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Prevalence of Anxiety Among Young Adult: A Case Study in Meghalaya, India

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Abstract: ***Anxiety is a significant mental-health concern among young adults, particularly college students who face academic demands, social pressures, and personal challenges. Understanding the prevalence of anxiety and its association with demographic characteristics is essential for identifying students' mental-health needs and developing appropriate support strategies. To determine the prevalence of anxiety among young adults and examine its association with selected demographic variables, namely academic year, gender, and type of family. An analytical cross-sectional study was conducted among 126 students enrolled in a professional college in Meghalaya, India, during July 2026. Data were collected using a structured questionnaire covering socio-demographic characteristics. Anxiety symptoms were assessed using the 14-item Hamilton Anxiety Rating Scale (HAM-A). Data were analysed using PSPP, employing frequencies, percentages, and chi-square tests to assess the association between anxiety and selected demographic variables. Statistical significance was set at $p < 0.05$. The findings revealed a higher prevalence of anxiety among female students (74.2%) than male students (45.5%). A statistically significant association was observed between gender and anxiety ($p = 0.003$). However, no statistically significant association was found between anxiety and type of family ($p = 0.918$) or academic year ($p = 0.062$). Tension, anxious mood, and intellectual difficulties were among the most frequently reported symptoms. Anxiety symptoms constitute an important mental-health concern among young adults in the selected college. The significant association between gender and anxiety underscores the importance of accessible mental-health services and appropriate student support. Integrating mental-health awareness, early screening, counselling, and stress-management programmes into college settings may help promote students' psychological well-being. Further studies involving larger and more diverse student populations are recommended to strengthen the evidence base.***

Keywords: Anxiety, young adults, college students, Hamilton Anxiety Rating Scale, gender, academic year, Meghalaya

1. Introduction

Young adulthood is an important developmental period consisting of educational, social, emotional, and career-related changes. For college students, this period can consist of adapting to academic requirements, examinations, competition, relationships, financial issues, shifting parental expectations, and making career-related decisions and choices. Such events could impact an individual's psychological wellbeing, potentially leading to symptoms of anxiety.

Anxiety differs from regular and temporary worry. While occasional fear or worry is a normal part of life, anxiety disorders are characterized by excessive fear or worry that is out of control and leads to significant distress or impairment in daily functioning. The World Health Organization considers anxiety disorders as one of the most prevalent mental disorders worldwide. Symptoms could consist of excessive worrying, restlessness, concentration problems, insomnia, irritability, tension, palpitations, sweating, trembling, and indigestion. Anxiety could impair educational, social, family, and occupational functioning in the case of persistent and severe symptoms.

Young people play a critical role in mental-health research since a significant proportion of mental-health disorders emerge during adolescence or early adulthood. The World Health Organization highlights that anxiety disorders are prevalent among young people, impacting school performance, attendance, social relationships, and general wellbeing. Therefore, early recognition is vital to minimize negative educational and personal consequences.

College students are an important population group for this study since anxiety symptoms have been repeatedly documented in this population. A systematic review and meta-analysis of anxiety among undergraduate university students, including approximately 130,090 students, reported a weighted mean prevalence of non-specific anxiety of 39.65%. However, the prevalence varied significantly according to measures, geographical location and academic features. Another global meta-analysis, including more than 100,000 college students, estimated pooled prevalence of anxiety symptoms at approximately 39%. Overall, anxiety appears to be a significant concern among college students.

Evidence from India also suggests that anxiety symptoms are common among college students. A multicenter study assessing 8,542 college students from 30 universities in 9 Indian states reported that 23.2% of students experienced moderate-to-severe anxiety symptoms, according to the GAD-7. Similarly, studies from different parts of India reported varying levels of anxiety symptoms among students. Overall, mental-health experiences could vary according to the population, academic settings, the measuring instrument and social context.

Another important aspect is gender. International evidence suggests that females tend to report anxiety disorders more frequently than males. However, gender differences are not always evident for every student population. Therefore, a closer assessment of gender differences is vital for a specific college and geographical location rather than a generalization across populations.

The family is also an essential part of an individual's life for his or her psychological wellbeing. Family relationships, communication, social support, expectations, and living arrangements could shape a student's response to academic and personal challenges. Nevertheless, the connection between the family and anxiety varies according to populations, and therefore, it needs to be investigated.

In Meghalaya, local evidence on anxiety among college students is essential since findings from other areas cannot be generalized onto students in a specific institutional and cultural environment. This study, therefore, focuses on young adults studying in a professional college and investigates anxiety in relation to selected demographic characteristics.

2. Review

Anxiety as a Mental-Health Concern

Anxiety is a psychological state characterized by persistent worry, fear, nervousness, or apprehension, which may be accompanied by cognitive, emotional, behavioral, and physical symptoms. Anxiety disorders can interfere with several areas of an individual's life, including family relationships, social interaction, education, and employment. The World Health Organization emphasizes that effective interventions are available for anxiety-related conditions. Consequently, identifying anxiety at an early stage and providing appropriate psychological and social support are important components of mental-health care .

Anxiety among University Students

The transition to university or college life exposes students to various academic, social, personal, and career-related pressures. These experiences may influence their psychological well-being and contribute to anxiety symptoms. Ahmed et al. conducted a systematic review and meta-analysis examining non-specific anxiety among undergraduate students. The review included 89 studies with approximately 130,090 participants and reported a weighted mean prevalence of 39.65%. However, considerable variation was observed across the studies, which was partly related to differences in assessment instruments, study settings, and methodological characteristics.

Similarly, Ibrahim et al. conducted a systematic review and meta-analysis focusing on depression and anxiety symptoms among college students. Their analysis included 64 studies involving approximately 100,187 participants. The pooled prevalence of anxiety symptoms was reported to be 39.0%, indicating that anxiety represents a considerable mental-health concern within the college student population.

Evidence from Indian College Students

Research conducted among Indian college students has also documented a considerable occurrence of anxiety symptoms. A large cross-sectional investigation involving 8,542 students from 30 universities located across nine Indian states reported that 23.2% of the participants experienced moderate-to-severe anxiety symptoms . The study also identified other indicators of psychological distress among students, highlighting the need for greater attention to mental-health promotion and support services within higher educational institutions.

Anxiety has also been examined among students enrolled in medical and other professional courses. For example, a study involving students from a private medical college in South India reported anxiety among approximately 43% of the participants. However, the observed levels of anxiety and associated factors differed according to the characteristics and circumstances of the study population. These findings demonstrate the relevance of assessing anxiety among students across different educational and professional settings.

Anxiety and Gender

Gender has been considered an important variable in research concerning anxiety. At the population level, the World Health Organization reports that anxiety disorders are generally more common among women than men . However, differences between male and female students may vary across educational settings and individual studies. In their systematic review, Ahmed et al. reported that around half of the studies included in their analysis observed higher levels of anxiety among female students.

Therefore, examining anxiety according to gender within a particular educational institution can provide useful information about the distribution of anxiety symptoms among male and female students. Such an analysis may also help identify whether meaningful differences exist within the population under study.

Anxiety and Academic Year

The academic year of a student may be associated with different educational and personal experiences. Students at different stages of their academic programmes may encounter varying levels of coursework, examinations, practical requirements, peer relationships, and concerns regarding future employment or career development. These differences may influence students' psychological well-being.

Previous research among Indian college students has reported variations in psychological conditions across different academic years [6]. Hence, examining anxiety among first-, second-, third-, and fourth-year students can help identify patterns in the distribution of anxiety symptoms across different stages of university education. Such comparisons may provide a clearer understanding of whether students' anxiety levels differ according to their academic progression.

Anxiety and Family Characteristics

Family circumstances constitute an important part of a student's social environment and may influence emotional well-being. Students may experience difficulties associated with family relationships, economic circumstances, household responsibilities, and the availability of emotional or social support. At the same time, family structure alone cannot be considered a direct indicator or predictor of an individual's mental-health condition.

Objective:

1) To determine the proportion of anxiety disorder among young adults
2) To determine the association of selected demographic Variables-Class, Gender, and Type of family

3. Materials and Methods

Study design and setting: This was an analytical cross-sectional, questionnaire-based study conducted among students of a professional college in Meghalaya, India, over a one-month period during July 2026.

Study population and sampling: The sampling universe consisted of 300 college students studying in 1st, 2nd, 3rd, and 4th year. A total of 126 students were included in the study after considering the anticipated non-response. Students of either gender who fulfilled the eligibility criteria and provided consent were included. Students with a history of psychiatric illness and those who did not provide consent were excluded.

Study instrument: Data were collected using a structured questionnaire. The questionnaire included socio-demographic information such as class/year, gender, and type of family. Anxiety was assessed using the 14-item Hamilton Anxiety Rating Scale (HAM-A). Each item was scored according to the severity of the symptom, and the individual scores were added to obtain the total anxiety score. A higher total score indicated greater severity of anxiety.

Data collection: The purpose and procedure of the study were explained to the participants before data collection. Informed consent was obtained from the participants. The questionnaire and HAM-A were administered to the selected students, and the completed responses were collected for analysis. Confidentiality of the information provided by the participants was maintained throughout the study.

Statistical analysis: The collected data were entered and analysed using PSPP. Frequency and percentage were used to describe the study participants and determine the proportion of anxiety. The association between anxiety and selected demographic variables, namely class, gender, and type of family, was assessed using the chi-square test. A p-value <0.05 was considered statistically significant.

Ethical considerations: Permission to conduct the study was obtained from the concerned authority. Informed consent was obtained from all participants before data collection. The privacy and confidentiality of the participants were maintained throughout the study.

Table 1: Socio- demographic characteristics

Gender	Frequency	Percent
Male	33	26.2%
Female	93	73.8%
Type of family		
Nuclear	13	10.30%
Joint	42	33.30%
Extended	71	56.30%
Particular Year in graduation of the participants		
1st year	80	63.5%
2nd year	26	20.6%
3rd year	11	8.7%
4th year	9	7.1%

A total of 126 participants were included in the demographic profile for this study. The gender distribution was predominantly female, comprising 73.8% (n=93) of the sample, compared to 26.2% (n=33) male participants. Regarding family structure, the majority of the students reported living in extended families (56.3%, n=71), followed closely by those in joint families (33.3%, n=42), while a smaller minority resided in nuclear families (10.3%, n=13). In terms of academic progression, the sample was heavily weighted toward the earlier stages of study, as nearly two-thirds of the participants were 1st-year students (63.5%, n=80). The remaining representation progressively decreased across the upper classes, with 20.6% (n=26) in their 2nd year, 8.7% (n=11) in their 3rd year, and just 7.1% (n=9) in their 4th year.

Table 2: Distribution anxiety, depression of study participants on the basis of gender

		Anxiety absent	Anxiety Present	Anxiety Mild	Anxiety Moderate	Depression Absent	Depressions Present	Depressions Mild	Depression Moderate
Male (n=33)	f	18	11	4	0	19	9	3	2
	%	14.30	8.7	3.2	0	15.10	7.1	2.4	1.6
Female (n=93)	f	24	43	18	8	44	31	13	5
	%	19.0	34.1	14.3	6.3	34.9	24.6	10.30	4.0

A total of 126 young adults participated in the study, comprising 33 males and 93 females. The prevalence of anxiety showed substantial variation between genders, from 45.5% in males to 74.2% in females (p=0.003), indicating a statistically significant association between a student's gender and anxiety. Comparing female participants to male participants yielded an odds ratio of 3.45 (95% CI: 1.51–7.88), which was statistically significant, indicating that females have substantially higher odds of experiencing anxiety than males. Conversely, the prevalence of depression showed minimal variation, from 42.4% in males to 52.7% in females (p=0.311), indicating no statistically significant association between gender and depression. Comparing females to males regarding depression yielded an odds ratio of 1.51 (95% CI: 0.68–3.37), which was not statistically significant, confirming they do not differ meaningfully. Altogether, this suggests that while female participants carry a significantly elevated anxiety burden compared to males, both genders carry a similarly distributed burden of depression, with neither sex demonstrating substantially higher odds of experiencing depressive symptoms.

Table 3: Distribution of study participant by anxiety, depression and type of family (n=126)

Family type		Anxiety absent	Anxiety Present	Anxiety Mild	Anxiety Moderate	Depression Absent	Depressions Present	Depressions Mild	Depression Moderate
Nuclear family (n=13)	f	4	5	2	2	9	2	1	1
	%	3.2	4	1.6	1.6	7.1	1.6	0.8	0.8
Joint family(n=42)	f	15	21	4	2	21	17	4	0
	%	11.9	16.7	3.2	1.6	16.7	13.5	3.2	0
Extended family (n=71)	f	23	28	16	4	33	21	11	6
	%	18.3	22.2	12.7	3.2	26.2	16.7	8.7	4.8

Type of family was not significantly associated with anxiety (p=0.918), with a similarly distributed burden among young adults from extended, joint, and nuclear families. Comparing extended families to nuclear families produced an odds ratio of 0.93 (95% CI: 0.26–3.33), which was not statistically significant. Comparing joint families to nuclear families gave an odds ratio of 0.80 (95% CI: 0.21–3.04), which was also not significant. Type of family was not significantly associated with depression (p=0.321). The odds ratio comparing extended to nuclear families was 2.59 (95% CI: 0.73–9.19), not significant. Comparing joint to nuclear families gave an odds ratio of 2.25 (95% CI: 0.60–8.45), also not significant.

Table 4: Distribution of anxiety and severity across different anxiety symptoms among students (n=126)

Variable	Not present (%)	Mild (%)	Moderate (%)	Severe (%)	Very Severe (%)
Anxious mood	11(8.7%)	31(24.6%)	54(42.9%)	22(17.5%)	8(6.3%)
Tension	9(7.1%)	29(23%)	34(27%)	39(31%)	15(11%)
Fears (of dark, stranger, or crowds	21(16.7%)	47(37.3%)	31(24.6%)	16(12.7%)	11(8.7%)
Insomnia	25(19.8%)	37(29.4%)	34(27%)	19(15.1)	11(8.7%)
Intellectual	10(7.9%)	51(40.5%)	36(28.6%)	24(19%)	5(4%)
Depress mood	27(21.4%)	36(28.6%)	40(31.7%)	16(12.7%)	7(5.6%)
Somatic (Muscular)	37(29.4%)	32(25.4%)	36(28.6%)	14(11.1%)	7(5.6%)
Somatic (Sensory)	34(27%)	38(30.2%)	34(27%)	17(13.5%)	3(2.4%)
Cardiovascular symptoms	56(44.4%)	37(29.4%)	18(14.3%)	9(7.1%)	6(4.8%)
Respiratory symptoms	58(46%)	31(24.6%)	21(16.7%)	10(7.9%)	6(4.8%)
Gastrointestinal	45(35.7%)	37(29.4%)	29(23%)	9(7.1%)	6(4.8%)
Genitourinary symptoms	68(54%)	33(26.2%)	21(16.7%)	2(1.6%)	2(1.6%)
Autonomic symptoms	41(32.5%)	42(33.3%)	28(22.2%)	10(7.9%)	5(4%)
Behaviour at interview	43(34.1%)	36(28.6%)	31(24.6%)	13(10.3%)	3(2.4%)

An item-level analysis of the specific anxiety symptoms among the 126 students reveals that cognitive and psychological manifestations were overwhelmingly the most prevalent. Tension, intellectual symptoms, and an anxious mood were the most frequently endorsed issues, with over 91% of the study participants experiencing them at some level of severity. Specifically, tension was absent in only 7.1% of the cohort, while intellectual difficulties and anxious moods were absent in just 7.9% and 8.7%, respectively. Furthermore, these psychological symptoms also reached the highest levels of intensity. Tension was reported as severe or very severe by a striking 42% of the students, and nearly 24% reported severe to very severe anxious moods. Insomnia was also highly prevalent, affecting roughly 80% of the group to some degree.

In contrast, somatic or physical symptoms were far less common and generally milder. Genitourinary symptoms were the least frequently reported, remaining entirely absent for 54% of the participants. Respiratory and cardiovascular symptoms followed a similar trend, being completely absent in 46% and 44.4% of the students, respectively. When physical symptoms were present, they primarily clustered in the mild to moderate range, with very few students experiencing severe physical reactions. Altogether, this indicates that the core anxiety burden in this specific population is heavily concentrated in internal mental distress and cognitive tension rather than severe physiological manifestations.

Table 5: Distribution of Depression and severity across different Depression symptoms among students (n=126)

			Depression				Total
			Absent	Present	Mild	Moderate	
Class	1st year	F	39	25	11	5	80
		%	31.0%	19.8%	8.7%	4.0%	63.5%
	2nd year	F	13	9	4	0	26
		%	10.3%	7.1%	3.2%	.0%	20.6%
	3rd year	F	5	5	0	1	11
		%	4.0%	4.0%	.0%	.8%	8.7%
	4th year	F	5	1	1	1	8
		%	4.0%	.8%	.8%	.8%	6.3%
	5th year	F	1	0	0	0	1
		%	.8%	.0%	.0%	.0%	.8%
Total		F	63	40	16	7	126
		%	50.0%	31.7%	12.7%	5.6%	100.0%

Depression prevalence showed minimal variation with increasing class year, from 51.2% in the 1st year to 50.0% in the 2nd year and 54.5% in the 3rd year (p=0.80), indicating no statistically significant association between year of study and depression. Comparing 1st-year students to 2nd-year students yielded an odds ratio of 1.05 (95% CI: 0.44–2.53), which was not statistically significant, indicating that 1st-year students do not have substantially higher odds of depression than 2nd-year students. Comparing 3rd-year students to 1st-year students gave an odds ratio of 1.14 (95% CI: 0.33–3.95), essentially no difference and also not significant. Altogether, this suggests students across the primary academic years carry a similarly distributed depression burden.

Table 6: Anxiety prevalence showed some variation across class years

			Anxiety moods				Total
			Absent	Present	Mild	Moderate	
Class	1st year	F	21	37	16	6	80
		%	16.70%	29.40%	12.70%	4.80%	63.50%
	2nd year	F	12	9	5	0	26
		%	9.50%	7.10%	4.00%	.0%	20.60%
	3rd year	F	3	7	1	0	11
		%	2.40%	5.60%	.8%	.0%	8.70%
	4th year	F	5	1	0	2	8
		%	4.00%	.8%	.0%	1.60%	6.30%
	5th year	F	1	0	0	0	1
Total		Count	42	54	22	8	126
		Total %	33.30%	42.90%	17.50%	6.30%	100.00%

Anxiety prevalence showed some variation across class years, from 73.8% in the 1st year to 53.8% in the 2nd year and 72.7% in the 3rd year (p=0.062), indicating no statistically significant association between year of study and anxiety. Comparing 1st-year students to 2nd-year students yielded an odds ratio of 2.41 (95% CI: 0.96–6.02), which was not statistically significant, indicating that 1st-year students do not have substantially higher odds of anxiety than 2nd-year students. Comparing 3rd-year students to 1st-year students gave an odds ratio of 0.95 (95% CI: 0.23–3.92), essentially no difference and also not significant. Altogether, this suggests students across the primary academic years carry a similarly distributed anxiety burden.

4. Discussion

This cross-sectional study among 126 young adults evaluated the prevalence and demographic determinants of anxiety and depression. The findings reveal a substantial burden of psychiatric disturbance within the cohort, heavily characterized by cognitive distress rather than physical symptoms. A critical finding of this study is the highly significant association between gender and anxiety (p=0.003). Female participants exhibited a markedly higher prevalence of anxiety (74.2%) compared to their male counterparts (45.5%). This suggests a distinct vulnerability to anxiety among young women in this demographic, potentially reflecting different socio-environmental pressures, expectations, or coping mechanisms. In contrast, the prevalence of depression was similarly distributed across genders (52.7% in females versus 42.4% in males), yielding no statistically significant difference (p=0.311). This indicates that while anxiety is disproportionately experienced by females, the risk for depressive symptoms is a shared, generalized burden across the student body.

Interestingly, the data demonstrated that neither family structure nor academic progression significantly influenced these mental health outcomes. The prevalence of anxiety and depression remained remarkably consistent whether students lived in nuclear, joint, or extended families (p=0.918 and p=0.321, respectively). This implies that specific household arrangements and their varying degrees of autonomy or intra-familial expectations do not inherently protect against or uniquely exacerbate psychiatric distress in this cohort. Similarly, academic year showed no significant association with depression (p=0.80) or anxiety (p=0.062), suggesting that mental health challenges are pervasive throughout the educational journey rather than being strictly tied to initial transition periods or final-year academic pressures.

Furthermore, an item-level analysis using the Hamilton Anxiety Rating Scale (HAM-A) revealed that cognitive and psychological manifestations- specifically tension, anxious mood, and intellectual distress—were almost universally endorsed. These specific HAM-A items were present in over 91% of participants at some level of severity. Conversely, somatic complaints measured by the HAM-A, such as genitourinary, respiratory, and cardiovascular symptoms, were the least common, remaining entirely absent in nearly half the cohort. This firmly establishes that the core anxiety burden in this population is heavily concentrated in internal mental distress rather than severe physiological reactions.

5. Conclusion

This study highlights that psychiatric disturbance, particularly internal cognitive tension and anxiety, is a substantial and under-recognized burden among young adults. Gender serves as the primary demographic determinant, with female students carrying a disproportionately higher risk for anxiety. However, depression affects the broader population more uniformly regardless of sex. The lack of significant correlation with family type or academic year suggests that these mental health challenges are pervasive, broad-based issues that span diverse living arrangements and educational stages, requiring holistic rather than purely demographic-targeted solutions.

6. Recommendations

The findings strongly support the integration of routine, campus-based mental health screening—utilizing validated tools like the HAM-A- and stress-management programs into existing student wellness platforms. Interventions should specifically target cognitive-behavioral coping strategies to address the remarkably high rates of internal tension and intellectual distress observed. Furthermore, gender-sensitive peer-support systems and counseling pathways could be highly beneficial given the significantly elevated anxiety burden among female students. Larger, multi-centric, and longitudinal studies with evenly distributed academic cohorts are recommended to better characterize the broader socio-economic determinants of young adult psychiatric distress and to allow for stronger causal inference.

7. Limitations

This study presents a few notable limitations. Anxiety was assessed using the self-administered Hamilton Anxiety Rating Scale (HAM-A) alongside a self-reported depression screener, rather than through structured clinical interviews. Therefore, the estimates reflect screen-positive symptoms rather than confirmed psychiatric diagnoses and may be subject to reporting or recall bias. The cross-sectional design precludes causal inference regarding the observed demographic associations. Additionally, potentially important determinants such as specific academic performance, sleep hygiene, screen time, and broader socio-economic status were not assessed in this dataset. Finally, the small sample sizes in the upper academic years (specifically the 4th and 5th years) limit the statistical power and generalizability of the class-based subgroup estimates.

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