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## **Math's Anxiety in Secondary School Students**

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### **Introduction**

Mathematics is defined as the science of measurement, quantity and magnitude. The dictionary meaning has been given that Mathematics is the science of number and space. It clearly indicates that Mathematics is an accepted science which deals with the quantitative aspects of our life and knowledge. It helps us in drawing necessary conclusions and interpreting various ideas with a useful meaning. Mathematics has its own language, its own tools and mode of operations. That is why Mathematics is taken as a chest filled up with the operations like measuring, weighing, counting etc. It helps in the proper understanding of the nature's work and complicated problems of life by converting them into its language of signs and symbols. Therefore the importance of mathematics is felt in daily life for the following:

- a. Commercial purpose
- b. Intellectual development
- c. Social and national development
- d. Higher education
- e. To express emotions
- f. Cultural developing
- g. Personal development

### **Aim for School Mathematics**

Developing children's ability for mathematisation is the main goal of mathematics education at school level. As mathematics is a compulsory subject, at the secondary school stage, access to quality mathematics education, is the right of every child.

- Children learn to enjoy mathematics rather than fear it.
- Children see mathematics as something to talk about, to communicate through, to discuss among them to work together on.
- Children understand the basic structure of Mathematics.
- Teachers engage every child in class with the conviction that everyone can learn mathematics.

## **Math's Anxiety**

Math's Anxiety is actually an emotional, rather than intellectual problem. However, math anxiety interferes with an individual's ability to learn maths and therefore results in an intellectual problem.

Math's Anxiety can cause one to forget various other important and necessary information and lose one's self-confidence. Research confirms that pressure of timed tests and risks of public embarrassment have long been recognized as source of unproductive tension among many students.

## **Symptoms of Math Anxiety**

### **Psychological Symptoms**

- Confusion
- Lack of confidence
- Panic-Stricken Worry
- Negative thoughts
- Sudden Memory Loss

### **Physiological Symptoms**

- Rapid heart beat
- Sweating
- Nausea
- Stomach disorders
- Headaches

## **Statement of the Problem:-**

**A study of Math's Anxiety in Secondary School Students**

## **Operational Definition:**

**Maths:** The Mathematics content in the Textbook of IX standard prescribed by NCERT, Delhi

**Maths Anxiety:** “A feeling of tension, apprehension or fear that interferes with math performance.”

**Secondary School:** Students of std IX fall in the age group of 12+ & 13+ years respectively.

### **Objectives of the Research**

To find out causes of Math's Anxiety in the students.

### **Assumption**

The performance of the students in mathematics is influenced by mathematics anxiety.

### **Limitations**

1. Samples will be drawn from school having C.B.S.E. curriculum in Kolhapur city.
2. The study will be restricted to Std- IX only.

### **Tools for Data Collection**

A test was selected that is “A self test for Math's Anxiety” for students and administered.

### **School Record:**

Summative Assessment – I grades in Mathematics received to find slow learners in Maths.

### **Statistical tools'**

For the present research “Percentage” is a statistics is a basic tool use for analysis and interpretation.

### **Analysis and Interpretation**

**Table – 1**

**Analysis of information about Mathematics subject.**

<b>Component</b>	<b>No. of Students</b>	<b>Percentage</b>
a. Addition	9	100%
b. Subtraction	9	100%
c. Multiplication	9	100%
d. Division	9	100%
e. Square	2	22.20%
f. Square root	3	33.30%

### **Observation**



It is seen that 100% of students can do basic mathematical operations like, addition, subtraction, multiplication, division. 22.2% can do square and 33.3% students can do square roots.

### Interpretation

Students are comfortable with four basic mathematical operations but they needs to concentrate on concepts of Square and Square roots.

**Table - 2**

**Views of Students about math's**

Component	No. of Students	Percentage
<b>Mathematics is difficult subject from</b>		
Std 1st	-	-
Std 4th	2	22.20%
Std 7th	7	77.70%

### Observation

About 77.7% students says Maths is difficult subject from 7<sup>th</sup> Std.,22.2% says it is difficult from 4<sup>th</sup> Std.

### Interpretation

Mathematics is not difficult for the students to grasp in the primary years but as they reach 7<sup>th</sup> Std, they face difficulty in Mathematics.

**Table – 3**

**Time Spend for Maths Study**

Component	No. of Students	Percentage
1 hour	6	67
2 hour	3	33
3 hour	-	-
4 hour	-	-
No time for study	-	-

### Observation

About 66.6% students spend 1 hour on study every day, 33.3% spend 2 hours on study every day.

### Interpretation

The above result shows that more than half of the students do not spend more than 1 hour for study and practice is negligent.

**Table – 4**  
**Nature of Study**

Component	No. of Students	Percentage
Reading Maths textbook	7	77.7
Solving exercises of textbook	2	22.2
Reading and solving examples of reference books	-	-

### Observation

As some students spend 1 hour in study, the nature of study is, Reading Maths textbook (77.7%) and they do not solve any textbook exercise. They do not refer any reference material.

### Interpretation

More than  $\frac{1}{2}$  of the students do not solve any textbook exercise and practice is negligent.

**Table- 5**  
**Help In Mathematics**

Component	No. of Students	Percentage
Father/Mother	4	44.40%
Brother/Sister	3	33.30%
Neighbor	-	-
No help (Independently)	2	22.20%

### **Observation**

44.4% Students take help from mother-father

33.3% Students take help from brother and sister

22.2% Students do independently

### **Interpretation**

Independent study of maths is negligible and  $\frac{3}{4}$  of the students take help of the others.

### **Conclusion**

1. The problems of students having Maths Anxiety are difficult level of some chapters in std IX
2. The problems of students having Maths Anxiety are Lack of basic knowledge from standard 1st to standard 4th
3. Lack of educational environment in family
4. Wastage of time in TV watching and sports
5. Unavailability of guidance in study from family members.
6. The students having Maths Anxiety are not identified earlier i.e. at lower standards.

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