

Influence of Gender and Academic Pressure on Adolescent Mental Health in Medchal–Malkajgiri District, Telangana: A Cross-Sectional Study

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Abstract: Adolescence is a critical developmental period during which academic expectations, educational competition, interpersonal relationships, family expectations and school environments may influence psychological well-being. This study examined the relationship between gender, academic pressure, anxiety and depression among adolescents studying Intermediate I and II year in Medchal–Malkajgiri District, Telangana State in India. A cross-sectional study was conducted among 360 adolescents selected from 12 Intermediate colleges across three blocks/mandals Medchal, Malkajgiri and Quthbullapur. Data were collected using a socio-demographic schedule, the Patient Health Questionnaire-9 (PHQ-9), the Generalized Anxiety Disorder-7 (GAD-7), and a six-item academic-pressure scale developed for the study. Descriptive statistics, chi-square tests, Spearman's rank correlation and Cramer's V tests were used. Of the 360 respondents, 54.2 percent were female and 45.8 percent are male. The study reveals that gender was significantly associated with anxiety severity, $\chi^2 (3, N = 360) = 8.934, p = .030$, but not depression severity, $\chi^2 (4, N = 360) = 7.923, p = .094$. Academic pressure was positively associated with anxiety (Spearman's $\rho = .191, p < .001$) and depression ($\rho = .195, p < .001$). The findings indicate that academic pressure constitutes an important correlate of adolescent mental-health difficulties. The study recommends strengthening school- and college-based counselling, early identification of psychological difficulties, academic workload management, teacher support, life-skills education and gender-sensitive psychosocial interventions.

Keywords: Adolescents, Academic Pressure, Anxiety, Depression, Gender, Mental Health

1. Introduction

Adolescence is a formative stage characterized by substantial physical, psychological, cognitive and social development. During this period, young people develop greater independence, formulate educational and occupational aspirations, negotiate relationships with parents and peers, and begin making decisions that may influence their transition into adulthood. These developmental processes occur simultaneously with increasing

educational expectations and competition. Consequently, the school and college environment can become an important context for both psychological risk and protection.

The World Health Organization (WHO) identifies adolescence as a crucial period for developing social and emotional habits, while noting that anxiety, depression and behavioural disorders are among the important mental-health conditions affecting adolescents. Globally, approximately one in seven adolescents aged 10–19 years is estimated to experience a mental-health condition. WHO also emphasizes that supportive environments within families, schools and communities are important protective factors for adolescent mental health. (World Health Organization).

The Indian context warrants particular attention because adolescents experience educational competition alongside family expectations, examinations and concerns regarding future higher education and employment. These pressures may be particularly salient among students in the higher-secondary or Intermediate stage, where academic performance may influence access to subsequent educational opportunities. Sehgal et al. (2025) investigated socio-cultural challenges affecting adolescent mental health in India through surveys and interviews. Findings revealed that adolescents experience significant social stigma regarding mental health issues, leading to reluctance in seeking help. Participants preferred anonymous and technology-based support systems due to concerns about privacy and judgment.

Deb (2025) examined the mental health status of school students in India and highlighted that academic stress, parental expectations, corporal punishment, family violence, and social discrimination significantly affect adolescents' psychological well-being. The study noted that anxiety, depression, and suicidal ideation are increasingly common among school-going adolescents. Supportive family environments and positive parent-child relationships were found to be protective factors.

Suresh and Dar (2025) surveyed 1,628 young students across major Indian cities and found that approximately 70% experienced moderate to high anxiety, 60% showed depressive symptoms, and more than 70% reported emotional distress. Female students reported significantly higher distress levels. The study emphasized the urgent need for mental health support systems in educational institutions. Kumar et al. (2025) conducted field observations among adolescents in Kolkata and found increasing levels of emotional distress, substance abuse tendencies, and suicidal thoughts. Academic pressure, lack of emotional support, and poor communication between parents and adolescents were major contributing factors.

In the present study, anxiety was assessed using the Generalized Anxiety Disorder-7 (GAD-7) developed by Spitzer et al. (2006), while depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9) developed and validated by Kroenke et al. (2001). The PHQ-9 provides a brief measure of depressive symptom severity, while the GAD-7 is a widely used brief measure of anxiety symptoms.

2. Review of Literature

Academic stress has increasingly been recognized as an important psychosocial concern among adolescents. Academic pressure may arise when students perceive that the educational demands placed upon them exceed their perceived capacity to meet those demands. Examinations, assignments, marks, competition, parental expectations and future educational aspirations can collectively contribute to this pressure.

Deb et al. (2015) examined academic stress, parental pressure, examination anxiety and mental health among 190 Indian high-school students in Grades 11 and 12. Approximately 63.5% of participants reported stress due to academic pressure. The authors also reported positive relationships between academic stress and psychological problems, suggesting that academic pressure can occur alongside broader mental-health difficulties. Mayya et al. (2022) investigated academic stress among pre-university students in coastal Karnataka. Their work is particularly relevant to the present study because the participants were also students in the higher-secondary/pre-university stage. The study emphasized the importance of examining academic stress alongside sociodemographic characteristics in this age group.

Rentala et al. (2019) examined academic stress among adolescent girls in Dharwad, Karnataka. Their study included students in pre-university and university settings and demonstrated the relevance of educational stress during the transition from adolescence toward higher education. Parikh et al. (2019) provided a broader ecological perspective. Their qualitative investigation of adolescents in Delhi and Goa identified academic pressure alongside family, peer, school and neighbourhood factors as important sources of stress. This supports the view that academic pressure should not be understood in isolation from adolescents' social environments.

A 2025 study of 1,426 students in Belagavi district reported substantial academic stress and significant associations between academic stress and several sociodemographic characteristics, including gender (Haritay, S., et. al 2025). Another recent study among adolescents preparing for competitive entrance examinations in Karnataka found high levels of academic stress and parental academic pressure, together with anxiety and reduced well-being (Pienyu, K., et al 2024).

Spitzer et al. (2006) developed the GAD-7 as a brief measure of generalized anxiety symptoms, providing a practical instrument for identifying symptom severity in research and clinical contexts. Indian research has similarly reported an association between educational pressure and anxiety. Depressive symptoms during adolescence may be associated with several psychosocial factors, including academic difficulties and perceived performance pressure. The PHQ-9 is a nine-item measure developed to assess the presence and severity of depressive symptoms (Kroenke et al., 2001). Evidence from India suggests that depressive symptoms constitute an important adolescent mental-health concern. Balamurugan et al. (2024), in a

systematic review of Indian research, identified depression as a prominent mental-health problem among children and adolescents, followed by a range of emotional, behavioural and anxiety-related difficulties.

Recent research in Manipur found a positive association between academic stress and depressive symptoms among school-going adolescents, further supporting investigation of the academic-pressure–mental-health relationship in Indian educational settings (Khumanlambam, R., et al 2025).

3. Research Gap

The existing literature establishes that academic stress and adolescent mental-health problems are important areas of concern. However, several gaps remain. First, much Indian research has been conducted in particular cities or states, including Karnataka, West Bengal, Delhi and other locations. Second, different studies use different definitions and instruments for academic stress, making direct comparisons difficult. Third, relatively fewer studies simultaneously examine academic pressure, anxiety and depression among Intermediate I and II students in Telangana. The present study attempts to address this gap by examining these variables among 360 adolescents from Intermediate colleges in Medchal–Malkajgiri District, Telangana.

4. Objectives of the Study

The study was guided by the following objectives:

1. To assess the level of academic pressure among adolescents studying Intermediate I and II year in Medchal–Malkajgiri District.
2. To assess the levels of anxiety and depression among the adolescents.
3. To examine the association between gender and anxiety and depression levels.
4. To examine the relationship between academic pressure and anxiety among adolescents.
5. To examine the relationship between academic pressure and depression among adolescents.

5. Hypotheses

- H₁: There is a significant difference in mental-health challenges between male and female adolescents.
- H₂: There is a significant relationship between academic pressure and mental-health challenges among adolescents.

6. Research Methodology

6.1 Research design

The study adopted a cross-sectional, quantitative, descriptive-correlational research design. Data were collected at one point in time from adolescents studying Intermediate I and II year. The design was appropriate because the study sought to describe academic pressure and mental-health status and examine statistical

associations among the variables. Because the study was cross-sectional, the findings indicate associations rather than causal effects.

6.2 Study area

The study was conducted in Medchal–Malkajgiri District, Telangana State in India. The district is one of the most urbanized districts in Telangana. The sample was drawn from three blocks (mandals) namely – Medchal, Malkajgiri and Quthbullapur using purposive sampling based on the availability of government and private colleges.

6.3 Sampling and sample size

A total of 12 Intermediate colleges were included in the study. Using, simple random sampling four colleges were selected from each block. Later, from each college, 30 students were chosen consisting of 15 boys and 15 girls using simple random sampling. The final sample consisted of 360 respondents. The sample included students studying in various government and private Intermediate colleges.

6.3 Measurement Tools

Depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9) developed by Kroenke et al. (2001). The PHQ-9 consists of nine items scored from 0 to 3, producing a total score ranging from 0 to 27. Standard severity categories were used: 0–4: None/minimal, 5–9: Mild, 10–14: Moderate, 15–19: Moderately severe and 20–27: Severe. Anxiety was assessed using the Generalized Anxiety Disorder (GAD-7), developed by Spitzer et al. (2006). The total score ranges from 0 to 21. The severity categories are - 0–4: None/minimal, 5–9: Mild, 10–14: Moderate and 15–21: Severe. Academic pressure was measured using six statements like - I feel more academic pressure in my college; I feel more stress on my class assignments/academic works; I feel pressure to achieve higher marks. Responses were recorded on a five-point Likert scale (1- Strongly Agree to 5 – Strongly Disagree). The resulting total academic-pressure score ranged from 6 to 30. The mean item score ranged from 1 to 5. For descriptive interpretation, the study classified the mean score as: 1.00 – 2.33 = Low; 2.34 – 3.66 = Moderate and 3.67 – 5.00 = High.

7. FINDINGS:

7.1 Gender wise distribution:

From the figure no. 1, the data depicts that out of 360 adolescent respondents' majority (54 percent) belongs to female category and the remaining 46 percent are male in gender. Thus, the gender distribution was relatively balanced, although females constituted a slightly larger proportion.

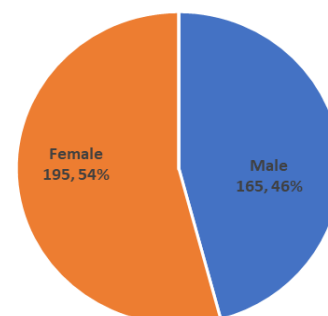


Fig No. 1 Gender distribution of respondents

7.2 Age-wise Distribution of Respondents

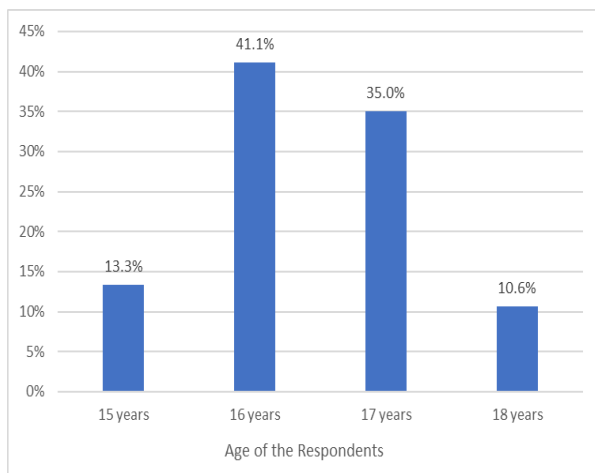


Fig no.2: Age-wise distribution of respondents

From the figure no. 2, the age-wise distribution indicates that respondents were between 15 and 18 years of age. Majority of respondents were 16 years old with 41.1 percent, followed by those aged 17 years with 35.0 percent. Respondents aged 15 years constitute 13.3 percent, while 18-year-olds represented the smallest proportion with 10.6 percent. Overall, 76.1 percent of the respondents were between 16 and 17 years, indicating that the sample was predominantly concentrated in the middle-adolescent age group.

7.3 Association between Gender and Anxiety among Adolescents:

Table no 1: Gender and level of anxiety among adolescent respondents

Gender	Level of Anxiety				Total
	None-Minimal	Mild Anxiety	Moderate Anxiety	Severe Anxiety	
Male	29 (17.6%)	51 (30.9%)	71 (43%)	14 (8.5%)	165 (100%)
Female	53 (27.2%)	37 (19%)	87 (44.6%)	18 (9.2%)	195 (100%)
Total	82 (22.8%)	88 (24.4%)	158 (43.9%)	32 (8.9%)	360 (100%)

From the table no. 1, the data reveals that among male adolescents, 17.6 percent were classified as having none-minimal anxiety, 30.9 percent having mild anxiety, 43.0 percent are of moderate anxiety and 8.5% having severe anxiety. Among female adolescents, majority of the adolescents with 44.6 percent having moderate anxiety, followed by 27.2 percent and 19.2 percent having none-minimal anxiety and mild anxiety respectively. Only, 9.2 percent are having severe anxiety. The distribution indicates that none-minimal anxiety was proportionately higher among females, whereas mild anxiety was proportionately higher among males. The proportions reporting moderate and severe anxiety were relatively similar between the two groups.

Table no. 2: Statistical test results between Gender and Anxiety

Gender relationship	χ^2	Df	p-value	Cramer's V	Conclusion
Gender $\times$ Anxiety	8.934	3	.030	0.158	Significant

From the table no. 2, the Pearson's chi-square test revealed that, there is a statistically significant association between gender and anxiety level, $\chi^2 (3, N = 360) = 8.934, p = .030$. However, the magnitude of the association

was small as the Cramer's $V = .158$. Thus, gender was significantly associated with the categorical distribution of anxiety levels among the adolescents, although the strength of the association was relatively small.

7.4 Association between Gender and Depression among Adolescents

Table no 3: Gender and level of depression among adolescent respondents

Gender	Level of Depression					Total
	None-Minimal level	Mild level	Moderate level	Moderately Severe level	Severe level	
Male	23 (13.9%)	42 (25.5%)	55 (33.3%)	40 (24.2%)	5 (3%)	165 (100%)
Female	29 (14.9%)	48 (24.6%)	43 (22.1%)	69 (35.4%)	6 (3.1%)	195 (100%)
Total	52 (14.4%)	90 (25%)	98 (27.2%)	109 (30.3%)	11 (3.1%)	360 (100%)

From the table no. 3, the data reveals that, among male adolescents, majority (33 percent) having moderate depression, followed by 25.5 percent and 24.2 percent with mild and moderately severe depression respectively. Whereas, nearly 14 percent having none-minimal depression and at last only 3 percent respondents are with severe depression. Among female adolescents, majority (35 percent) having moderately severe depression, followed by 25 percent, 22 percent and 15 percent respondents with mild, moderate and none-minimal level of depression respectively. Whereas, only 3 percent are having severe depression. The descriptive distribution indicates that male respondents had a higher proportion in the moderate depression category, whereas female respondents had a higher proportion in the moderately severe category.

Table no. 4: Statistical test results between gender and depression

Gender relationship	χ^2	df	p-value	Cramer's V	Conclusion
Gender $\times$ Depression	7.923	4	0.094	0.148	Not significant

However, the Pearson chi-square test did not reveal a statistically significant association between gender and depression level, $\chi^2 (4, N = 360) = 7.923$, $p = 0.094$ (table no. 4). The magnitude of the association was small as the Cramer's $V = 0.148$. Therefore, although some descriptive differences in depression severity were observed between male and female adolescents, the evidence was insufficient to establish a statistically significant association between gender and depression level in the study sample.

7.5 Academic pressure among Adolescents:

The overall academic-pressure score was: $M = 17.48$, $SD = 3.93$ on a possible range of 6–30. The mean item score was no approximately: $M = 2.91$ which falls within the moderate academic-pressure category.

Table no 5: Academic-pressure classification among adolescents

Academic pressure	Frequency	Percentage (%)
Low	66	18.3
Moderate	258	71.7
High	36	10.0
Total	360	100.0

The above findings indicate that, out of the total 360 respondents, majority of adolescents (71.7 percent) experienced a moderate level of academic pressure. A further 36 adolescents (10.0 percent) experienced high level of academic pressure, indicating that one in ten respondents reported relatively high academic pressure according to the study's measurement criteria. In contrast, 66 adolescents (18.3 percent) were classified as experiencing a low level of academic pressure. Thus, the distribution shows that the respondents were predominantly concentrated in the moderate academic-pressure category, while relatively smaller proportions were classified at the low and high levels.

7.6 Academic Pressure Influence on Anxiety and Depression:

Table no. 6: Statistical analysis of Academic Pressure – Anxiety and Depression Symptoms

Mental-health outcome	Spearman ρ	P	Cramer's V	Chi-square p
Anxiety	0.144	0.006	0.154	0.009
Depression	0.132	0.012	0.172	0.006

The findings presented in Table no. 6 demonstrate that academic pressure was significantly associated with both anxiety and depressive-symptom severity among the 360 adolescents included in the study. The results were examined using both categorical and ordinal approaches. Pearson's chi-square tests assessed whether the distribution of anxiety and depression categories differed across levels of academic pressure, while Spearman's rank-order correlations examined the direction and strength of the relationship between the ordered categories of academic pressure and mental-health symptom severity.

For anxiety, the Pearson chi-square analysis demonstrated a statistically significant association between academic-pressure level and anxiety severity, with $\chi^2(6, N = 360) = 17.15, p = 0.009$. The corresponding Cramer's V was 0.154, indicating that the association was relatively small in magnitude. The Spearman rank-order correlation was also statistically significant and positive ($\rho = .144, p = 0.006$). This indicates that, overall, adolescents reporting higher levels of academic pressure tended to have higher levels of anxiety severity.

Although statistically significant, the relatively small correlation coefficient indicates that the relationship was weak.

A similar pattern was observed for depressive symptoms. The Pearson chi-square test indicated a statistically significant association between academic-pressure level and depression severity, $\chi^2 (8, N = 360) = 21.31, p = .006$. The Cramer's V of 0.172 indicates a small association. The Spearman correlation was also statistically significant and positive ($\rho = .132, p = 0.012$), indicating that higher academic-pressure levels were generally associated with greater depressive-symptom severity. As with anxiety, however, the magnitude of the relationship was weak.

An important observation is that the strength of the relationship was modest for both outcomes. The Spearman coefficient was 0.144 for anxiety and 0.132 for depression, while Cramer's V was 0.154 and 0.172, respectively. Thus, although the relationships achieved statistical significance, academic pressure should not be interpreted as the sole or dominant determinant of adolescent mental-health difficulties.

Rather, the findings suggest that academic pressure represents one psychosocial factor associated with anxiety and depressive symptoms within the study population. Other factors, such as family relationships, peer interactions, school environment, socioeconomic circumstances, technology use, sleep, coping mechanisms and individual characteristics, may also contribute to adolescent mental health.

8. Implications of Social Work Practice:

The findings have important implications for social work practice in educational settings. Since academic pressure was significantly associated with both anxiety and depressive symptoms, social workers can undertake early screening, psychosocial assessment, individual counselling, stress-management interventions, and referral for adolescents requiring specialized mental-health care. School social workers can also facilitate support groups, strengthen peer and family support, and promote communication between students, teachers and parents. Steare et al. (2023) identified academic pressure as a potential target for preventive mental-health interventions, while school-based intervention research supports targeted approaches to anxiety and depression. In the Indian context, the longitudinal study by Mofatteh et al. (2021) also provides evidence linking academic stress with subsequent anxiety symptoms among adolescents.

9. Limitations of the Study:

Because data were collected at one point in time, causal relationships cannot be established. The finding that academic pressure is associated with anxiety and depression does not establish that academic pressure causes these conditions. Also, the study included 360 students from 12 colleges in three mandals. Therefore, generalization to all adolescents in Telangana should be undertaken cautiously. PHQ-9, GAD-7 and academic-

pressure responses were self-reported. Consequently, responses may be influenced by recall, social desirability or individual interpretation.

10. Conclusion:

The present study examined gender, academic pressure, anxiety and depression among 360 adolescents studying Intermediate I and II year in Medchal–Malkajgiri District, Telangana. The first hypothesis received partial support. Gender was significantly associated with anxiety severity categories, but no significant gender association was found for depression severity. Furthermore, continuous GAD-7 and PHQ-9 scores did not differ significantly between male and female adolescents. The second hypothesis received statistical support. Academic pressure demonstrated significant positive relationships with both anxiety and depression scores. The correlations were weak in magnitude, indicating that academic pressure represents one correlate among multiple factors potentially associated with adolescent mental health.

The findings reinforce the need to move beyond an exclusively academic-performance-oriented educational environment toward a student well-being-oriented approach. Social workers, teachers, counsellors and parents should collaborate to identify excessive academic pressure at an early stage, strengthen adolescents' coping and emotional-support systems, and facilitate timely referral where required. This is particularly relevant because systematic evidence indicates that academic pressure is consistently associated with adolescent mental-health problems, while family, peer and teacher support can function as protective resources. Colleges should therefore complement academic expectations with accessible counselling, supportive teacher–student relationships, appropriate workload management, life-skills education, parent sensitization and early identification of students experiencing psychological difficulties.

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