

RELATIONSHIP BETWEEN MATHEMATICS PHOBIA AND ACHIEVEMENT IN MATHEMATICS OF HIGHER SECONDARY STUDENTS

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Abstract

The aim of the study is to determine the impact of higher secondary students' Mathematics phobia. This study adopted descriptive survey method. The sample of 300 higher secondary students was obtained from ten higher secondary schools of Srivilliputhur Taluk by simple random sampling method. The data is statistically analysed by using SPSS. The extent of higher secondary students in their Mathematics phobia is moderate in Virudhunagar district. The study shows that there is significant association between Mathematics phobia and achievement in Mathematics of higher secondary students.

Keywords: *Mathematics Phobia, Achievement, Descriptive, Significant, Survey Method.*

Introduction

The word "Education" stresses on school and the total development of physique and behaviour. The true teacher has to develop the best in the child body, mind and soul. The aim of all learning should be the development of character and personality. The education makes the child ready for further education, but also transforms him in to a good citizen to country. Education is the tool with which we have to evolve and diversity in to various professions and vocations. Children of today are the leaders of tomorrow. It is good to know ourselves and our surroundings and to acquire the ethical, moral, cultural, social and spiritual values. Education is the process in which the human race is shaping itself into the manifestation of its own potentialities, it is a means for human being to discover its goal of greatest power, happiness and service in life, Truth, Charity, Righteousness, Honesty, Sacrifice, Tolerance, Punctuality, Loyalty and Faithfulness are other virtues that should be taught to our children. Mahatma Gandhi strongly emphasises on "Truth is the ultimate aim of education" (Aggarwal, 1985, P-5). Education in a restricted sense is the change of behaviour of children in a planned environment. To shape the behaviour. The stages of development of children and their characteristics are very important factors which the teacher must know to be successful in his teaching.

Significance of the Study

Mathematics anxiety is a sense of dread and anxiety that disrupts the manipulation of numbers and solving of mathematical problems in many common situations. Mathematics

anxiety can make you forget and doubt yourself. The three classroom practices that are very common in the traditional Mathematics classroom and cause anxiety for many students are imposed authority, public speaking and timelines. Thousands of people experience Mathematics anxiety. Most of this occurs in the classroom as a result of not considering students' different learning needs. In this modern age, more and more Mathematics is needed. There are many social factors influencing the achievement of students, one of the important factor is family acceptance. In the education environment, many researchers have found that there is a positive and significant relationship between self-efficacy, anxiety and stressed with achievement. Mathematics phobia is an anxiety and phobia which obstructs the use of numbers and solving mathematics problem across a broad range of real life and academic contexts. Mathematics phobia can make one lose his/her memory and confidence. Most of the Phobia occurs in the classroom because different learning styles are not taken into account. There is a greater need of Mathematics in today's society. Mathematics phobia can be reduced by positive attitude towards Mathematics. Mathematics is a very abstract subject and the achievement will be influenced by his / her self- efficacy. With the above mentioned mind set, but no such study has been done in Mathematics phobia and Mathematics achievement. In the light of the above the researcher studied the achievement in Mathematics of the secondary school students in relation to their Mathematics phobia and achievement in Mathematics.

Objectives of the Study

1. To know the level of Mathematics phobia of higher secondary students.
2. To find out the level of achievement in Mathematics of higher secondary students.

Hypothesis

1. There is no difference among first group and second group higher secondary students in their Mathematics phobia.
2. There is no significant difference among government, aided and private higher secondary students in their Mathematics phobia.
3. There is no significant difference in the Mathematics achievement of government, aided and private higher secondary students.

Methodology

The researcher used a descriptive survey research method for this study.

Population for the Study

Higher secondary school students of Srivilliputhur Taluk, Virudhunagar district of Tamilnadu are the population of the current study.

Sample for the Study

The researcher used simple random sampling to select the sample. The sample for this study is 300 higher secondary students from 10 higher secondary schools in Virudhunagar district.

Tool

- Mathematics phobia Scale developed and validated by investigator and guide.
- The achievement in Mathematics is the marks achieved by all the higher secondary school students in Mathematics in the quarterly examination.

Statistical Techniques

Percentage, mean, standard deviation and correlation.

Analysis of Data**Objective: 1**

To find out the level of Mathematics phobia of higher secondary students.

Table 1 Level of Mathematics phobia of Higher Secondary Students

Low		Moderate		High	
Count	%	Count	%	Count	%
71	27.3	196	65.3	33	11.0

As we can see in the above table, of higher secondary students have low, 65.3% of them have moderate and 11.0% of them have high level of Mathematics phobia.

Objective: 2

To know the achievement level of higher secondary Mathematics.

Table 2 Level of Achievement in Mathematics of Higher Secondary Students

Low		Moderate		High	
Count	%	Count	%	Count	%
35	11.7	195	65.0	70	23.3

According to the above table, 11.7% of higher secondary students have low, 65.0% of them have moderate and 23.3% of them have high level of Achievement in Mathematics.

Null Hypothesis: 1

Government, aided and private higher secondary students are not significantly different in their Mathematics phobia.

Table 3 Difference among Government, Aided and Private Higher Secondary Students in Their Mathematics Phobia

Variables	Sources	Sum of square	Degrees of freedom	Mean square	Calculate 'F' Value	Remarks at 5% Level
Mathematics phobia	Between	3424.942	2	1712.471	13.914	S
	Within	36552.428	297	123.072		
	Total	39977.370	299			

One can deduce based on the table above that, the table value (3.00) under df (2, 297) is lower than the calculated F (13.914) at 5% level of significance. Therefore the null hypothesis is rejected. It demonstrates that the difference between the government, government-aided and private school students in terms of Mathematics phobia is strong.

Null Hypothesis: 2

Government, aided and private higher secondary students show no significant difference in their success in Mathematics.

Table 4 Difference among Government, Aided and Private Higher Secondary Students in their Achievement in Mathematics

Variables	Sources	Sum of Square	Degrees of Freedom	Mean Square	Calculate 'F' Value	Remarks at 5% Level
Achievement in Mathematics	Between	31.618	2	15.809	0.115	NS
	Within	40696.179	297	137.024		
	Total	40727.797	299			

The conclusion based on the above table that calculates the value of F (0.115) falls below the value in the table (3.00) when the value of df (2, 297) is considered and at 5% of significance level. Therefore the null hypothesis is accepted. It demonstrates that the government, government aided and private school students have no significant difference in their achievement in Mathematics.

Major Findings

1. Higher secondary students have a moderate level of Mathematics phobia.
2. The achievement of Mathematics of higher secondary students is moderate.
3. Government, aided and private higher secondary students have a large disparity in their Mathematics phobia.
4. No significant difference exists between government, aided and private higher secondary students on their performance in Mathematics.

Interpretation

The current research demonstrates that a great disparity exists between government, aided and private higher secondary students in terms of Mathematics phobia. Comparing the mean value of type of school, Aided school students has a better mean value compared to the other type of school students in their Mathematics phobia. This could be because one of the main reasons that students are Scared of Mathematics and fail the subject is because of the peer pressure that they cannot cope with. Their abilities are doubted by them and they fail to handle the pressure of performance at school and other levels.

Recommendations

1. The teacher will be able to pay more attention to the students and consider individual differences of the students.

2. Teacher needs to be more caring and encourage the students to engage in learning Mathematics.

Suggestions of the Study

1. Recreation of the current work using other districts in Tamil Nādu.
2. Recreation of the current study using other variables.
3. Copy of the current research on attitude among the trainees of diploma teachers, nursing, engineers.

Conclusion

The current study seeks to quantify the higher secondary attainment in Mathematics in relation to Mathematics phobia and attainment in Mathematics. Study finding shows that Mathematics phobia and Mathematics achievement is average. The research offers recommendations that are useful in enhancing Mathematics achievement.

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