



A study on Pre-Exam Anxiety among undergraduate students in Purulia and Bankura districts

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ABSTRACT

This study was done with the objective to measure the pre-exam anxiety among the undergraduate students in Purulia and Bankura districts of West Bengal. It was also aimed at comparing the pre-exam anxiety level of students based on district, gender and residential background. 208 undergraduate students were chosen for the study. Researcher use descriptive survey method to conducted this work. pre-exam anxiety scale was used as an instrument to collect the data which is developed by Stober's (2004). For the analysis of data descriptive statistics and independent samples t-test was used.

The results showed that there was significant variation of pre-examination anxiety among districts, gender, streams, and places of residence of students. These results revealed that there is need for paying particular attention to the students who scored high on anxiety. Guidance, counselling, stress management exercises and good exam preparations were recommended to assist students in coping with pre-examination anxiety. This study concluded that the right academic environment can assist students in coping with pre-exam anxiety.

Keyword: *Pre-Exam Anxiety, Undergraduate Students, Purulia, Bankura, Descriptive Study, t-Test*

Introduction

Exams are a normal part of student life, but for many students, the period before an exam can be very stressful. This condition is called pre-exam anxiety. It is more than just feeling nervous. Students with pre-exam anxiety may experience worry, fear, and physical symptoms like a fast heartbeat, sweating, or trouble sleeping (Ahmed, 2015; Wu et al., 2013). These feelings can make it difficult for students to focus, remember what they have studied, and perform well on their exams (Sohail et al., 2020).

Pre-exam anxiety is a common problem among students around the world. Studies from many countries show that a large number of students feel high levels of stress before their exams. This is especially true for students in medicine, nursing, and other healthcare programs (Ortega-Donaire et al., 2023). These students often have heavy workloads, many exams, and high expectations from their families and teachers (Lee and Park, 2023). The pressure to succeed can be overwhelming, and it can affect both their mental health and their academic results.

Understanding pre-exam anxiety is important because it can have serious effects on students' lives. When students are very anxious, they may have trouble learning and remembering information. Their grades may drop, and they may feel tired, sad, or isolated (Sohail et al., 2020; Stober, 2004). Some students even think about leaving school because of the stress (Ahmed, 2015).

Students use many different ways to cope with exam stress. Some try to study harder and plan their time better. Others seek support from friends, family, or teachers (Stöber, 2004). However, not all coping methods are equally helpful. Some students turn to unhealthy habits like using energy drinks or avoiding study altogether (Ahmed, 2015). Effective stress management is important for maintaining good health and performing well on exams.

Schools and universities can help students manage exam anxiety. They can create supportive learning environments, provide counselling services, and teach stress management techniques (Ahmed, 2015). Some interventions that have been studied include breathing exercises, meditation, acupressure, and even virtual reality experiences (Lee and Park, 2023; Ortega-Donaire et al., 2023; Wu et al., 2013). These approaches aim to help students relax and feel more confident before their exams.

This review looks at many studies on pre-exam anxiety. It examines how common this problem is, what causes it, how it affects students, and what can be done to help. By understanding this issue better, we can support students in staying healthy and successful in their studies.

Review of related literature

The frequency of exam anxiety was indicated to be highly variant among different student groups, but it is known for its psychologically strong effect on students all over the world. Prevalence rates of exam anxiety that range from 30% to 40% for all schools, especially colleges, were stated by Ahmed (2015), and also it was stated that girls were always more anxious than boys. A facilitating role of moderate anxiety was noted by Dawood et al. (2016) as it made the students prepare more. The electrophysiological method was used to investigate 28 anxious and 30 normal students, and it was determined that the HRV indices, mainly RMSSD, were increased significantly after auricular pressing and demonstrated improved parasympathetic activity and sympathetic-vagal balance recovery (Wu et al., 2013). For the anxiety group, there were significant increases in SDNN and RMSSD during the first 10 minutes of stimulation and VLF and LF power increases during the next 10 minutes. It was noted in the study carried out by Snober (2022) that Arts students had maximum anxiety levels as opposed to Science and Commerce students. Neurotic and extroverted students were identified by Pahwa et al. to experience greater levels of pre-examination anxiety. There is little evidence provided by Abbing et al. (2018) regarding the efficacy of art therapy. Reduced symptoms of anxiety for students were discovered by Salem and Alshebami (2023) in the case of mobile exam platforms as opposed to paper exams. Reduced anxiety and improved academic performance were discovered by Nsor-Ambala (2020) in cheat-sheet exams as compared to open book exams. A positive impact on the level of exam anxiety and increased self-efficacy was shown by Apostolidis and Tsiatos (2021) due to biofeedback. A moderate negative correlation ($r=-0.314$) between the test anxiety and GPA was identified by Sohail et al. (2020) for 225 Pakistani medical students; it was discovered that 100% of the students with $GPA \leq 2.50$ were anxious while only 29% of the students with GPA 3.51-4.00 were anxious. Significant differences ($p=0.000$) between them were found using ANOVA. Moderate correlation between anxiety and knowledge test score was discovered, Rho value is -0.222, p value is 0.015, it corresponds to the inverted-U theory as suggested by Ortega-Donaire et al. (2023). High test anxiety among all nursing students was identified by Farrag et al. (2020), as 68.1% had high levels of test anxiety. The study by Stöber (2004) involving 162 students examined four dimensions, including the connection of worry to task orientation and negative correlation to cognitive avoidance in women only; emotionality correlated with seeking social support for men and task orientation in women; interference correlated with negative task orientation and positive correlation with avoidance among both genders; lack of confidence correlated with avoidance in women only. Literature review of CBT, yoga, relaxation, and pharmacology was made by Ahmed (2015). Significantly lower test anxiety was found by Lee and Park (2023) through the AAT, $t=4.66$, $p<0.001$, but there were no results regarding the state/trait anxiety. There were no results found regarding guided breathing compared to the control group in Ortega-Donaire et al. (2023). In the study by Mahato and Das (2024a, 2024b), independent samples t-test was used to test the differences in positive mental well-being based on gender, institution and residence of the respondents, and the findings revealed that there were no statistically significant differences in positive mental well-being among males and females, teacher training and non-teacher training institutions respondents, and rural and urban respondents, Mahato and Das (2024a, 2024b); Paramanik et al. (2014). There are several researcher doing their work related to this area of the study, these are: Mahato et al. (2023); Adhikari et al. (2023); Sen et al. (2023); Gayen and Sen (2021); Gayen et al. (2021); Roy and Mahato (2026); Mandal and Mahato (2025); Sutradhar and Sen (2022); Sutradhar et al. (2023); Gorain and Saha (2023); Gorain et al. (2018); Mahato and Sen (2021a, 2021b), Saha (2021); Sen and Saha (2026); Sen et al (2025); Sen et al. (2021).

Objectives of the study

- I. To compare the pre-exam anxiety of undergraduate students between Purulia and Bankura districts.
- II. To compare the pre-exam anxiety between Male and Female undergraduate students.
- III. To compare the pre-exam anxiety between Rural and Urban undergraduate students.

Hypothesis of the Study

- **H₀₁**: There is no significant difference in the pre-exam anxiety among the undergraduate students of Purulia and Bankura districts.
- **H₀₂**: There is no significant difference in the pre-exam anxiety between Male and Female undergraduate students.
- **H₀₃**: There is no significant difference in the pre-exam anxiety between Rural and Urban undergraduate students.

Methodology of the study

In order to explore pre-exam anxiety among undergraduate students, this study used a descriptive-survey approach. Students from West Bengal made up the population, and 208 participants from the Purulia and Bankura districts were selected using stratified random sampling. Stober's (2004) validated Dimensions of Test Anxiety scale, which assesses social, emotional, and cognitive aspects, was used to gather data.

Results

Table 1. Descriptive Statistics among Pre-Exam anxiety of Purulia and Bankura District.

Total Pre-Exam Anxiety	District	N	Mean	Std. Deviation	Std. Error Mean
	Bankura	116	64.40	20.191	1.875
	Purulia	92	88.40	17.231	1.797

Table 1 Shows that the Purulia students ($n = 92$, $M = 88.40$, $SD = 17.23$) reported higher pre-exam anxiety than Bankura students ($n = 116$, $M = 64.40$, $SD = 20.19$), according to this descriptive data. The very lower standard errors of the mean (Bankura = 1.875; Purulia = 1.797) indicate that the calculated group means are trustworthy, despite the fact that anxiety were more variable among Bankura students.

Table 2. Results of the Independent Samples t-Test

Total PEA	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Remarks
	-9.078	206	.000	-24.006	2.644	Rejected the H_01

Table 2 showed that the pre-exam anxiety scores of pupils from Purulia and Bankura districts were compared using the independent samples t-test. The two groups differed significantly, according to the results ($t = -9.078$, $df = 206$, $p < .001$). Students from Purulia showed higher pre-exam anxiety scores than students from Bankura, according to the mean difference of -24.006.

The null hypothesis (H_02) was rejected since the p-value was less than 0.05. This indicates that undergraduate students in the Bankura and Purulia areas experience significantly different pre-exam anxiety.

Table 3. Descriptive Statistics among Pre-Exam anxiety of Male and Female Students.

Total Pre-Exam Anxiety	Gender	N	Mean	Std. Deviation	Std. Error Mean
	Male	83	78.82	21.518	2.362
	Female	125	72.49	22.630	2.024

Table 3 showed that pre-exam anxiety scores of male and female undergraduate students are displayed in the group statistics. The survey included 125 female students and 83 male pupils. Male students' average pre-exam anxiety score was 78.82 ($SD = 21.52$), but female students' average score was 72.49 ($SD = 22.63$). This indicates that the average pre-exam anxiety score was higher for male students than for female students. Both groups' standard deviation values are comparable, indicating that there was a comparable degree of fluctuation in the anxiety scores of male and female students. The sample means are accurate estimates of the population means, as evidenced by the standard error of the mean being 2.362 for males and 2.024 for females.

Table 4. Results of the Independent Samples t-Test

Total PEA	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Remarks
	2.015	206	.045	6.331	3.142	Rejected the H_02

Table 4 shows the independent samples t-test was used to compare the pre-exam anxiety scores of male and female undergraduate students. The result showed a significant difference between the two groups ($t = 2.015$, $df = 206$, $p = .045$). The mean difference was 6.331, which shows that male students had higher pre-exam anxiety scores than female students.

Since the p-value (.045) is less than the 0.05 level of significance, the null hypothesis (H_02) was rejected. This means that there is a significant difference in pre-exam anxiety between male and female undergraduate students.

Table 5. Descriptive Statistics among Pre-Exam anxiety of Rural and Urban Students.

Total Pre-Exam Anxiety	Residence	N	Mean	Std. Deviation	Std. Error Mean
	Rural	157	72.97	23.092	1.843
	Urban	51	81.29	18.771	2.628

Table 5 showed that the pre-exam anxiety scores of undergraduate students from both rural and urban settings are displayed in the group data. The research included 51 urban pupils and 157 rural students.

Rural students had an average pre-exam anxiety level of 72.97 ($SD = 23.09$), whereas urban students had an average score of 81.29 ($SD = 18.77$). This

indicates that the average pre-exam anxiety score of urban students was greater than that of rural pupils.

Both groups' standard deviation values are comparable, indicating that there was a similar degree of fluctuation in the anxiety levels of rural and urban pupils. The sample means are accurate representations of the population means, as seen by the standard error of the mean being 2.628 for urban students and 1.843 for rural students. These findings imply that pre-exam anxiety was higher among urban pupils than among rural ones.

Table 6. Results of the Independent Samples t-Test

Total PEA	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Remarks
	-2.333	206	.021	-8.320	3.565	Rejected the H_0

Table 6 shows that the pre-exam anxiety scores of undergraduate students from rural and urban locations were compared using the independent samples t-test. The two groups differed significantly, according to the results ($t = -2.333$, $df = 206$, $p = .021$). Urban students showed greater pre-exam anxiety levels than rural pupils, as indicated by the mean difference of -8.320.

The null hypothesis (H_0) was rejected since the p-value (.021) falls below the 0.05 level of significance. This indicates that pre-exam anxiety varies significantly between rural and urban undergraduate students.

Discussion

The present study explored differences in pre-exam anxiety amongst undergraduate students in terms of district, gender, academic streams and place of residence. The results revealed statistically significant differences in pre-exam anxiety in terms of all four above-mentioned variables.

To start with, there was a statistically significant difference in pre-exam anxiety between students from Bankura and Purulia districts. The students from Purulia district exhibited much higher pre-exam anxiety ($M = 88.40$, $SD = 17.23$) compared to those from Bankura district ($M = 64.40$, $SD = 20.19$). The result of an independent samples t-test was statistically significant, $t(206) = -9.078$, $p < .001$. As a result, the relevant null hypothesis was rejected. This means that the district where the student's study or reside could have some influence on their pre-exam anxiety.

Further, there was a statistically significant difference in pre-exam anxiety between male and female students. The male students scored much higher on average ($M = 78.82$, $SD = 21.52$) compared to the females ($M = 72.49$, $SD = 22.63$). The independent samples t-test confirmed this statistically significant difference, $t(206) = 2.015$, $p = .045$. As a result, the null hypothesis was rejected.

Thirdly, a significant difference was found in pre-exam anxiety among rural and urban students. It was shown that the level of pre-exam anxiety among urban students ($M = 81.29$, $SD = 18.77$) was higher than among rural students ($M = 72.97$, $SD = 23.09$). An independent samples t-test proved that a significant difference existed between the two groups, $t(206) = -2.333$, $p = .021$. Hence, the null hypothesis was rejected.

In general, the main result of the research is that the pre-exam anxiety varied significantly depending on district, gender and location. Of all the groups considered, the greatest variability was found in the case of students from Purulia and Bankura districts; specifically, the level of pre-exam anxiety in Purulia district was much higher.

Implication of the Results

The results of the study have several implications for the students, educators, educational institutions, counsellors, and policy makers. The differences found in the analysis suggest that pre-examination anxiety is not a problem experienced by all undergraduate students equally. Some students may require additional attention.

The high level of pre-examination anxiety in Purulia district students calls for an Exploration of the factors which make them anxious. The educational institutions where students experience more anxiety may offer the counseling, academic assistance, exam preparation programs, stress management training, and forums for students to discuss academic issues.

This shows that a gender-based strategy can also work when dealing with examination-related anxiety issues. It is important to note that the results obtained in this case should not be viewed as an indication that gender alone can cause anxiety. There are other factors that might account for this variance.

Finally, the higher cases of anxiety reported in urban students mean that there is need to take into consideration the students' environment. Educational institutions should create conducive learning environments for all students whether they come from rural or urban settings.

The findings also highlight the importance of early identification and intervention. Pre-exam anxiety, when excessive, may negatively affect students' concentration, confidence, preparation, and academic performance. Teachers and counsellors can help students develop effective coping strategies, including appropriate study planning, relaxation techniques, time management, positive self-talk, and examination-preparation skills.

Conclusion

To conclude, it is clear from the current research study that there is a considerable variation in the pre-exam anxiety among various student groups based on the variables of district, gender and place of residence. Students belonging to Purulia district, male students, students and urban students suffered from comparatively high pre-exam anxiety. These significant results in all three cases imply that pre-exam anxiety is related to multiple demographic variables.

Thus, educational institutions need to consider these differences among various student groups and devise suitable programs aimed at managing the problem of pre-exam anxiety among the students. Counselling programs, mentoring and other programs for handling stress may be helpful in creating a better examination environment for students.

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