



## State Trait Anxiety and Academic Achievement: A Correlational Study

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### Abstract:

*The present study wants to investigate the impact of state trait anxiety on academic achievement of IX grade secondary school students of Paschim medinipur district in west Bengal, India. In this study researcher attempted to examine the co-relation between state trait anxiety and academic achievement of the respondent. Total sample was 79 from two Government aided Bengali medium Secondary School affiliated from west Bengal board of secondary education. A standardized questionnaire developed by Charles D. Spielberger et. al. was used to collect requisite data from the respondent using purposive sampling procedure. Descriptive statistical techniques were used to analyze the data like Mean, SD, and Correlation. After analyzing data the result showed that no significance relation exists between state trait anxiety and academic achievement of IX grade secondary students. About fifty percent student has high state trait anxiety. Friendly relationship, congenial learning environment, employing efficient teaching strategies, seminar, awareness programme, and teacher's positive attitude will reduce students state trait anxiety.*

**Keywords:** State Trait Anxiety, Trait Anxiety, Academic Achievement, Co-Relation.

### Introduction:

Anxiety is a individual sensation of tension, detention, tension, and anxiety associated with nervous system excitation (Spielberger, 1983). High levels of anxiety interfere with our ability to remember at work and in school, for example, the normal life of a difficult person, for example, with activities and social life. Students with anxiety disorders demonstrate passive attitudes in their research, including lack of interest in learning, low performance in exam, and inadequate tasks.

Psychological symptoms of anxiety include increased body temperature, reddened eyes, increased breathing rate, increased heartbeat, dry throat, tension, panic, rapid rhythm of breathing etc. panic missed during the test, helplessness during the task, lack of interest in difficult subjects, and physiological symptoms include sweaty palms, cold,, and heart rate, stomach (Ruffins, 2007). The commonness of anxiety among university students is perceived as students and teachers also. Anxiety's definition According to Spielberger (1995), emotional states include feelings, tension, imprisonment, and the impact they have on the neurological system.

State anxiety is a temporary emotional state that reflects the interpretation of a specific stressful situation in a certain period of time or at this moment. It is a personality trait, meaning it's a comparatively enduring characteristic of a human being, rather than a momentary state. Anxiety is of two types i.e. trait and state.

The symptoms of these anxiety disorders can differ from what many people might anticipate, and they are very diverse. An example of trait anxiety is a feeling of unease brought on by a fear of harm or death. Fear that if society finds you guilty, you will be banished.

Anxiety that is a part of a person's personality or worldview is referred to as "trait anxiety." State anxiety, which is associated with trait anxiety, is anxiety that manifests only in reaction to stressful events. State and trait anxiety theories distinguish between anxiety about more permanent aspects of the personality (trait anxiety) and anxiety about temporary responses to stressful events (state anxiety). It is characterized by feelings of anxiety, panic and horror, frequently accompanied by physical symptoms such as the increase in the rate of heart pulse, physical temperature, perspiration and difficulty concentrating. An anxiety-related concept called national anxiety explains anxiety that occurs only in response to anxiety. Any types of anxiety can have a significant impact on many aspects of a person's life, including academic performance. Anxiety can hamper with a student's ability to perform well academically, leading to a number of negative outcomes. The main aim of this comprehensive study is to investigate the effects of anxiety on academic achievement by examining existing research and literature in the field.

**Academic achievement:** Here academic achievement refers to the maximum performance in all academic activities at school after a certain period of instruction. Student accomplishment includes the capacity and performance of the student in relation to human growth and physical, mental, emotional, and social development. Some of the factors that have a significant impact on students' academic performance include socioeconomic position, social anxiety, social phobia, anxiety, learning disabilities, parent styles, learning styles, classroom climate, etc.

**After getting the knowledge about** relationship between anxiety and academic performance of an individual, Stakeholder, parents, educationist and mental health professionals can gain insight into the challenges facing anxious students. It helps to make strategies to support their educational journey and reduce their anxious excitements.

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

Examining how state trait anxiety affects students' academic performance is the main objective of this study. In order to properly address this issue, proactive interventions by educators, school administration, and parents are essential. The findings can be used by educators to develop targeted teaching strategies that target students' test-taking preparation and worries about failing. By establishing friendly learning environment and employing efficient teaching strategies, teachers can minimize students' stress levels and raise their academic achievement. Educational institutions can use the findings of the study to develop modified assistance programs to help students deal with state trait anxiety. This may involve providing counseling, workshops on time management, and awareness programs focused on reducing anxiety and enhancing overall well-being.

### **Review of Related Literature:**

**Yarkwah.C. et. al.** (2024) showed that test anxiety has a significantly negative ( $\beta = -0.042, p < 0.05$ ) effect on students' academic performance. Specifically, a higher level of test anxiety is associated with a decrease in academic performance by a coefficient of 0.042.

**Sarah V. Alfanso et. al.** (2021) conducted on Trait anxiety and adolescent's academic achievement. They cited that Trait Anxiety factor significantly predicted the EF factors, such that higher levels of trait anxiety predicted higher performance on EF tasks factor.

**Mahajan, G. (2015)** showed that academic stress was significantly and negatively correlated with parental encouragement. No significant difference was found between academic anxiety of male and female secondary school students.

**Daniel Macher *et. al.* (2012)** Statistics anxiety, state anxiety during an examination, and academic achievement Statistics anxiety was the only variable related to state anxiety in the examination. Via state anxiety experienced before and during the examination, statistics anxiety had a negative influence on achievement. However, statistics anxiety also had a direct positive influence on achievement. This result may be explained by students' motivational goals in the specific educational setting

**Vitasaria. P. *et al.* (2010)** explored that study anxiety is negatively related to academic performance with a Person correlation coefficient was small. Again it can be concluded that there is a significant relationship between high level anxiety and low academic performance among engineering students.

**Bettina S. (2007)** found that a closer relationship was also found if anxiety was measured after the performance situation compared to being measured before.

### **Objectives of the Study:**

1. To find out the relation between State trait anxiety and academic achievement of the students according to streams.
2. To find out the level of state trait anxiety among students.
3. To find out the level of Academic achievement among students.

### **Hypothesis**

**H<sup>0</sup>1-** There is no significant relationship exists between State trait anxiety and Academic Achievement among the respondents in the study area.

### **Operational Definition of Related Terms:**

**State Trait Anxiety:** “Trait anxiety” refers to anxiety that is a component of a person’s personality or worldview. Anxiety that only arises in reaction to stressful conditions is referred to as state anxiety, which is a related notion to trait anxiety.

**Academic Achievement:** Here Academic Achievement means final exam score obtained by IX grade Secondary level Students. Final exam score at school in different subject areas has considered as academic achievement of the learners.

### **Statement of Problem:**

In light of the evaluations above, the issue could be described as “**State trait anxiety and Academic Achievement: A co-relational Study**”

### **Delimitation of the study**

- Only 79 students were selected for the present study as sample.
- This study was confined only Bengali speaking students.
- A standardized translated into Bengali version questionnaire was used to collect information from different IX grade school students.
- Only one psychological variable i.e. State trait anxiety was assigned for the study.

## Methodology of the Study:

In this study the researcher has been taken major variables-

1. State Trait Anxiety (Independent Variable)
2. Academic Achievement (Dependent Variable)

**Population:** The population of the study is all secondary school students, West Bengal, India. Purposive sample technique was used to collect data for the study. Only 79 students were taken for the study those who are studying in Bengali medium secondary school in Paschim Medinipur.

**Sample:** In the present study, a sample of 79 IX grade secondary school students from two schools was drawn. Purposive sampling procedure was employed to collect reliable data from the students.

**Tool:** The tool used for the present study was 'State Trait Anxiety Inventory' developed by .Charles D. Spielberger, Richard L. Gorsuch, and Robert E. Lushene in 1964. Standardized State Trait Anxiety Inventory (STAI) translated into Bengali language was used to collect trait anxiety of IX grade students. This inventory consists 20 items with four point scale 1.Not at all, 2.A little, 3.Somewhat, 4.Very much so carries 1, 2,3, and 4 marks respectively. The coefficient of this scale was ranging from .16 to .62. Class IX final exam result obtained by student is considered as academic achievement.

## Analysis and Interpretation:

**Statistical Techniques:** Different statistical techniques like mean, SD, co-efficient of correlation, t- test were used to analyze the data.

## Analysis and interpretation pertaining hypothesis-1

**H<sub>0</sub>- No significant correlation exists between State Trait Anxiety and Academic Achievement of IX grade secondary school students.**

**Table-2: Showing the particulars about mean, SD and r-value of IX grade secondary school students.**

<i>Variables</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>r</i>	<i>Level of Sig.</i>
State trait Anxiety	79	45.17	7.46	0.12	Not significant (.05)
Academic Achievement	79	50.27	16.26		

**Source:** Author's calculation based on field survey - 2024

The above table-2 showed that the mean score of State trait anxiety and academic achievement of secondary school level students is 45.17 and 50.27 respectively. The calculated 'r'-value is 0.12 which is not significant at 0.05 level i.e. no significant relationship exists between state trait anxiety and academic achievement of IX grade secondary level students. The null hypothesis will remain unchanged.

## Analysis and interpretation pertaining to objective- 2

### To find out the level of state trait anxiety among students

The state trait anxiety inventory is one of the important test to assess both state and trait anxiety separately each type STAI consists 20 items relating to state trait anxiety. The range of possible score varies from minimum score of 20 to a maximum score of 80. State trait anxiety scores commonly classified as low

anxiety 20-37, moderate anxiety 38-44, and high anxiety 45-80 according to Spielberger, D et. al. Here state trait anxiety score level of IX grade secondary students.

**Table -3: Showing the level of state trait anxiety of respondents**

Level Of STAI	Range	IX grade students Anxiety level	Percentage (%)
Low	20-37	11	13.92%
Moderate	38-44	29	36.70%
High	45-80	39	49.36%
Total		79	100%

**Data Source:** Author's calculation based on field survey - 2024

Above table shows that about 49.36 percent students have high state trait anxiety, 36.70 percent students have moderate state trait anxiety and 13.92% students are free from anxiety.

### **Analysis and interpretation pertaining to objectives -3**

#### **To find out the level of Academic achievement among students**

West Bengal Madhyamik grading system uses a seven point scale, with grades ranging from AA to D. It is to be noted that to pass the Madhyamik exam student must aim at achieving at least grade 'C'.

**Table- 4: Showing percentage analysis of level of academic achievement of the students**

Grading system in WB Board	Range	Level of academic achievement	Percentage (%)
AA	90-100	1	1.25
A+	80-89	2	2.50
A	60-79	22	27.5
B+	45-59	22	27.5
B	35-44	22	27.5
C	25-34	8	10
D	Below 25	3	3.75

**Source:** Author's calculation based on field survey - 2024

### **N.B. Scale taken from WBBSE**

From the above table it is clear that are 1.25percent students obtained AA, 2.5 percent A+, 27.5 percent students scored A, B+, B respectively. Only 8 percent and 3 percent students scored C and D respectively.

**Findings:** Results of this study revealed that correlation between state trait anxiety and academic achievement is positive but very low which indicates not significant relation between them. That means high state trait anxiety leads to decrease academic performance of the students and have negative impact on

academic achievement. Near about 50 percent students have high state trait anxiety. Ninth grade students are almost normally distributed in terms of academic achievement.

### **Limitations of the Study:**

The following are the restrictions of this study:

1. Only 79 secondary pupils in grade IX were taken into consideration for this study.
2. We only looked at one district of West Bengal.
3. We have only used a single year.
4. State trait anxiety used as psychological variable.

### **Conclusion:**

No significant association was found between state trait anxiety and academic achievement. That means, low correlation value does not indicate that low state trait anxiety can assist performance up to an optimal level and high level trait anxiety have negative impact to achieve academic score. Individuals with higher levels of trait anxiety will perform less on the exam. That is, those who have more mental anxiety will perform less well in the examination.

Reduced anxiety results in poorer performance, whereas increased anxiety and excitement can help performance reach its peak

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