik, & Harackiewicz, 2008). Accordingly, anxiety and sadness may also be linked to perceived competition in college as a result of social comparisons over academic achievement.

Peer relationship

Peer connections are significant components of the lives of adolescents and young adults, as defined by Erikson's theory of psychosocial development (Erikson,1963) and, more broadly, social psychology theory, which describes the need for peer acceptance during adolescence

(Newcomb, 1962). Newcomb (1962) emphasized the need to monitor friendships among new college students, recognizing their impact on attitudes and behaviors. For better or worse, there was evidence that friends influenced students' college progress (Newcomb 1962). Tinto (1975) also evaluated the evidence that demonstrated a direct positive relationship between friendship support and persistence in college. When individuals experience stress in an academic setting, they will produce a stress response and try to regenerate the equilibrium, known as academic buoyancy (Martin et al., 2010). Students will seek help and receive support from peers or teachers. Such kind of day-to-day help from parents, teachers, or peers will form a support system. With the peer relationship, it is believed that friends play an important role as compared to father and mother in shaping personality as well as in behavior development (Chen, 2011). Student-peer connections are strongly related to student academic achievement (Espelage et al., 2013; Li et al., 2020; Vignery and Laurier, 2020). Espelage et al. (2013), for example, used both horizontal and longitudinal research to demonstrate that bullying and peer victimization were associated with poor academic achievement. Gremmen et al. (2018) conducted a longitudinal social network analysis (RSiena) and discovered that student academic engagement and achievement rose when their friends scored higher, and vice versa, regardless of their physical position in the classroom. Vignery and Laurier (2020) reported the selection effect (i.e., students for groups of friends with similar levels of academic performance) and socialization process (i.e., peer performance is significantly associated with future student achievement), which could be used to understand the links between student academic performance and peer relationships.

Although peer relationships, academic resilience, and academic stress have been the subject of numerous studies, researchers have had to examine the concept in great detail due to its shifting cultural and contextual context.

METHODOLOGY

Objective

The objective of the present study was-

- To find out if there is any correlation between academic stress and peer relations among young adults.
- To find out if there is a significant difference in peer relationship scores among the three levels of academic stress (high, moderate, and low levels).

Hypothesis

In the present study following hypotheses were used

- **Hypothesis 1:** There is a significant positive correlation between academic stress and peer relations among young adults.
- **Hypothesis 2:** There is a significant negative correlation between academic stress and peer relations among young adults.
- **Hypothesis 3:** There is no significant mean difference in peer relationship scores among the three levels of academic stress (high, moderate, and low levels).
- **Hypothesis 4:** There is a significant mean difference in academic resilience scores among the three levels of academic stress (high, moderate, and low levels).

Sample

The purposive sampling technique was used for the present study. A total of 140 participants were approached, among whom 122 signed a consent form and filled out the questionnaire

booklet. Out of 122, 18 participants did not return the questionnaire, and 4 participants (who belong to the school, aged not between 18-24) submitted the filled-up questionnaire. From this pool of data, 100 usable data were selected for the present study. All the participants were selected from Kolkata and its surroundings.

Inclusion and exclusion criteria

Participants were selected based on the following inclusion and exclusion criteria.

Inclusion criteria:

- Age range above 18 – below 25
- Subjects should be college students
- Subjects must be from Kolkata and the surrounding suburban area
- Those who have an understanding of the English language
- Subjects who are non-working

Exclusion criteria:

- Those who have no understanding of the English language
- Subjects studying in non-recognized colleges and universities.
- Subjects suffering from psychological ailments.
- Subjects who are working
- Age range not between 18-25

The participants who were selected for the present study are referred to as "subjects" here.

Instruments

1. **Demographic details:** An information schedule was used to gather demographic details – name, age, education qualification, type of residential area (urban/suburban/ rural), type of family (nuclear/ extended/ joint/ broken-home), socio-economic status.
2. **Perceptions of Academic Stress Scale (PAS):** This scale was developed by Dalia Bedewy and Adel Gabriel (2015), is an 18-item scale that captures various aspects of academic stress. This is a self-administering test based on what participants have experienced during the past month. The items were divided into four subscales (Pressure to perform, Perception of workload and examination, Self-perception, and Time restraint). The developed instrument demonstrated internal consistency reliability with a Cronbach's alpha of 0.7. It is scored using a 5-point Likert-type scale from 1 (extremely irrelevant) to 5 (strongly relevant). The possible total scores thus range from 18 to 90, with higher scores indicating higher levels of perceived academic stress.
3. **Peer Relationship Scale:** The Peer Relationship Scale for Adolescents, developed by Fatih Aydoğdu (2022), is a valid and reliable tool designed to assess adolescents' perceptions of peer relationships. The scale consists of 29 items and measures four sub-dimensions: Intimacy, Popularity, Trust, and Insightfulness. It is a self-administered test based on participants' experiences over the past month. The scale has been found to have a high level of internal consistency with a Cronbach's alpha coefficient of 0.93, split-half reliability of 0.85, and a test-retest reliability value of 0.82. Both exploratory and confirmatory factor analyses have supported the construct validity of the scale. Responses are scored on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), with no reverse-scored items. The total score ranges from 29 to 145, with higher scores indicating a higher level of peer relationships.

Procedure

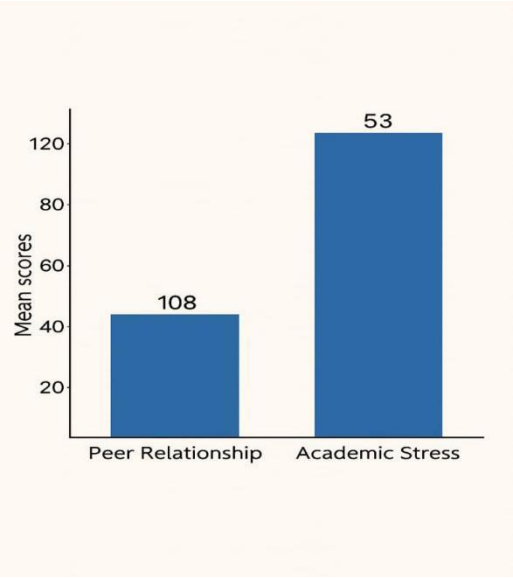
All participants were approached personally, and rapport was built. Consent forms have been signed. They were briefed about the current study's objectives. Instructions were delivered following the questionnaire. They were informed that their information would be kept confidential and used solely for research purposes, so they were asked to be open and honest in their responses, and then scales were administered and data were collected. For the data analysis purpose of the present study, firstly, the Kolmogorov-Smirnov test was used to check the normality of the data. Then, JAMOVI version 2.3.28 was used, in which descriptive statistics, correlational analyses and Kruskal-Wallis H Test were made according to the decision rules for testing the null hypothesis. In the first phase, Mean, Median, Mode, and SD were calculated. In the second phase, the Spearman Correlation Coefficient was used to determine the relationship between peer relationships, academic stress, and academic resilience of young adults. In the third phase, the Kruskal-Wallis H Test was used to compare Peer relationship scores across the three groups of academic stress, as the data distribution was non-parametric.

RESULTS

Table No. 1: Descriptive statistics (mean, median, mode, and standard deviation) concerning academic stress and academic resilience of young adults

	Peer Relationship Scale	Academic Stress Scale
N	100	100
Mean	108	53.0
Median	108	53.0
Mode	106	52.0
Standard deviation	11.5	7.05

From the above table, it can be observed the mean of peer relationship is 108 which indicates the overall peer relationship of the sample is good; the mean of the academic stress scale is 53 which indicates a moderate level of academic stress, the mean of academic resilience is 112 which indicates the overall academic resilience of the sample is good.



Graphical representation of mean differences on academic stress and peer relationship of young adults

Table No. 2: Spearman Correlation Coefficient in academic stress and peer relationship scale of young adults.

		Peer Relationship Scale	Academic Stress Scale
Peer Relationship Scale	Spearman's Rho		
Academic Stress Scale	Spearman's Rho	-0.230	

It is evident from Table 2 above that there is a negative correlation between academic stress and peer relationships, which is significant at a 0.01 level.

Table No. 3: Kruskal-Wallis H Test denoting significant mean difference among different academic stress levels in terms of peer relationship of young adults.

	χ^2	df	p	ε^2
Peer Relationship Scale	14.1	2	<0.001	0.142

In the above table the p-value < .001 suggests a statistically significant difference among the three groups regarding peer relationships. And the Effect Size ($\varepsilon^2 = 0.142$) indicates a moderate effect size, showing meaningful differences in peer relationships across groups.

DISCUSSION

The present study set out to investigate the relationship between peer relationships and academic stress among young adults, with a specific focus on college students in Kolkata and its surrounding areas. It is observed from the Kolmogorov-Smirnov test that the data does not follow a perfectly normal distribution; the data distribution is slightly left-skewed, has heavier tails than a normal distribution, and contains outliers (136, 80, 65, and 77). Therefore, non-parametric test has been performed in this study.

Table 1 provides valuable information about the central tendency (mean, median) and variability (standard deviation) of the two scales. The mean peer relationship score is 108 which indicates that the overall peer relationship of the sample is good. The median peer relationship score is also 108. The mode (most frequent value) for peer relationships is 106. The standard deviation is 11.5. The mean academic stress score is 53.0, which indicates a moderate level of academic stress. The median academic stress score is also 53.0. The mode for academic stress is 52.0. The standard deviation for academic stress is 7.05.

Table 2 represents the Spearman Correlation Coefficient in peer relationships and academic stress of young adults. From the result, it is observed that there is a negative correlation between academic stress and peer relationship, which is significant at the 0.05 level. So, Hypothesis 1 is rejected, but Hypothesis 2 is accepted, which means positive peer relationships can buffer the impact of academic stress. Supportive friends can provide encouragement, empathy, and practical assistance during challenging times. Students with strong peer connections are less likely to feel isolated or overwhelmed by stress. Social interactions can distract from stressors and promote well-being. This result can be supported by a study on the "academic achievement of the peer accepted and peer rejected children" which was conducted by Choudhury et al. (1997) using 136 students in the fourth, fifth, and sixth grades as a sample. School records and the group sociometric approach were used to

collect the data. The study's findings showed that children who were accepted by their peers exhibited more academic competence than those who were rejected by their peers. So, these correlations highlight the interconnectedness of social support, stress, and resilience in the academic context. Building positive peer relationships, developing effective coping strategies, and fostering a growth mindset contribute to overall academic success and well-being. In a different study, Gremmen et al. (2018) suggest that near-seated peers, especially friends, have an impact on students' academic engagement and achievement. The research involved 559 fourth- and sixth-grade students and revealed that students' academic engagement and achievement improved when their friends performed better, and vice versa, regardless of their physical location in the classroom. It was also found that near-seated peers who were not friends had higher diversity ratings over time.

In table 3, the Kruskal-Wallis test reveals significant group-level differences in peer relationships, suggesting that the academic stress has a meaningful impact. Hence, Hypothesis 4 is accepted and Hyopthesis 3 is rejected. The moderate ε^2 effect size reinforces the relevance of these findings in real-world scenarios, aligning with previous psychological literature that indicates peer relationships can be contextually shaped by stress, coping strategies, or socio-emotional environments. This pattern aligns with transactional models of stress and coping, which posit that individuals' appraisal of stressors influences their social engagement. Those in the low-scoring group may perceive academic or emotional demands as more threatening, leading to withdrawal or conflict, whereas moderate-scoring participants maintain healthier peer bonds through adaptive coping.

Overall, these findings underscore the interconnectedness of academic stress and social relationships. They point toward the importance of institutional interventions that foster healthy peer interactions, such as peer mentoring programs, collaborative learning environments, and campus activities that build community. By recognizing the pivotal role of peer support, educators and policymakers can design targeted initiatives to mitigate stress and enhance students' overall well-being.

Future research could build on these insights by employing longitudinal designs to assess how peer relationships and academic stress influence each other over time, or by exploring moderating variables such as personality traits and individual coping styles. Additionally, qualitative studies could offer richer insights into how students perceive and navigate the dual pressures of academic demands and social belonging.

CONCLUSION

The present study demonstrates that positive peer relationships are significantly associated with lower levels of academic stress among young adults. The findings support the notion that peers serve not only as companions but also as critical buffers against the pressures inherent in academic life. As revealed by the significant negative correlation and group differences, students with stronger peer bonds reported reduced stress, likely benefiting from emotional support, shared coping strategies, and a sense of belonging. These insights highlight the need for colleges and universities to actively cultivate environments that encourage meaningful peer interactions through collaborative learning spaces, mentorship programs, and social initiatives. Future research could extend this inquiry by examining longitudinal patterns or exploring the moderating roles of personality and coping styles. Ultimately, investing in the social dimensions of student life may prove essential for mitigating stress and enhancing both academic performance and psychological well-being.

REFERENCES

Bauman, S. (2013). Cyberbullying: What does research tell us? *Theory Into Practice*, *52*(4), 249–256. https://doi.org/10.1080/00405841.2013.829727

Beilock, S. L. (2008). Math performance in stressful situations. *Current Directions in Psychological Science, 17*(5), 339–343. https://doi.org/10.1111/j.1467-8721.2008.00602.x

Chen, X. (2011). Culture, peer interaction, and socioemotional development. *Child Development Perspectives*, *5*(2), 77–81. https://doi.org/10.1111/j.1750-8606.2010.00155.x

Choudhury, S., Das, S., & Bhattacharya, B. (1997). Academic achievement of the peer accepted and peer rejected children. *Indian Journal of Psychometry and Education, 28*(1), 15–20.

Dang, H. N. (2007). The impact of academic stress on students' academic achievement. *Journal of Educational Psychology*, *99*(2), 291–300.

de Botton, A. (2005). *Status anxiety*. Penguin.

Dweck, C. S. (2000). *Self-theories: Their Role in Motivation, Personality, and Development.* Psychology Press.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53*(1), 109–132. https://doi.org/10.1146/annurev.psych.53.100901.135153

Erikson, E. H. (1993). *Childhood and society*. W. W. Norton & Company.

Gadzella, B. M., & Masten, W. G. (2005). Stress and college students: The 21st century. *Research & Teaching in Developmental Education,* 21(2), 1–6.

Gremmen, M. C., van den Berg, Y. H., Segers, E., & Cillessen, A. H. (2018). Considerations for classroom seating arrangements: Trading off between social and academic outcomes. *Educational Psychology Review*, *30*, 445–471. https://doi.org/10.1007/s10648-017-9410-6

Kim, Y. K., & Diamond, M. C. (2017). The stressed hippocampus, synaptic plasticity and lost memories. *Nature Reviews Neuroscience*, *8*(6), 445–457. https://doi.org/10.1038/nrn2171

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

Li, Y., Lynch, A. D., Kalvin, C., Liu, J., & Lerner, R. M. (2020). Peer relationships as a context for the development of school engagement during early adolescence. *International Journal of Behavioral Development*, *44*(1), 39–49. https://doi.org/10.1177/0165025419866905

Martin, A. J., Colmar, S. H., Davey, L. A., & Marsh, H. W. (2010). Longitudinal modeling of academic buoyancy and motivation: Do the "5Cs" hold up over time? *British Journal of Educational Psychology, 80*(3), 473–496. https://doi.org/10.1348/000709910X486376

Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, *16*(1), 41–51.

Newcomb, T. M. (1962). Student peer-group influence. *The Educational Record*, *43*(1), 16–24.

Senko, C., Durik, A. M., & Harackiewicz, J. M. (2008). Historical perspectives on goal orientation theory in educational psychology. *Educational Psychologist*, *43*(1), 9–15. https://doi.org/10.1080/00461520701756315

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89–125. https://doi.org/10.3102/00346543045001089

Vignery, A., & Laurier, C. (2020). Peer influence on academic achievement: A longitudinal social network analysis. *Social Psychology of Education*, *23*(1), 131

Wilks, S. E. (2008). Resilience amid academic stress: The moderating impact of social support among social work students. *Advances in Social Work*, *9*(2), 106–125.

Xu, X., Wang, Y., & Zhou, L. (2019). Academic stress and problematic smartphone use among Chinese undergraduates: The mediating role of coping styles. *BMC Psychiatry*, *19*, Article 341. https://doi.org/10.1186/s12888-019-2357-8

Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Baidya, A. & Mukherjee, A. (2025). Peers Under Pressure: Examining the Link Between Peer Relationships and Academic Stress in Young Adults. *International Journal of Indian Psychology*, *13*(3), 4476-4484. DIP:18.01.410.20251303, DOI:10.25215/1303.410