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# Academic Stress and Mental Health among College Students in Bokaro Steel City

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## ABSTRACT

*The present study investigated the impact of academic stress on mental health among college-going students in Bokaro Steel City, Jharkhand. The study also examined the influence of gender and place of residence on academic stress and mental health. A total of 80 college students were selected through purposive sampling, comprising male and female students from both urban and rural areas. Academic stress was assessed using the Academic Stress Scale (Kaur, 2004), while mental health was measured using the General Health Questionnaire (GHQ-12) developed by Goldberg (1978). The collected data were analyzed using the t-test and Pearson's product-moment correlation coefficient. The findings revealed significant gender differences in academic stress and mental health, with female students reporting higher levels of academic stress and psychological distress than male students. Significant differences were also observed between urban and rural students, as rural students exhibited higher academic stress and poorer mental health outcomes. Furthermore, a significant positive correlation was found between academic stress and psychological distress ( $r = 0.68$ ,  $p < .01$ ), indicating that increased academic stress is associated with poorer mental health. The study highlights the need for effective stress-management strategies, counseling services, and mental health support programs within higher educational institutions to enhance students' psychological well-being and academic adjustment.*

**Keywords:** Academic Stress, Mental Health, College Students, Psychological Distress, Gender Differences

College life is a critical period of transition that offers significant opportunities for personal and professional growth. However, it is also a time frequently associated with high levels of academic stress. Globally, academic stress has been identified as a major contributor to declining mental health among university students, often leading to psychological issues such as anxiety, depression, and burnout (World Health Organization (WHO), 2022). When students face continuous pressure

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from examinations, heavy workloads, and uncertainty about their future careers, their overall psychological well-being is severely impacted (Kumar & Sharma, 2023). In the Indian context, this issue is further amplified. Indian college students often navigate intense pressure from highly competitive academic environments, coupled with strong familial and societal expectations to secure stable and prestigious careers (Gupta et al., 2024). While the link between academic stress and mental health is well-documented in major metropolitan cities like Delhi and Mumbai, there is a significant lack of empirical research focusing on tier-2 and industrial cities. Bokaro Steel City, a prominent industrial and educational hub in the state of Jharkhand, presents a unique demographic landscape. The city is home to various engineering, medical, and general degree colleges, attracting students from diverse socio-economic backgrounds. Students in this region often face distinct challenges, such as the intense pressure to secure jobs in core industrial sectors, financial constraints, and comparatively limited access to specialized mental health counseling services (Singh & Das, 2025). Despite these unique local dynamics, the mental health of college students in Bokaro remains a largely under-researched area. Therefore, this study aims to investigate the prevalence of academic stress and its direct impact on the mental health of college students in Bokaro Steel City. By understanding the specific stressors and coping mechanisms of this local population, this research seeks to provide valuable, data-driven insights. These insights can help educators, parents, and local policymakers develop targeted and accessible mental health support systems for students in the region.

## REVIEW OF LITERATURE

**Dureja and Sharma (2024)** conducted a study on academic stress, general health, and life satisfaction among college students. A sample of 100 college students was selected through random sampling techniques. The study aimed to investigate the impact of academic stress on students' overall health and life satisfaction. Standardized psychological measures were administered to assess the variables under investigation. The findings indicated that students with higher academic stress reported poorer general health and lower levels of life satisfaction. The researchers concluded that academic pressure negatively affects both physical and psychological well-being and recommended the implementation of stress-management programs within higher educational institutions.

**Multani, Kaur, and Narula (2024)** conducted a study to understand the relationship between academic stress and psychological distress among college students. The study was carried out on a sample of 30 college students using standardized measures of academic stress and psychological distress. The primary objective was to examine how academic pressures influence the psychological well-being of students. The findings revealed a significant positive correlation between academic stress and psychological distress. Students experiencing higher levels of examination-related and classroom-related stress reported greater anxiety, emotional exhaustion, and psychological discomfort. The study emphasized the importance of institutional support systems and effective coping strategies for maintaining students' mental health and academic success.

**Wang et al. (2023)** conducted a study among college students in China to examine the relationship between academic performance, anxiety, and depression. Using network analysis techniques, the researchers explored the central symptoms of psychological distress among students with different academic achievement levels. The findings revealed that students with poor academic performance reported significantly higher levels of anxiety and depression compared to high-performing students. Feelings of nervousness, excessive worry, and emotional instability emerged as the most influential psychological symptoms. The study concluded that academic challenges and performance-related pressure are important contributors to mental health problems among university students.

**Barbayannis et al. (2022)** conducted a study to examine the relationship between academic stress and mental well-being among college students in the United States during and after the COVID-19 pandemic. The study included undergraduate students from various universities and utilized standardized measures of academic stress and psychological well-being. The findings revealed a significant negative relationship between academic stress and mental well-being. Students experiencing high levels of academic pressure reported greater symptoms of anxiety, depression, emotional exhaustion, and reduced life satisfaction. The study further found that female students and students from minority backgrounds were particularly vulnerable to the adverse effects of academic stress. The researchers emphasized the need for university-based mental health interventions and academic support services to promote student well-being.

## Objectives of the study

1. To study the impact of gender and place of residence on academic stress and mental health among college-going students in Bokaro Steel City.
2. To study the relationship between academic stress and mental health among college-going students in Bokaro Steel City.

## Hypotheses

To address these objectives, we formulated the following hypotheses:

- H1. There will be a significant impact of gender on academic stress and mental health among college-going students in Bokaro Steel City.
- H2. There will be a significant impact of place of residence on academic stress and mental health among college-going students in Bokaro Steel City.
- H3. There will be a significant relationship between academic stress and mental health among college-going students in Bokaro Steel City.

## METHODOLOGY

The study included 80 participants selected from various colleges in Bokaro Steel City and its surrounding rural areas in Jharkhand. The sample included both male and female participants, belonging to two residential groups: urban and rural college students. Purposive sampling technique was used in this study.

**Table 01**

*Sample Design*

| Place of Residence | Urban | Rural |
|--------------------|-------|-------|
| <b>Gender</b>      |       |       |
| <b>Male</b>        | 20    | 20    |
| <b>Female</b>      | 20    | 20    |
| <b>Total</b>       | 40    | 40    |
|                    | 80    |       |

## Tools

**Academic Stress Scale (ASS):** To measure the level of academic stress among the students, the Academic Stress Scale (ASS) developed by Kaur (2004) will be used. This highly standardized Indian tool consists of 20 items assessing stress related to syllabus pressure, examinations, and interpersonal relationships. The items are rated on a 5-point Likert scale ranging from 'Strongly Agree' (5) to 'Strongly Disagree' (1), where a higher total score indicates a higher level of academic stress. The scale demonstrates strong psychometric properties. Its internal consistency is highly satisfactory, with Cronbach's Alpha typically ranging between .82 and 0.88, and test-retest reliability yielding a correlation coefficient of 0.85. Content validity was established through expert evaluation, while construct validity was confirmed via factor analysis, ensuring the items effectively measure distinct dimensions of academic stress in the Indian educational context.

**General Health Questionnaire (GHQ-12):** To assess the mental health and psychological well-being of the students, the General Health Questionnaire (GHQ-12) developed by Goldberg (1978) will be used, utilizing the Indian standardized version by Venkatesan (1994). This globally recognized tool consists of 12 items measuring psychological distress, including anxiety and depression. Items are scored on a 4-point scale using the standard GHQ scoring method (0-0-1-1), where a higher total score indicates poorer mental health and higher psychological distress. The GHQ-12 exhibits excellent reliability and validity across Indian research settings. Its internal consistency is robust, with Cronbach's Alpha coefficients consistently reported between 0.80 and 0.90, and test-retest reliability showing stability coefficients around 0.80 to 0.85. Criterion validity was established through comparison with clinical psychiatric interviews, demonstrating high sensitivity and specificity, while construct validity was confirmed through factor analysis in the Indian context, making it a highly valid instrument for screening psychological distress among students.

## STATISTICAL ANALYSIS

To test the hypotheses, t test was implemented on collected data to find out the difference and pearson 'r' was calculated to correlation.

## RESULTS

The analysis revealed the following results:

**Table 02**

*Influence of Gender on Academic Stress*

| Subgroups | Mean  | SD    | Mean difference | df | t     |
|-----------|-------|-------|-----------------|----|-------|
| Male      | 65.40 | 10.25 | 6.75            | 78 | 2.85* |
| Female    | 72.15 | 11.30 |                 |    |       |

\* Significant at 0.01 level

**Figure 01**

*Mean scores on Academic Stress in relation to Gender.*

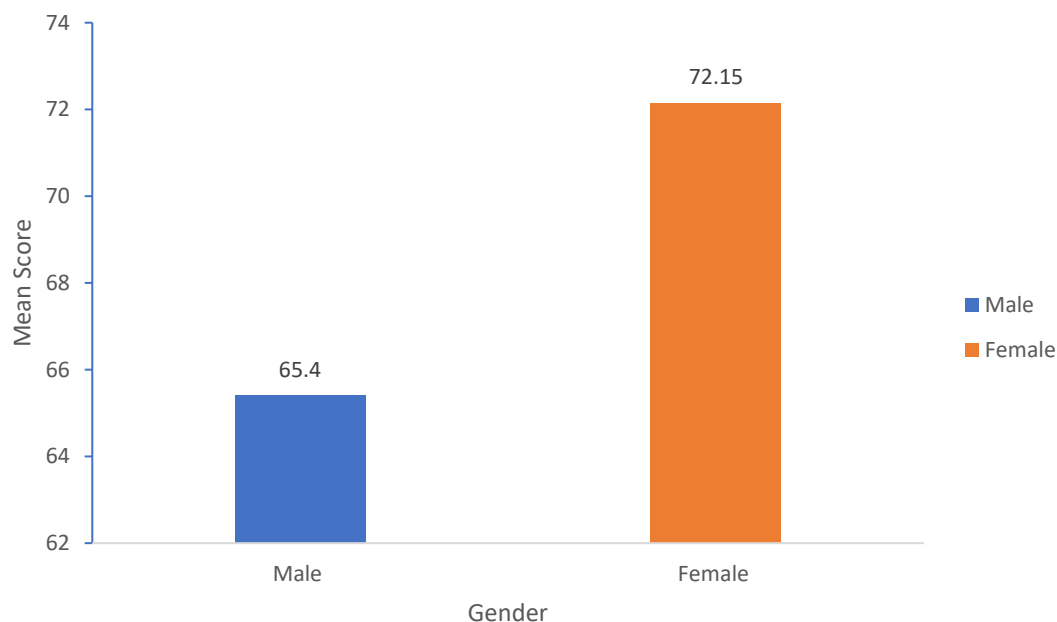


Table 02 and Figure 01 indicate that the mean academic stress scores of male and female participants were 65.40 and 72.15, respectively. The obtained t-value (2.85) was found to be significant at the 0.01 level, indicating a statistically significant difference between male and female students in terms of academic stress. Female students reported higher levels of academic stress than their male counterparts. Therefore, the hypothesis stating that gender has a significant effect on academic stress among college-going students in Bokaro Steel City is accepted.

**Table 03**

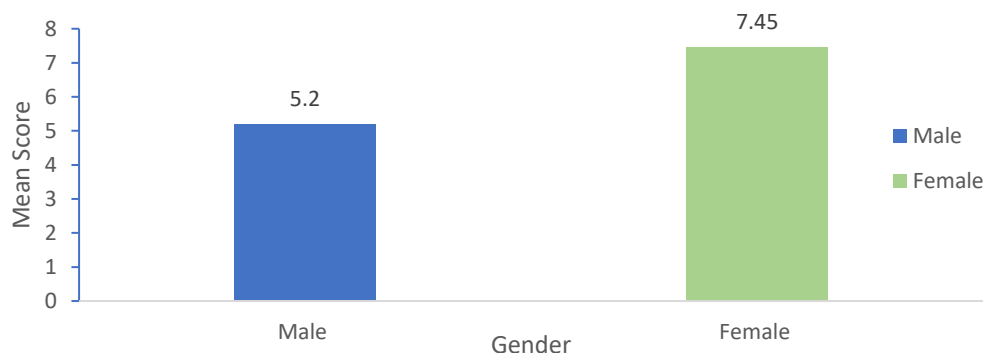
*Influence of Gender on Mental Health*

| Subgroups | Mean | SD   | Mean difference | df | t     |
|-----------|------|------|-----------------|----|-------|
| Male      | 5.20 | 2.15 | 2.25            | 78 | 3.12* |
| Female    | 7.45 | 2.40 |                 |    |       |

\* Significant at 0.01 level

**Figure 02**

*Mean scores on Mental Health in relation to Gender*



From Table 03 and Figure 02, it is evident that male participants obtained a mean mental health (psychological distress) score of 5.20, whereas female participants obtained a mean score of 7.45. The computed t-value of 3.12 was found to be statistically significant at 0.01 level. Therefore, the hypothesis stating that gender has a significant impact on mental health among college-going students in Bokaro Steel City is accepted.

**Table 04**

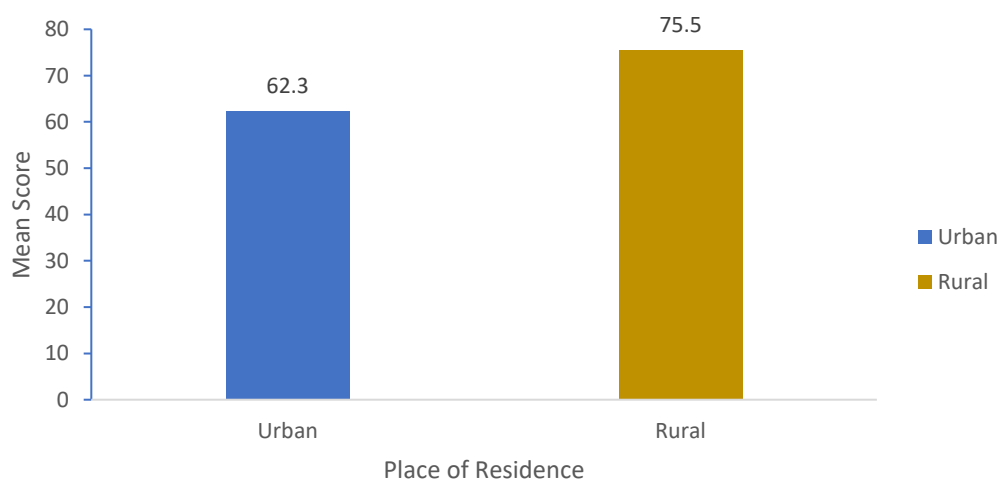
*Influence of Place of Residence on Academic Stress*

| Subgroups | Mean  | SD    | Mean difference | df | t     |
|-----------|-------|-------|-----------------|----|-------|
| Urban     | 62.30 | 11.50 | 13.20           | 78 | 4.15* |
| Rural     | 75.50 | 10.80 |                 |    |       |

\* Significant at 0.01 level

**Figure 03**

*Mean scores on Academic Stress in relation to Place of Residence.*



From Table 04 and Figure 03, it is evident that urban participants obtained a mean academic stress score of 62.30, whereas rural participants obtained a mean score of 75.50. The obtained t-value of 4.15 was found to be significant at the 0.01 level, indicating a significant difference in academic stress between urban and rural students. Therefore, the hypothesis stating that place of residence has a significant impact on academic stress among college-going students in Bokaro Steel City is accepted.

**Table 05**

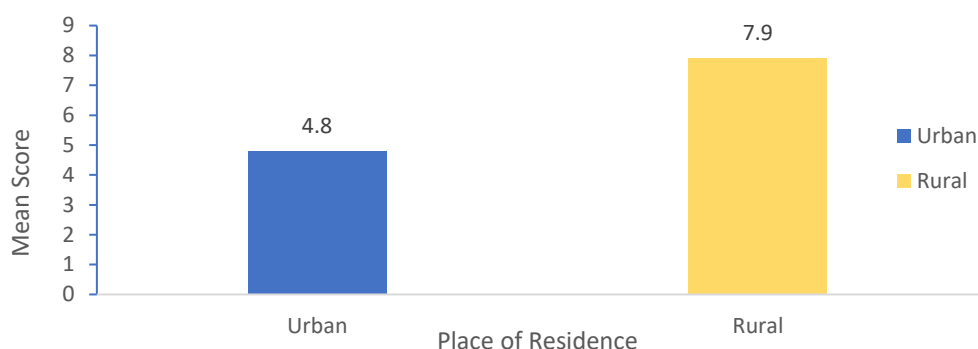
*Influence of Place of Residence on Mental Health*

| Subgroups | Mean | SD   | Mean difference | df | t     |
|-----------|------|------|-----------------|----|-------|
| Urban     | 4.80 | 2.30 | 3.10            | 78 | 4.56* |
| Rural     | 7.90 | 2.10 |                 |    |       |

\* Significant at 0.01 level

**Figure 04**

*Mean scores on Mental Health in relation to Place of Residence.*



It is observed from Table 05 and Figure 04 that the mean of mental health (psychological distress) scores for urban and rural participants were 4.80 and 7.90 respectively. A t-value of 4.56 was obtained, which was found to be significant at the 0.01 level. Consequently, the hypothesis regarding the significant impact of place of residence on mental health among college-going students in Bokaro Steel City is accepted based on the present data.

**Table 05**

*Correlation coefficient of Academic Stress and Mental Health*

|                 | Academic Stress | Mental Health |
|-----------------|-----------------|---------------|
| Academic Stress | 0.68**          | 1             |
| Mental Health   | 1               | 0.68**        |

\*\* Significant at 0.01 level

From Table 05, it is clear that, the correlation coefficient was found positive ( $r = 0.68$ ), which is significant at 0.01 level. It indicates that academic stress and mental health (psychological distress) both are positively correlated to each other, means higher academic stress results in higher psychological distress (poorer mental health). Hence, the hypothesis that, there will be significant relationship between academic stress and mental health, is accepted here.

## DISCUSSION

The present study examined the impact of gender and place of residence on academic stress and mental health among college-going students in Bokaro Steel City. The findings revealed significant differences in academic stress and mental health across gender and residential groups, as well as a significant positive relationship between academic stress and psychological distress. With regard to academic stress, the mean scores obtained by male and female students were 65.40 and 72.15 respectively. The calculated t-value of 2.85 was found to be significant at the 0.01 level, indicating that female students experienced significantly higher academic stress than their male counterparts. This finding may be attributed to the multiple academic, social, and familial expectations often faced by female students. The present finding is consistent with the study conducted by Barbayannis et al. (2022), who reported

that female college students were more vulnerable to the adverse effects of academic stress and exhibited higher levels of anxiety and emotional exhaustion compared to male students. The finding also supports the view that gender plays an important role in determining students' responses to academic demands and pressures. The study further revealed a significant impact of place of residence on academic stress. Rural students obtained a higher mean score (75.50) than urban students (62.30), and the calculated t-value of 4.15 was significant at the 0.01 level. This finding suggests that rural students experience greater academic stress, possibly due to financial limitations, lack of educational resources, adjustment difficulties, and concerns regarding future career opportunities. Students from rural backgrounds often face additional challenges while pursuing higher education, which may increase their vulnerability to stress. The finding highlights the importance of providing academic and psychological support services to students coming from disadvantaged backgrounds.

In relation to mental health, female students obtained a higher mean psychological distress score (7.45) compared to male students (5.20). The obtained t-value of 3.12 was significant at the 0.01 level, indicating that female students experience poorer mental health outcomes than male students. This finding is in agreement with the observations of Barbayannis et al. (2022), who found that female students reported higher levels of anxiety, depression, and emotional distress under academic pressure. The result suggests that the psychological consequences of academic stress may be more pronounced among female students, thereby requiring targeted mental health interventions. Similarly, the analysis revealed a significant impact of place of residence on mental health. Rural students demonstrated higher psychological distress scores (7.90) than urban students (4.80), and the obtained t-value of 4.56 was significant at the 0.01 level. The finding indicates that students from rural areas are more susceptible to mental health problems than urban students. This may be due to reduced access to mental health services, socio-economic challenges, and limited social support systems. The result emphasizes the necessity of expanding counseling and mental health awareness programs, particularly for students from rural communities. The study also investigated the relationship between academic stress and mental health. The Pearson correlation coefficient was found to be 0.68, which was significant at the 0.01 level. The positive correlation indicates that higher levels of academic stress are associated with higher levels of psychological distress and poorer mental health. This finding is strongly supported by the studies of Multani, Kaur, and Narula (2024), who reported a significant positive relationship between academic stress and psychological distress among college students. Similarly, Dureja and Sharma (2024) found that students experiencing high academic stress reported poorer general health and lower life satisfaction. The present finding is also supported by Wang et al. (2023), who observed that academic challenges and performance-related pressure significantly contributed to anxiety and depression among university students. Therefore, the present study reinforces the growing body of evidence suggesting that excessive academic stress is a major risk factor for mental health problems among college students. The findings of the present investigation demonstrate that academic stress significantly influences the mental health of college-going students in Bokaro Steel City. Female students and students from rural backgrounds emerged as particularly vulnerable groups. The significant positive relationship between academic stress and psychological distress underscores the urgent need for effective stress-management programs, counseling services, and mental health promotion initiatives within higher educational institutions. Such interventions can play a crucial role in improving students' psychological well-being and fostering a healthier academic environment.

## CONCLUSION

This study highlights the issue of academic stress and its profound impact on the overall mental health of college students in Bokaro Steel City. The research establishes a strong positive relationship between academic stress and psychological distress, confirming that increasing pressures directly deteriorate student mental health. This underscores that academic stress is a persistent psychological burden requiring immediate attention to prevent heightened anxiety and depression. Furthermore, the investigation reveals that gender and place of residence play pivotal roles in shaping student stress levels. Female students experience higher academic stress and psychological distress than males, likely due to the dual burden of academic competition and stringent societal expectations. Similarly, rural students exhibit poorer mental health outcomes compared to urban peers, navigating compounded challenges like financial constraints, adjusting to new environments, and lacking familiar support. These vulnerabilities indicate that generalized welfare approaches are insufficient; interventions must be tailored to specific realities. Consequently, there is an urgent need for educational institutions in Bokaro Steel City to develop targeted mental health support systems. Colleges must establish dedicated

counseling centers and introduce mandatory stress management workshops and peer mentorship programs. Teachers and parents must foster supportive environments that value holistic growth over mere academic competition. Ultimately, addressing this mental health crisis is a societal imperative. By actively mitigating specific stressors, the educational ecosystem can transform into a nurturing ground, empowering students to successfully thrive in their future professional careers.

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