Research Article

A STUDY OF TEST ANXIETY ACROSS DIVERSE DEMOGRAPHIC PROFILES OF HIGHER SECONDARY STUDENTS

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ABSTRACT

In today's education system, the pursuit of academic excellence has become more career-oriented than knowledge-centered, i.e., which has shifted the focus from fostering intellectual curiosity to achieving high marks, creating a system where education is often perceived as mechanical rather than a process of meaningful learning. This mark-oriented approach places immense pressure on students, compelling them to prioritize scores over genuine understanding and passion for learning. Parents, driven by aspirations for their children's success, often impose high expectations, which, in turn, intensifies the pressure on students. This is particularly evident during the Higher Secondary examination, a crucial academic milestone that shapes future opportunities in higher education and employment. The heightened significance of these examinations generates excessive stress, leading to psychological challenges such as anxiety, tension, nervousness, and even depression among students. To conduct the present study, stratified random sampling technique was used to select the sample from various Higher Secondary schools, and the data was collected from a sample of 986 Higher Secondary students in Theni district, Tamil Nadu, India. The present study seeks to investigate these issues through a comparative analysis across various demographic variables. By examining factors such as gender, socio-economic status, and academic streams, the study aims to uncover underlying patterns and provide insights into the challenges faced by Higher Secondary students.

A Questionnaire on " Test Anxiety Scale "(TAS)-2023 constructed and validated, by the investigator with the guidance of the research supervisor - Dr.G. Arumugham, was administered to the sample and the collected data were analysed by adopting various statistical techniques. The study indicated that that exist significant difference on Test Anxiety among Higher Secondary students with respect to gender, locality of the school, type of school management, father's and mother's educational and occupational background, and highlighted that female students are experiencing more anxiety than the male students, rural students than urban students, the government school students, students whose father's are only with the school level education, mothers with college level education, father's being employed in private concern and mothers with other jobs experienced higher test anxiety than their counterparts.

INTRODUCTION

Education fosters all-round development in individuals, which is inherently harmonious and progressive. In India, the structure of general education follows the 10+2+3 system, where 10 years are devoted to Elementary and High School education, 2 years to Higher Secondary education, and 3 years to Higher Education (undergraduate classes). Currently,

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students typically determine their career paths after completing the Higher Secondary examination based on their results. Therefore, this stage holds immense importance in a student's life. Moreover, the Higher Secondary education stage coincides with adolescence, a period in a person's life that Hall described as one filled with stress and strain. Adolescence is a critical and significant developmental phase that everyone goes through. This stressful period often brings about anxiety, tension, and depression. The stress related to achieving high marks, planning for careers, and considering future opportunities often leads to Test Anxiety. Test anxiety is situational; it arises

when exams are near and subsides once they are over. It is a condition in which students struggle to focus on their tests and experience heightened tension and nervousness. They may also find it difficult to recall information they had studied or prepared for. This unpleasant state of inner turmoil is often accompanied by symptoms like fear, worry, fatigue, sweating, rapid heartbeat, restlessness, and nervousness. CHUKWU (2014) conducted a survey on Test Anxiety among secondary school students and found that male students experience higher levels of test anxiety compared to female students. Conversely, Sundararajan (2013) found no significant difference in the levels of test anxiety between male and female students in both private and government schools at the Higher Secondary level. These studies suggest that test anxiety levels vary across different times and places. Therefore, examining the levels of test anxiety among Higher Secondary students is undoubtedly a significant and engaging topic for research.

NEED AND SIGNIFICANCE OF THE STUDY

Modern education is primarily examination-driven, with students focusing solely on achieving high marks to secure a better future. Since examination results are closely tied to obtaining a good job, this often results in immense stress for students. The Higher Secondary stage is particularly critical, as it plays a key role in shaping the students' careers. The marks they receive guide them toward higher education opportunities, which are essential for achieving their career goals. In this context, test anxiety has become a prevalent issue among Higher Secondary students, often leading to increased tension and depression. Therefore, conducting a study to explore the varying levels of test anxiety among these students, with respect to factors such as gender, locality, and parents educational and occupational background, is of great importance.

DEFINITION OF TEXT ANXIETY

Zeidner (1998): Test anxiety is described as "a combination of emotional, physiological, and cognitive responses that occur during test situations, characterized by worry, fear of failure, and bodily symptoms such as sweating or nausea.

Mandler and Sarason (1952): According to these researchers, test anxiety is "a state of emotional and physiological arousal that impedes an individual's ability to perform well on an exam or test, caused by the perceived stress of being evaluated."

OPERATIONAL DEFINITION

Test Anxiety – refers to the fear, tension, or uneasiness experienced by students before, during, or after an academic evaluation, such as exams or tests. In this study, test anxiety will be measured using specific test anxiety scale (TAS) and scores will be used to categorize levels of anxiety among students.

It manifests through physiological symptoms (e.g., increased heart rate, sweating, or nausea), cognitive challenges (e.g., negative thoughts, difficulty concentrating, or blanking out), and behavioral responses (e.g., avoidance of studying or excessive worry).

Higher secondary students - refers to 11th-grade students enrolled in schools affiliated with the Tamil Nadu State Board.

OBJCTIVES

1. To find out the level of test anxiety among higher secondary students
2. To find out the level of different dimensions of test anxiety among higher secondary students
3. To find out whether there is significant difference in the test anxiety of higher secondary students in terms of a gender, locality of school, Fathers and mother's educational qualification and occupation.

HYPOTHESIS

1. The level of test anxiety among higher secondary students is high
2. The level of different dimensions of test anxiety among higher secondary students is high
3. There is no significant difference in the test anxiety of higher secondary students in terms of a gender, locality of school, Fathers and mother's educational qualification and their occupation.

METHOD OF STUDY

Descriptive survey method was adopted to conduct the present study by the investigator

POPULATION AND SAMPLE

The population of the present study covers all the higher secondary (only 1st year students), studying in various government, aided and private higher secondary schools in Theni district, Tamilnadu, approved by Tamilnadu state educational board.

To conduct the present study, stratified random sampling technique was used to select a sample of 986 higher secondary 1st year students from a random selection of 19 government, government aided and private higher secondary schools, from Theni District, Tamilnadu.

TOOL FOR THE STUDY

Test Anxiety Scale (TAS, 2023) developed by the Investigator and research supervisor was administered to the sample. The scale is a Likert type scale which includes 64 test items, each having 5 responses ranging from minimum to maximum level of test anxiety.

STATISTICAL TECHNIQUES

In the study different statistical techniques were used to analyze and interpret the result. They are

Descriptive Statistics:

- Graph
- Percentage
- Mean
- Standard Deviation

Inferential Statistics:

- t- test
- ANOVA

ANALYSIS AND INTERPRETATION OF DATA

Hypothesis – 1

The level of Test Anxiety among higher secondary students is high.

Table 1 Test Anxiety of higher secondary students

S. No	Variable	N	Mean	S.D.
1.	Test anxiety	986	192.29	8.16

The mean and standard deviation for the Test Anxiety of higher secondary students were computed for the entire sample is found to be 192.29 and 8.16 respectively. Hence, the hypothesis 1 is rejected and it is concluded that the Test Anxiety of higher secondary students is average.

Hypothesis – 2

The level of different dimensions of test anxiety among higher secondary students is high.
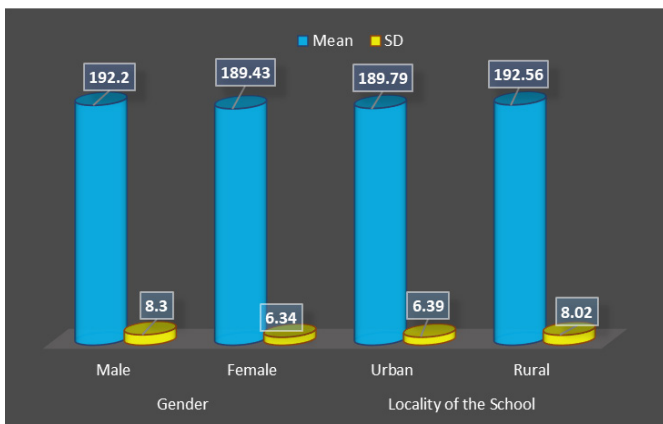
Table- 2

Dimensions	N	M (Mean)	SD
Cognitive Dimension	986	193.45	7.12
Emotional Dimension	986	188.67	8.03
Physiological Dimension	986	192.3	6.98
Behavioral Dimension	986	187.15	7.56

From Table - 2, the calculated mean and standard deviation for the dimensions of Cognitive, Emotional, Physiological, and Behavioral anxiety scores of the entire sample are found to be 193.45 and 7.12, 188.67 and 8.03, 192.30 and 6.98, and 187.15 and 7.56, respectively. Hence, the framed hypothesis 2 is rejected, and it is concluded that all the dimensions of test anxiety among higher secondary students are moderate in nature.

Hypothesis – 3 (a) (b)

There is no significant difference in the test anxiety of higher secondary students in respect of gender and locality of school.

Table-3 indicates that the calculated CR values are 5.39 and 4.99 for gender and locality respectively all of which are significant at the 0.05 level. Consequently, the null hypotheses 3(a), 3(b), are rejected, and therefore, it is concluded that gender and locality, significantly influence the test anxiety of higher secondary students. Additionally, it is inferred that female students and rural students, exhibit higher test anxiety compared to their counterparts.

Hypothesis 4

There is no significance between Test Anxiety of school students in respect of their Father's Educational Qualification.

From Table 4.0, ANOVA results shows, that the difference is significant [F = 7.77 > P at 0.05]. Hence, the framed null hypothesis 4 is rejected and it is concluded that there is a difference in the Test Anxiety of school students in respect of their Father's Educational Qualification. It is also inferred that students whose fathers are with School level educational qualification have higher level of Test Anxiety than the other school students. In order to find out the significant difference between sub-groups in their Test Anxiety the 't' value has been calculated.

The significant, F value 7.77 [Table 4.1] at 0.05 level in the Test Anxiety of school students with respect to their Father's Educational Qualification indicates that there must be at least one pair, which must be significantly different from others.

The mean difference in the Test Anxiety of school students by the pair (1,2) is 3.88, pair (1,3) is 2.97 and pair (2,3) is 6.99, which are significant at 0.05 level. (Uneducated & School; Uneducated & College level; School & College level) with respect to Father's Educational Qualification. It is also inferred that students whose fathers are with School level educational qualification have higher level of Test Anxiety than the other school students.

Hypothesis 5

There is no significant difference in the Test Anxiety of school students in respect of their Mother's Educational Qualification.

From Table 5.0, ANOVA results shows, that the difference is significant [F = 5.64 > P at 0.05]. Hence, the framed null hypothesis - 5 is rejected and it is concluded that there is a difference in the Test Anxiety of school students in respect of their Mother's Educational Qualification. It is also inferred that students whose mother are with College level educational qualification demonstrate higher level of Test Anxiety than the other school students. In order to find out the significant difference between sub-groups in their Test Anxiety the 't' value has been calculated.

The significant, F value 5.64 [Table 5.1] at 0.05 level in the Test Anxiety of school students with respect to their Mother's Educational Qualification indicates that there must be at least one pair, which must be significantly different from others.

The mean difference in the Test Anxiety of school students by the pair (1,2) is 2.55, pair (1,3) is 4.08 and pair (2,3) is 3.09, which are significant at 0.05 level. (Uneducated & School; Uneducated & College level; School & College level) with respect to Mother's Educational Qualification. It is also inferred that students whose mother's are with College level educational qualification have higher Test Anxiety than the other school students.

Hypothesis 6

There is no significance between Test Anxiety of school students in respect of their Father's Occupation.

From Table 6.0, ANOVA results shows, that the difference is significant [F = 7.88 > P at 0.05]. Hence, the framed null hypothesis (8h) is rejected and it is concluded that there is a difference in the Test Anxiety of school students in respect of their Father's Occupation. It is also inferred that students

Table - 3

Sl. No.	Variables		Number	Mean	Standard Deviation	CR Value	Level of Significant at 0.05 Level
1	Gender	Male	592	192.2	8.3	5.39	Significant
		Female	394	189.43	6.34		
2	Locality of the School	Urban	345	189.79	6.39	4.99	Significant
		Rural	641	192.56	8.02		

Table 4.0 ANOVA results for Test Anxiety of school students in respect of their Father's Educational Qualification

	Sum of Squares	df	Mean Square	'F' value	Level of Significance at 0.05 Level
Between Group	30.295	2	15.147	7.77	Significant
Within Groups	65485.998	983	66.619		
Total	65516.293	985			

Table 4.1 Significance of the Difference between the Pairs of Sub-Samples in respect of Father's Educational Qualification

Pairs of Sub Samples	Father's Educational Qualification	N	Mean	SD	't' value	Level of Significance at 0.05 level
Pair (1,2)	Uneducated	247	191.19	7.24	3.88	Significant
	School	542	194.91	8.43		
Pair (1,3)	Uneducated	247	191.19	7.24	2.97	Significant
	College Level	197	188.36	6.05		
Pair (2,3)	School	542	194.91	8.43	6.99	Significant
	College Level	197	188.36	6.05		

Table 5.0 ANOVA results for Test Anxiety of school students in respect of their Mother's Educational Qualification

	Sum of Squares	df	Mean Square	'F' value	Level of Significance at 0.05 Level
Between Group	517.282	2	258.641	5.64	Significant
Within Groups	64999.011	983	66.123		
Total	65516.293	985			

Table 5.1 Significance of the Difference between the Pairs of Sub-Samples in respect of Mother's Educational Qualification

Pairs of Sub Samples	Mother's Educational Qualification	N	Mean	SD	't' value	Level of Significance at 0.05 level
Pair (1,2)	Uneducated	296	188.14	6.05	2.55	Significant
	School	493	190.19	7.14		
Pair (1,3)	Uneducated	296	188.14	6.05	4.08	Significant
	College Level	197	192.83	8.52		
Pair (2,3)	School	493	190.19	7.14	3.09	Significant
	College Level	197	192.83	8.52		

Table 6.0 ANOVA results for Test Anxiety of school students in respect of their Father's Occupation

	Sum of Squares	df	Mean Square	'F' value	Level of Significance at 0.05 Level
Between Group	428.997	3	142.999	7.88	Significant
Within Groups	65087.296	982	66.280		
Total	65516.293	985			

whose fathers are in Private occupation have high level of Test Anxiety than the other school students. In order to find out the significant difference between sub-groups in their Test Anxiety the 't' value has been calculated.

The significant, F value 7.88 [Table 6.1] at 0.05 level in the Test Anxiety of school students with respect to their Father's Occupation indicates that there must be at least one pair, which

the pair (1,3) is 4.95, pair (1,4) is 3.77, pair (2,3) is 5.56 and pair (2,4) is 3.16, which are significant at 0.05 level. (Government & Private; Government & Others; Self-Employment & Private; Self-Employment & Others) with respect to Father's Occupation. It is also inferred that students whose fathers are in Private occupation shows higher level of Test Anxiety than the other school students.

Table 6.1 Significance of the Difference between the Pairs of Sub-Samples in respect of Father's Occupation

Pairs of Sub Samples	Father's Occupation	N	Mean	SD	't' value	Level of Significance at 0.05 level
Pair (1,2)	Government	148	188.43	6.09	0.77	Not Significant
	Self-Employment	296	190.16	6.46		
Pair (1,3)	Government	148	188.43	6.09	4.95	Significant
	Private	345	193.97	8.70		
Pair (1,4)	Government	148	188.43	6.09	3.77	Significant
	Others	197	192.32	7.57		
Pair (2,3)	Self-Employment	296	190.16	6.46	5.56	Significant
	Private	345	193.97	8.70		
Pair (2,4)	Self-Employment	296	190.16	6.46	3.16	Significant
	Others	197	192.32	7.57		
Pair (3,4)	Private	345	193.97	8.70	0.81	Not Significant
	Others	197	192.32	7.57		

Table 7 ANOVA results for Test Anxiety of school students in respect of their Mother's Occupation

	Sum of Squares	df	Mean Square	'F' value	Level of Significance at 0.05 Level
Between Group	365.772	3	121.924	5.88	Significant
Within Groups	65150.521	982	66.345		
Total	65516.293	985			

Table 7.1 Significance of the Difference between the Pairs of Sub-Samples in respect of Mother's Occupation

Pairs of Sub Samples	Mother's Occupation	N	Mean	SD	't' value	Level of Significance at 0.05 level
Pair (1,2)	Government	99	191.07	7.62	2.01	Significant
	Self-Employment	148	188.42	6.05		
Pair (1,3)	Government	99	191.07	7.62	0.22	Not Significant
	Private	197	189.20	6.63		
Pair (1,4)	Government	99	191.07	7.62	2.66	Significant
	Others	542	193.06	8.22		
Pair (2,3)	Self-Employment	148	188.42	6.05	0.99	Not Significant
	Private	197	189.20	6.63		
Pair (2,4)	Self-Employment	148	188.42	6.05	6.03	Significant
	Others	542	193.06	8.22		
Pair (3,4)	Private	197	189.20	6.63	5.18	Significant
	Others	542	193.06	8.22		

must be significantly different from others.

The mean difference in the Test Anxiety of school students by

Hypothesis 7

There is no significant difference in the Test Anxiety of school

students in respect of their Mother's Occupation.

From Table 4.24, ANOVA results shows, that the difference is significant [F = 5.88 > P at 0.05]. Hence, the framed null hypothesis 7 is rejected and it is concluded that there is a difference in the Test Anxiety of school students in respect of their Mother's Occupation. It is also inferred that students whose mother's are in other occupations have high Test Anxiety than the government, self-employed and private occupations. In order to find out the significant difference between sub-groups in their Test Anxiety the 't' value has been calculated.

The significant, F value 5.88 [Table 7.1] at 0.05 level in the Test Anxiety of school students with respect to their Mother's Occupation indicates that there must be at least one pair, which must be significantly different from others.

The mean difference in the Test Anxiety of school students by the pair (1,2) is 2.01, pair (1,4) is 2.66, pair (2,4) is 6.03 and pair (3,4) is 5.18, which are significant at 0.05 level. (Government & Self-Employment; Government & Others; Self-Employment & Others; Private & Others) with respect to Mother's Occupation. It is also inferred that students whose mothers are in other occupations have high Test Anxiety than the government, self-employed and private.

RECOMMENDATION AND SUGGESTION

Based on the findings of the study a few recommendations to be followed by the educational institution and parents to reduce test anxiety among students

- ❖ By organizing workshops on stress management and coping techniques.
- ❖ Provide training to teachers to identify and support students showing signs of test anxiety.
- ❖ By revising Assessment Methods - flexible exam patterns that include low-stress alternatives.
- ❖ Introduce diverse evaluation techniques (e.g., projects, oral presentations) to reduce the over-reliance on high-stakes exams.
- ❖ Incorporating Stress-Relief Programs - Include yoga, meditation, or physical activities in the school curriculum.
- ❖ Create peer support groups where students can share their concerns.
- ❖ Provide counseling services and ensure they are easily accessible to students.
- ❖ Conducting regular parent-teacher meetings to discuss students' emotional well-being.

- ❖ Conduct awareness campaigns about test anxiety and its impact on academic performance.
- ❖ Equip students with study strategies to build confidence in their preparation.
- ❖ Parents should avoid comparing their children with others, instead celebrating their small achievements to build their confidence.
- ❖ Creating a supportive environment by encouraging for open communication.
- ❖ Implementing these recommendations will not only help reduce test anxiety but also contribute to a healthier and more supportive academic experience for students.

CONCLUSION

The findings of the study revealed that the test anxiety among higher secondary students is average, and further inferred that significant difference exists with respect to certain demographic variables in terms of gender, locality of the school, type of educational institutions, father's and mother's educational and occupational backgrounds. These findings could contribute to developing strategies and interventions to create a more supportive and balanced educational environment, fostering both academic achievement and emotional resilience.

References

1. Zeidner, M. (1998). *Test anxiety: The state of the art*. Springer Science & Business Media.
2. Mandler, G., & Sarason, S. B. (1952). A study of anxiety and learning. *Journal of Abnormal and Social Psychology*, 47(2), 166-173.
3. Chukwu, C. (2014). Test anxiety among secondary school students. *Journal of Educational Psychology*, 12(3), 45-58.
4. Sundararajan, R. (2013). Gender differences in test anxiety among higher secondary students. *International Journal of Educational Research*, 7(2), 89-102.
5. Hall, G. S. (1904). *Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion, and education* (Vol. 1). D. Appleton and Company.
6. Spielberger, C. D. (1980). *Test anxiety inventory*. Consulting Psychologists Press.
7. Sarason, I. G. (1984). Stress, anxiety, and cognitive interference: Reactions to tests. *Journal of Personality and Social Psychology*, 46(4), 929-938.

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