

# Gender Differences in Test Anxiety among Undergraduate Students

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## **Abstract:**

Test anxiety is a situation-specific anxiety that manifests as increased physiological arousal, cognitive worry, and behavioural tension in assessment situations. The present study is significant from both educational and psychological perspectives. The objectives of the study are: (a) to determine the significant difference in test anxiety between male and female undergraduate students, and (b) to analyse the levels of test anxiety among male and female undergraduate students. The researcher put forward one null hypothesis, i.e., there is no significant difference in test anxiety between male and female undergraduate students. The 'descriptive survey method' is used to prepare this research article. The population of the study encompass all the undergraduate students of Upper Assam. The sample of the study comprises 136 undergraduate students of Upper Assam. The sample are selected on the basis of their gender using 'proportionate stratified random sampling technique'. A standardized tool of test anxiety i.e., 'Test Anxiety Scale' developed by V. P. Sharma (2022) was used to collect the data. The findings of the study revealed that male and female students are differ significantly in relation to their test anxiety. Female undergraduate students tend to experience comparatively higher levels of test anxiety than male undergraduate students, while male students are comparatively more represented in the low test anxiety category. This pattern indicates that gender differences exist in the distribution of test anxiety levels among undergraduate students.

**Keywords:** Test Anxiety, Male, Female

## **1. Introduction:**

Test anxiety is a situation-specific anxiety that manifests as increased physiological arousal, cognitive worry, and behavioural tension in assessment situations. It is commonly understood by two primary components: emotionality and worry. Emotionality refers to physical reactions like tension and anxiety; and worry refers to cognitive concerns about failure and negative judgement. Test anxiety among undergraduate students has been repeatedly associated to low academic achievement, less focus, and a low working memory capacity (Cassady & Johnson, 2002). Understanding the variations in test anxiety between genders requires integrating cognitive, social, motivational, and biological perspectives. The cognitive-interference theory states that worry-related intrusive thoughts deplete cognitive resources, which hinders performance (Sarason, 1988). Attentional control theory states that anxiety affects task efficiency by impairing executive control and diverting attention to threat-related stimuli (Eysenck, Derakshan, Santos, & Calvo, 2007). Empirical studies have shown that female students are generally more

anxious about tests than male students (Chapell et al., 2005). These differences are often more prominent in the worry component, suggesting that cognitive worry may play a significant role in gender disparities. Socialization theory provides an extra paradigm for explanation. Gender-role expectations affect coping strategies, achievement motivation, and emotional expressiveness. Due to their socialization to be more conscientious and evaluatively sensitive, female may be more likely to experience anxiety in competitive academic situations. Males may be taught to repress their emotions or to attribute failure to other factors, which could lead to an underreporting of anxiety symptoms. Certain social norms may have an impact on how test anxiety appears and is felt. Furthermore, self-efficacy theory (Bandura, 1997) offers insightful information. Academic self-efficacy, or the conviction that one can perform academic tasks, has been proven to be negatively connected with test anxiety. When perceived competence is poor, avoidance behaviours and anticipatory concern are heightened. Gender variations in domain-specific self-efficacy, particularly in math and science, may have an impact on anxiety levels across disciplines (Pajares & Miller, 1994). When students feel that the requirements of the task at hand are incompatible with their own capabilities, their anxiety may rise. Additionally, motivational perspectives such as expectancy-value theory (Eccles & Wigfield, 2002) indicate that anxiety is impacted by the subjective significance attributed to performance expectations and success. It has been noticed that fear of failing and anxiety over getting a poor grade operate as mediating elements in this relationship. Additionally, biological explanations have been proposed. Research indicates that female report higher levels of trait anxiety and may be more sensitive to stress due to differences in their stress-response systems and hormonal effects (McLean & Anderson, 2009). However, gender differences in test anxiety are not solely biologically determined because biological predispositions interact with cultural and social factors. This complex perspective provides a solid theoretical foundation for empirical study and targeted intervention.

## **1.1 Significance of the Study:**

The present study is significant from both educational and psychological perspectives. One of the key elements that might affect students' academic achievement, motivation, and emotional health is test anxiety. It is easier to determine how gender may affect students' responses to testing conditions when one is aware of the variations in test anxiety between male and female students. The study's conclusions will assist educators and educational institutions in comprehending the level of anxiousness that students feel during exams. Teachers can use supportive teaching strategies, lessen excessive exam pressure, and provide a pleasant classroom environment that helps students better cope with anxiety if significant gender disparities are identified. The study is crucial for college guidance and counselling services as well. Counsellors can create suitable stress management programs, awareness workshops, and counselling interventions to help students build better coping techniques by determining which gender has higher levels of test anxiety. Additionally, by offering empirical data on gender variations in test anxiety among undergraduate students, the study contributes to the body of knowledge already available in educational psychology. Researchers who are interested in examining psychological variables influencing the educational experiences of students may find the findings to be useful information. Hence, the study is important for comprehending how students feel about exams and for assisting institutions and teachers in creating plans that promote students' academic achievement and psychological well-being.

**1.2 Objectives of the Study:** The research study has two basic objectives as follows:

**1.2.1** To determine the significant difference in test anxiety between male and female undergraduate students.

**1.2.2** To analyse the levels of test anxiety among male and female undergraduate students.

**1.3 Hypothesis:** The researcher has formulated one null hypothesis as follows:

**1.3.1** There is no significant difference in test anxiety between male and female undergraduate students.

**1.4 Operational Definitions of the Key Terms:** The conceptual definitions of the important terms are as follows:

**a) Test Anxiety:** This psychological state of behaviour is quantified on the basis of scores obtained in the 'Test Anxiety Scale' constructed and standardized by Dr. V. P. Sharma (2022), denoting higher score refers to higher state of test anxiety and vice-versa.

**b) Undergraduate Students:** Undergraduate students imply only to those students who are studying in B.A./ B.Sc./ B.Com. Programme in the colleges of Upper Assam.

**c) Gender:** Gender represents male and female undergraduate students who are studying in B.A./ B.Sc./ B.Com. Programme in the colleges of Upper Assam.

**1.5 Delimitations of the Study:** The researcher has delimited the study in the following aspects:

a) The study is delimited to only general degree students i.e., B.A., B.Sc., and B.Com. students.

b) The study is delimited to only selected general degree colleges of Upper Assam.

**2. Review of Related Literature:** The review of related literature provides a brief overview of the research related to the present study. Some of the pertinent findings are given below from the researcher's review of numerous research publications, theses, dissertations, abstracts, journals, and so on.

**Rana, R. K. & Mahmood, N. (2010)** studied on "The Relationship between Test Anxiety and Academic Achievement". The result of the study showed that there is a significant negative correlation between students' achievement scores and their test anxiety scores.

**Olaitan, A. W. and Moroluyo, A. T. (2014)** investigated about "Contribution of Test Anxiety, Study Habits and Locus of Control to Academic Performance". It was found that test anxiety, study habit, and locus of control are positively correlated with each other and also had a combined effect on the academic performance of students.

**Chaliha, A. (2015)** conducted research entitled as "Scholastic achievement of the postgraduate students of Dibrugarh University: a study of some associated variables". The study found a negative and insignificant relationship between post-graduate students' academic achievement and anxiety at Dibrugarh University.

**Bas, G. (2016)** had done research on "Teaching-Learning Conceptions and Academic Achievement: The Mediating Role of Test Anxiety". According to the results obtained, it was found that there were

significant relationships amongst teaching - learning conceptions, test anxiety, and academic achievement. Furthermore, it was concluded that test anxiety mediated the relationship between teaching-learning conceptions and academic achievement significantly.

**Mallik, P. S. (2016)** investigated about “Test anxiety of scheduled caste students and its relation with academic achievement”. The findings of the study revealed a gender-based discrimination among students regarding test anxiety. Again, in relation to locality (urban and rural), no significant difference was found.

**Baruah, G.S. (2017)** studied “A study on the influence of anxiety and feeling of security on the academic achievement of students in higher secondary examination of Kamrup District of Assam”. The study reveals that High Anxiety has negative influence on Academic Achievement. And that more students fall under Normal Anxiety than High Anxiety.

**Alemu, B. M. & Feysa, T. (2020)** had done research on “The relationship between test anxiety and academic achievement of grade ten students of Shirka Woreda, Oromia Regional State, Ethiopia”. The findings of the study showed that test anxiety is one of the factors that contribute to students’ underachievement and poor performance, but it can be controlled by providing them with the right kind of training on how to handle the situations that lead to test anxiety.

By reviewing the above research work, it leads to perceive that the study conducted in Assam is found to be relatively less in comparison to that in some other states in India. Additionally, the analysis of related literature highlights the fact that significantly less research has been done on the undergraduate students’ academic achievement who are studying in the colleges of Assam. Besides, there is a dearth of studies seen on associated variables of academic achievement i.e., test anxiety among the undergraduate students of Assam. Hence, this is the knowledge gap between the previous and present study which the researcher attempts to fill.

### 3. Methodology:

The ‘descriptive survey method’ is used to prepare this research article. The population of the study encompass all the undergraduate students of Upper Assam. The sample of the study comprises 136 undergraduate students of Upper Assam. The sample are selected on the basis of their gender using ‘proportionate stratified random sampling technique’.

In order to collect data, one standardized tool of test anxiety i.e., ‘Test Anxiety Scale’ developed by V. P. Sharma (2022) is used. For academic achievement, the scores of last ‘end semester examination’ is used. A brief description of the tool is given below:

**Test Anxiety Scale, by V. P. Sharma (2022):** This Test Anxiety Scale was developed and standardized by Dr. V. P. Sharma. This is a five-point scale consisting of 25 items, each item having 5 responses ranging from minimum to maximum levels of Test Anxiety. Time was limited to 30 minutes to conduct this test. The scale was developed in a way that enabled precise manual scoring. Scores showing 75th percentile and above that indicated the level of High Test Anxiety, whereas, scores showing 25th percentile and below that indicated Low Test Anxiety. Again, scores above 25th and below 75th percentile indicated the level of Normal Test Anxiety.

In the present study, the researcher has collected data both from primary and secondary sources. The researcher has collected data from students by visiting five (5) colleges of Upper Assam. Secondary sources of data included books, journals, articles, theses, encyclopaedias, and different e-resources.

For analysing and interpreting the data, the researcher has used percentage, graphical representation and Pearson coefficient of correlation.

**4. Analysis and Interpretation of Data:**

The researcher carried out an objective-wise analysis under the following sections:

**Objective 1: To determine the significant difference in test anxiety between male and female undergraduate students.**

Table 1: Significant Difference in Test Anxiety Between Male and Female Undergraduate Students

Variable	Gender	N	Mean	SD	z-value	df	p-value	Level of Significance
Test Anxiety	Male	61	47.23	6.22	2.27	134	0.002	Significant at both 0.05 and 0.01 level
	Female	75	50.64	7.15				

Source: I. Based on data obtained from field survey, 2024

II. Calculated in MS-Excel (2021)

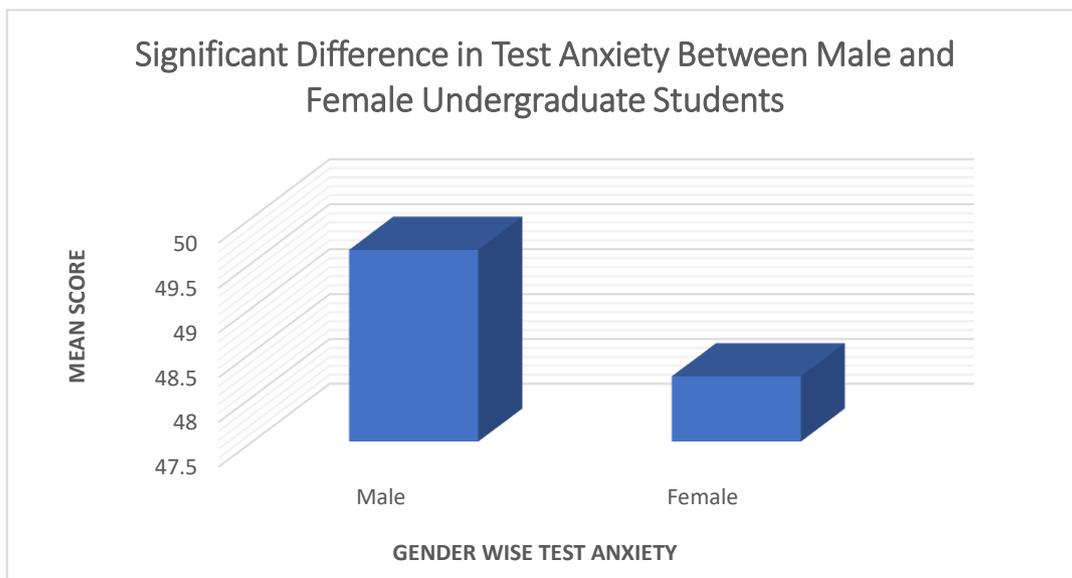


Figure 1: Graphical Representation of Significant Difference in Test Anxiety Between Male and Female Undergraduate Students

Table 1 and Figure 1 reveal the difference between male and female undergraduate students in relation to their test anxiety. It was found that there was statistically significant difference between male

and female undergraduate students at both 0.05 and 0.01 level of significance where z-value (2.27) with 134 df and p-value 0.002. Hence, the null hypothesis, i.e., “there is no significant difference in test anxiety between male and female undergraduate students” was rejected. It can be said that male and female undergraduate students are differ in relation to their test anxiety. Female students are comparatively more test anxious than male students.

**Objective 2: To analyse the levels of test anxiety among male and female undergraduate students.**

Table 2: Levels of Test Anxiety Among Male and Female Undergraduate Students

Sl. No.	RANGE	Levels of Test Anxiety	Male	Female	Male (%)	Female (%)
1	84 and above	High Test Anxiety	7	15	12	20
2	68 to 83	Normal Test Anxiety	27	36	44	48
3	67 and below	Low Test Anxiety	27	24	44	32
		<b>Total</b>	<b>61</b>	<b>75</b>	<b>100%</b>	<b>100%</b>
			<b>136</b>			

Source: I. Based on data obtained from field survey, 2024

II. Manual of Test Anxiety Scale of V. P. Sharma (2022)

III. MS-Excel (2021)

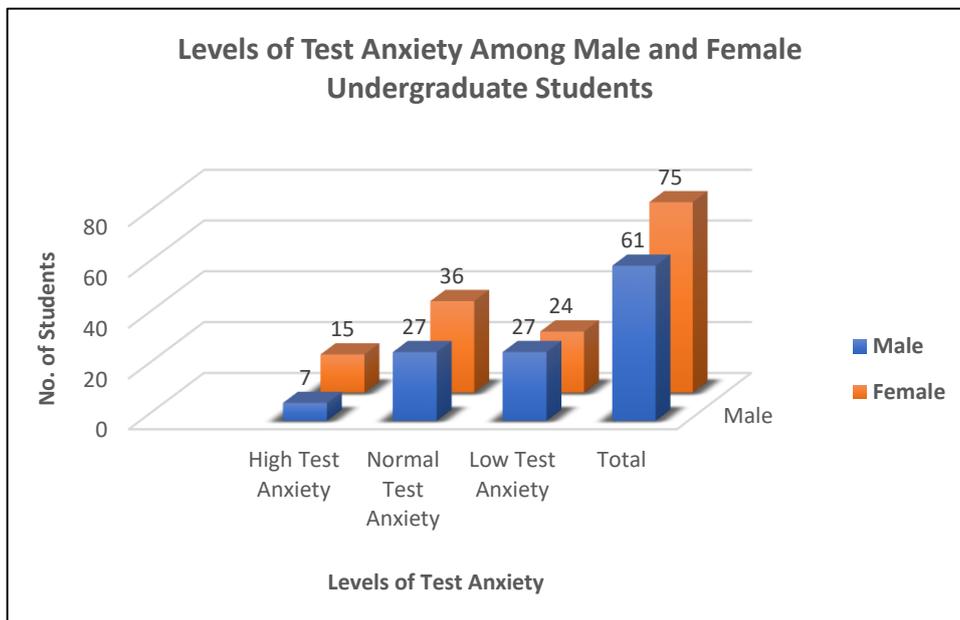


Figure 2: Graphical Representation of Levels of Test Anxiety Among Male and Female Undergraduate Students

Table 2 and Figure 2 reveal the levels of test anxiety among male and female undergraduate students. It is observed that there are three levels of test anxiety among undergraduate level students. Out of 136 students 22 students have found to be high test anxiety, 63 students have found to be normal test anxiety, and 51 students have found to be low test anxiety. Among 22 high test anxiety students, 7 (12%) are male and 15 (20%) are female. Likewise, among 63 normal test anxiety students, 27 (44%) are male

and 36 (48%) are female. In case of 51 low test anxiety students, 27 (44%) are male and 24 (32%) are female. From these data it is revealed that a higher proportion of female students experience high test anxiety compared to male students. At the same time, the percentage of female students in the normal test anxiety category is slightly higher than that of male students. In contrast, a larger proportion of male students fall into the low test anxiety category compared to female students.

## 5. Major Findings, Educational Implications and Conclusion:

By summarising the results, the researcher put forward the major findings as given below:

- a) Male and female undergraduate students differ in relation to their test anxiety. Female students are comparatively more test anxious than male students.
- b) The female undergraduate students tend to experience comparatively higher levels of test anxiety than male undergraduate students, while male students are comparatively more represented in the low test anxiety category. This pattern indicates that gender differences exist in the distribution of test anxiety levels among undergraduate students.

**Educational Implications:** The educational implications of the major findings of the study are as follows:

- a) Teachers and educational institutions should offer guidance, counselling, and stress-management programmes to help students, especially females to develop better coping mechanisms for exams because female undergraduate students were found to have relatively higher levels of test anxiety than male students.
- b) In order to reduce test anxiety and encourage better educational achievement among students, the results emphasize the necessity for colleges to implement supportive evaluation procedures and awareness programs including study skills instruction, relaxation techniques, and time-management tactics.

In conclusion, it can be stated that although a lot of study has been done on students' test anxiety, it is insufficient. Further research in this area is required to determine the causes of the gender differences in test anxiety. In this context, appropriate counselling by the teachers and parents is crucial. Teachers must be given training so they can recognize and assist students who are experiencing anxiety. Strategies for mental well-being should be incorporated into the curriculum.

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