GENDER DIFFERENCES IN TEST ANXIETY OF XI COMMERCE STUDENTS IN CHENNAI DISTRICT OF TAMILNADU

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Abstract

Test anxiety is the excessive worry or apprehension experienced specifically in examination situations, often leading to cognitive, emotional, and physiological symptoms that can interfere with academic performance. While mild nervousness is common, test anxiety is more severe and can cause students to blank out or perform below their capabilities despite adequate preparation. This study investigates test anxiety among XI Standard Commerce students in the Chennai District of Tamil Nadu, with a focus on identifying gender differences. The study involved 102 students, utilizing a quantitative survey method and simple random sampling. A validated questionnaire assessed their exam anxiety levels. The research aimed to evaluate general exam anxiety levels and identify potential gender differences. Results showed moderate overall test anxiety, with female students experiencing significantly higher anxiety levels than males. These findings highlight the need for gender-sensitive strategies and academic support to assist students in managing test-related stress.

Keywords: Test anxiety, gender differences, academic stress, survey method, strategies, support system

INTRODUCTION

An examination is crucial to assessing a student's academic progress and future prospects. However, the pressure to perform well, often gives rise to psychological challenges, one of the most common being test anxiety. Test anxiety goes beyond ordinary pre-exam nervousness; it is a psychological condition marked by intense worry, fear of failure, and physical symptoms like sweating, a rapid heartbeat, and mental blocks. These symptoms can significantly hinder a student's ability to recall information, concentrate, and perform well on exams.

In the Indian educational context, particularly at the higher secondary level, students are frequently subjected to academic stress due to competitive expectations from schools, parents, and society. Among these students, those in the Commerce stream of Class XI face unique academic challenges, including a curriculum that demands analytical thinking and a strong grasp of theoretical concepts. These pressures can contribute to elevated levels of anxiety in examination.

Research on gender differences in emotional responses to academic stress consistently shows that female students tend to experience higher levels of anxiety than their male counterparts. This study examines the level of test anxiety among XI Commerce students in Chennai District, Tamil Nadu, and explores potential gender-based disparities. The findings aim to help educators and policymakers understand the emotional challenges faced by students and develop strategies to improve their mental health and academic performance.

LITERATURE REVIEW

Test anxiety is a pervasive issue affecting students across various educational levels. Putwain and Daly (2014) found that 16.4% of English secondary school students reported high test anxiety, with a significantly higher proportion among females (22.5%) compared to males (10.3%). Similarly, Omoyemiju (2021) reported that nearly half of the senior secondary students in Nigeria experienced high test anxiety, irrespective of gender. These findings underscore the widespread nature of test anxiety and its potential to impede academic performance.

Numerous studies have documented gender disparities in test anxiety levels. González-Cabrera et al. (2019) observed that female secondary school students exhibited higher test anxiety than their male counterparts. This trend persists across different educational contexts; for instance, Maryam et al. (2023) found that female college students reported higher test anxiety levels than males. In the Indian context, Talesara and Bano (2020) highlighted that adolescent girls are more emotionally sensitive to academic evaluations, leading to elevated anxiety levels. However, some studies, such as Sandhu (2016), found no significant gender differences, suggesting that cultural and contextual factors may influence these outcomes.

The academic stream chosen by students can influence their experience of test anxiety. Kumar and Kumari (2023) reported that over 60% of XI standard Commerce students in Tamil Nadu experienced moderate to high levels of test anxiety, attributing this to the dual demands of theoretical and numerical subjects. Similarly, Ahmad and Sulaiman (2022) found that students studying in a second language, such as English for non-native speakers, faced additional stress, exacerbating test anxiety. These findings suggest that curriculum complexity and language proficiency are significant contributors to test anxiety. The educational environment, including factors like school type and parental expectations, plays a crucial role in shaping students' test anxiety. Reddy and Narayan (2022) observed that urban students in Chennai faced higher academic stress due to increased competition and parental expectations. Sharma and Bhardwaj (2021) further emphasized that parental pressure and peer comparisons significantly contribute to students' anxiety before exams. Moreover, supportive school environments and stress-reduction techniques, such as mindfulness and counseling interventions, have been shown to mitigate test anxiety (Putwain & Pescod, 2020). Psychological constructs like self-efficacy and stereotype threat also influence test anxiety. Stang et al. (2020) found that lower self-efficacy among female students contributed to higher test anxiety and lower assessment scores in physics courses. Similarly, Maries and Singh (2020) demonstrated that stereotype threat negatively impacted female students' performance in physics assessments. These studies highlight the importance of addressing psychological barriers to reduce test anxiety and promote academic success.

NEED AND IMPORTANCE OF THE STUDY

In today's highly competitive academic environment, students face growing pressure to perform well in exams. This pressure often leads to test anxiety, a psychological condition that can severely affect learning, memory recall, and performance outcomes. While test anxiety affects students across disciplines, those in Class XI Commerce stream are particularly vulnerable due to the transitional nature of their curriculum and the increased academic expectations they face. The Commerce stream involves subjects that demand both numerical

and theoretical understanding, making students prone to academic stress if foundational concepts are not strong.

The need for this study arises from the observation that test anxiety is not uniformly experienced, and factors such as gender can influence the degree of anxiety students feel. Research consistently shows that female students tend to experience higher levels of exam anxiety than male students, likely due to sociocultural expectations, self-perception, and differences in coping strategies (Yahaya et al., 2023). In addition, language of instruction may create barriers in comprehension and expression, especially for students who are taught in a second language, thereby increasing their stress during assessments (Ahmad & Sulaiman, 2022).

Furthermore, recent studies emphasize the growing need for mental health support in Indian schools, especially at the higher secondary level. According to a study by Kumar & Kumari (2023), more than 60% of higher secondary students in Tamil Nadu reported moderate to high levels of exam-related anxiety. Similarly, Reddy and Narayan (2022) found that students in urban educational environments, such as Chennai, are more prone to test anxiety due to academic competition and parental expectations.

Despite the importance of this issue, limited empirical research has focused specifically on XI Commerce students in Chennai District, and fewer still have explored how gender and language of instruction interact with test anxiety. Understanding these dimensions is crucial for developing effective intervention programs, including counseling services, anxiety-reduction workshops, and curriculum adjustments.

STATEMENT OF THE RESEARCH PROBLEM

The statement of the problem is "Test Anxiety in XI Commerce Students in Chennai District of Tamil Nadu".

OBJECTIVES OF THE STUDY

• To assess the level of exam anxiety among XI Commerce students in the Chennai district.

• To examine gender-based differences in test anxiety among XI Commerce students.

• To identify the factors contributing to exam anxiety in XI Commerce students.

• To suggest strategies to reduce exam anxiety, based on the study's findings.

HYPOTHESES OF THE STUDY

• There is a significant difference in test anxiety levels between male and female XI Commerce students in Chennai district.

• The level of test anxiety among XI Commerce students is not significantly high.

RESEARCH INSTRUMENT

A Test Anxiety Questionnaire was developed based on an extensive review of prior research and relevant test anxiety scales. The instrument was validated by the investigator and research supervisor to ensure its reliability and appropriateness for the study. The questionnaire consists of 35 items, including 1 negatively worded and 34 positively worded statements, assessed using a 5-point Likert scale with response options: Always, Often, Sometimes, Rarely, and Never. The items are designed to measure four key dimensions of test anxiety experienced by students: physical, emotional, behavioral, and cognitive aspects.

RELIABILITY ANALYSIS OF TEST ANXIETY QUESTIONNAIRE

The reliability of the Test Anxiety Questionnaire was evaluated through Cronbach's alpha, a measure of internal consistency, using data collected from students. Cronbach's alpha values range from 0 to 1 and are interpreted as follows:

Table 1: Showing the Interpretation of Cronbach's Alpha of Internal Consistency

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 2: Reliability Value of the Test Anxiety Tool

Reliability Statistics	
Cronbach's Alpha	No of Items
0.898	35

Based on the reliability statistics mentioned above, the numbers show 0.92, which was in the "Good" level of internal consistency as shown in Table 2. and indicates that the questionnaire is suitable.

VALIDITY OF THE TOOL

The validity was found to be (0.947) which indicates that it possesses high validity.

POPULATION AND SAMPLE OF THE STUDY

The validated instruments were utilized in the primary study to gather the requisite data. A random sample of 102 XI Commerce students from schools in the Chennai district of Tamil Nadu, India, was utilized for the current study.

RESEARCH METHOD AND TECHNIQUE

The study aims to gather data regarding Test Anxiety among XI Commerce Students. The researchers employed the normative survey methodology. The present study employed a simple random sample strategy using a questionnaire.

ANALYSIS AND INTERPRETATION OF DATA

The researcher analyzed participant data using SPSS 22.0 software. After transferring the data collected from the scales into the computer environment, descriptive statistics were conducted on the resulting dataset.

Hypothesis 1:

H₀ (Null Hypothesis): There is no significant difference in test anxiety levels between male and female XI Commerce students in Chennai district.

H₁ (Alternative Hypothesis): There is a significant difference in test anxiety levels between male and female XI Commerce students in Chennai district.

Table 3: Level of Test Anxiety Based on Gender Differences

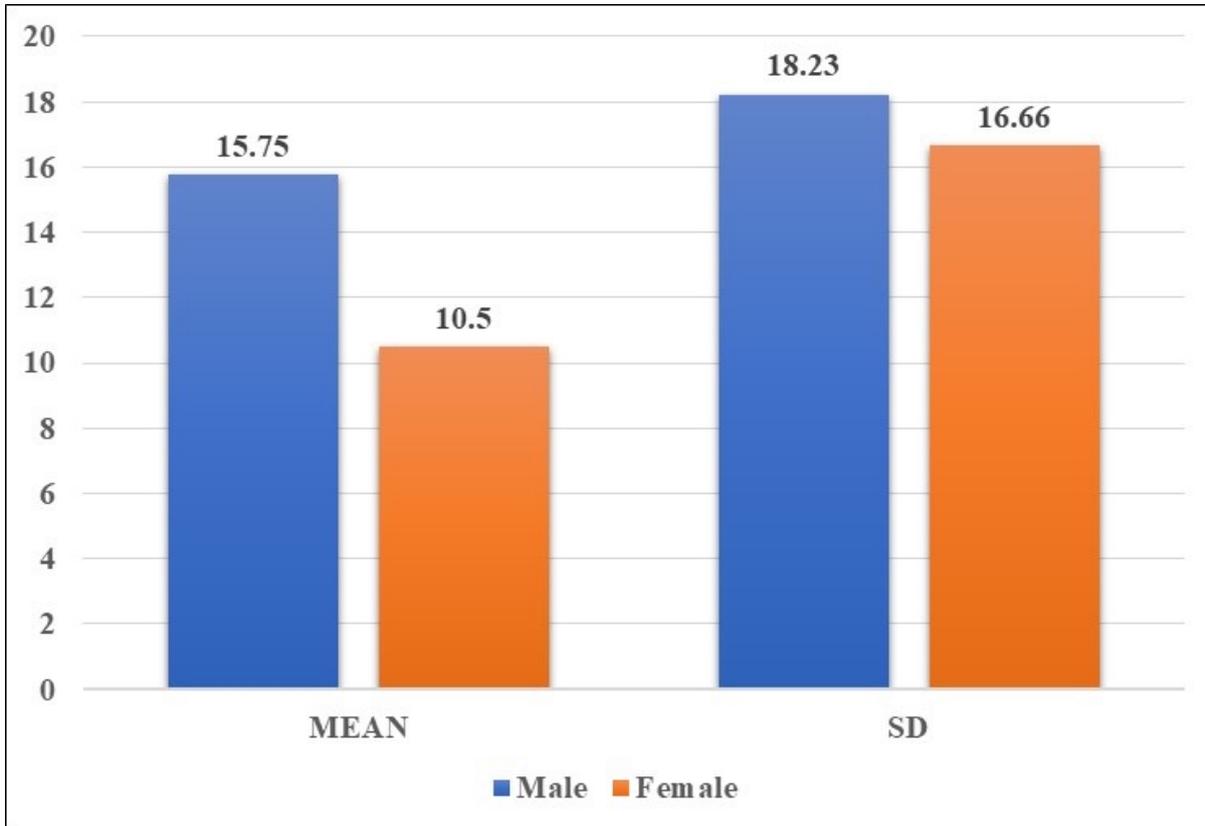| Category	N	MEAN	SD	t-value
Male	58	15.75	18.23	2.57
Female	44	10.50	16.66	

Level of Significance at 0.05%

Figure 1: Mean and SD of Level of Test Anxiety Based on Gender Differences

The examination of test anxiety ratings between male and female XI Commerce students, as illustrated in Table 3 and Figure 1, indicates a substantial disparity in exam anxiety levels (t = 2.57). The t-value surpasses the crucial value at the 0.05 significance level, leading to the rejection of the null hypothesis. The data indicate that male students exhibit markedly elevated levels of test anxiety relative to their female counterparts in this study.

Hypothesis 2:

H_0: The level of test anxiety among XI Commerce students is not significantly high.

H_1: The level of test anxiety among XI Commerce students is significantly high.

Table 4: Statistics Showing Level of Test Anxiety with its Frequencies with Scores

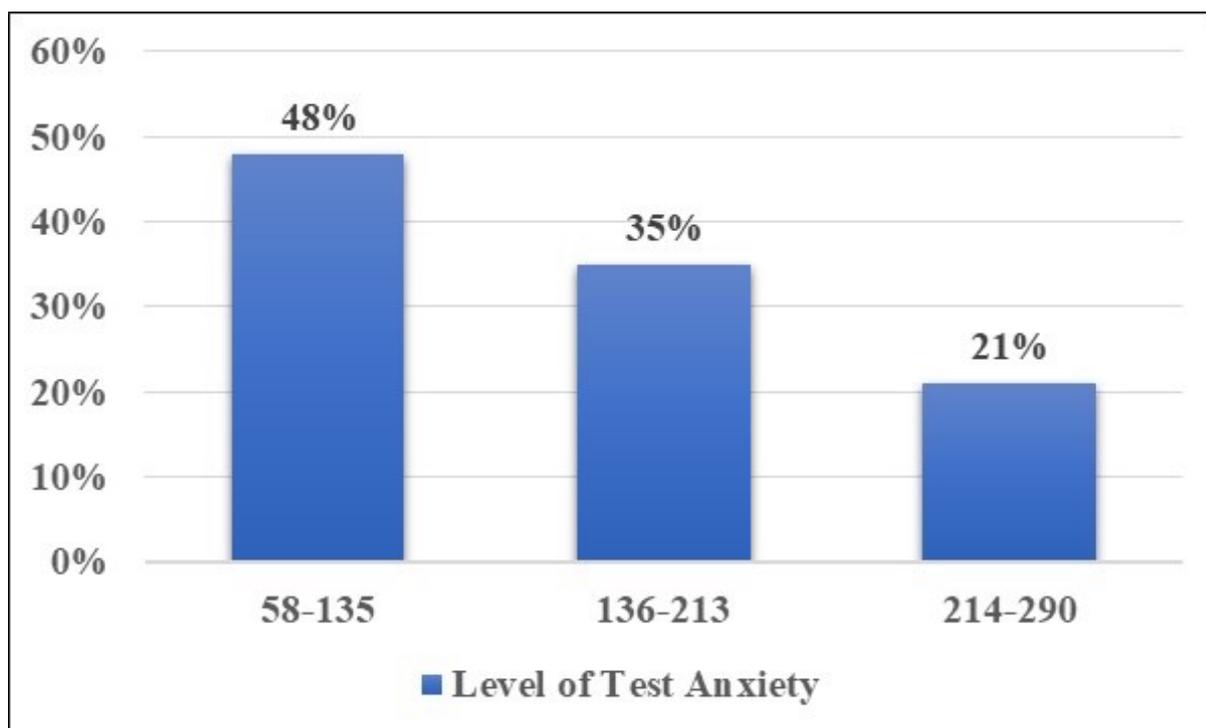| Calculated Score Range of Participants	Frequency Percentage	Level of Test Anxiety
58-135	48%	Low
136-213	35%	Moderate
214-290	21%	High

Figure 2: Statistics Showing Level of Test Anxiety with its Frequencies with Scores

The analysis of test anxiety scores among XI Commerce students, as presented in Table 4 and Figure 2, reveals that a considerable proportion of students experience varying levels of test anxiety. Specifically, 48% of students fall into the low-test anxiety range (scores between 58–135), indicating that over half of the participants experience relatively low levels of anxiety in testing environments. However, 35% of students exhibit a moderate degree of test anxiety (scores ranging from 136 to 213), suggesting that more than one-third of the participants experience significant anxiety that could negatively affect their exam performance. Notably, 17% of students demonstrate high test anxiety (scores ranging from 214 to 290), a level that warrants attention. This group may require targeted interventions, as elevated test anxiety can lead to reduced academic performance, emotional distress, and long-term negative perceptions of education. While the majority of students appear to manage test-related stress effectively, a substantial portion still experiences moderate to high anxiety, highlighting the need for school-based interventions to address test anxiety, particularly for at-risk students.

Nevertheless, the overall level of exam anxiety among XI Commerce students is not significantly elevated.

FINDINGS OF THE STUDY

•   A significant proportion of XI Commerce students (48%) exhibit mild test anxiety, whereas 35% indicate moderate anxiety levels, and merely 17% are categorized as experiencing high test anxiety. The results indicate that most students do not encounter considerable exam-related stress.

•   The t-test analysis indicated a substantial disparity in test anxiety levels between male and female students (t = 2.57). Male students exhibited elevated levels of test anxiety (Mean = 15.75) in contrast to female students (Mean = 10.50). Consequently, the null hypothesis is rejected, affirming that gender significantly influences test anxiety.

RECOMMENDATIONS

• Teachers can integrate mock assessments, time management exercises, and exam procedures into the curriculum to boost students' confidence and reduce exam-related stress.

• Schools should ensure the availability of qualified counselors to identify students with elevated anxiety levels and offer individual or group therapy, guidance, and emotional support.

• Parents should be educated on the signs of test anxiety and encouraged to create a supportive, low-pressure home environment that fosters positive attitudes toward learning and exams.

• Educators should guide students in developing effective study habits, such as planning, note-taking, and revision strategies, to reduce last-minute stress and improve performance.

• Promoting study groups and peer mentoring can help alleviate feelings of isolation, encourage collaboration, and provide both academic and emotional support.

• Teachers should monitor students' mental health and provide constructive feedback to reduce fear of failure and enhance motivation.

DELIMITATIONS

• The study is limited to students in the XI Standard Commerce stream.

• The research is confined to schools within the Chennai District of Tamil Nadu.

• The size of the sample may be increased to get a better results.

• The research focused solely on demographic variable: gender.

• Data was collected using a self-developed and validated test anxiety questionnaire comprising 35 items.

• The findings are based solely on students' self-reported responses, which may be subject to subjective bias.

CONCLUSION

This study seeks to assess the extent of test anxiety among XI Commerce students and investigate gender-based disparities in anxiety levels. The findings indicated that 48% of students suffer light test anxiety, 35% express severe worry, and merely 17% encounter extreme degrees of anxiety. The data indicate that although test anxiety exists, it is not pronounced for most of the group. Marked gender disparities were noted, with male students exhibiting elevated levels of test anxiety compared to their female peers, a difference that was statistically significant. The results highlight the necessity for educational institutions to tackle test anxiety, especially in male students, using specialized support systems and stress management techniques. The study promotes continuous psychological assistance, curriculum modifications, and awareness initiatives to assist kids in coping with test-related stress and improving academic achievement.

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