

# A Study On Relationship Between Parental Education And Mathematics Achievement

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*Abstract: The present study was conducted with an objective to find out relationship between parental education and mathematics achievement of secondary school students. A sample of 454 students randomly selected from different secondary schools of Aligarh. Mathematics achievement scores were recorded on the basis of their result of successive school examination. The data was collected and subjected to 't' test. The results revealed that there is significant difference between the mathematics achievement of children of less, medium and highly educated parents.*

*Keywords: Parental education, mathematics achievement.*

## I. INTRODUCTION

The spirit of modernity and development in nations is reflected in their investment in children's education in general. Modern nation see value in building a mathematically literate society and hope for a strong mathematical elite that can shape the knowledge economy of the 21<sup>st</sup> century. No nation can be proper in absence of mathematics teaching. We can say that mathematics is the mother of all round development.

While mathematics was seen to be an essential part of any curriculum from early on, perspectives differed. The Zakir Hussain Committee in 1937 saw it in relation to work. The NPE in 1986 saw it as a vehicle to train a child to think, reason, analyze and to articulate logically. Mathematics is considered as one of the important subject of study and that is why its study has been made compulsory upto secondary level. Napoleon said that the development of society is related to the development of the mathematics in the society concerned. Due to its utilitarian, disciplinary, vocational, intellectual and other values it has become even more important in this scientific age.

Educational achievement of students demands urgent attention to attain their goals. A numerous researches have been conducted to contribute to determine the predictors of educational success of students. Research has suggested that achievement in mathematics is a function of many inter-

related variables. This study has rightly explained the importance of parental education in relation to mathematics achievement. By mathematics achievement we mean the performance of a learner after a course of instructions and measure in terms of marks and grades obtained in mathematics after undergoing a program of instruction. Parent education, refers to a systematically and conceptually based program, intended to impart information, awareness or skill to the participants on aspects of parenting (Aruna NS,1981).

## II. METHOD

### SAMPLE AND PROCEDURE

The sample of the present study consisted of 454 students from 5 secondary schools of Aligarh. Out of 454 students, 260 were male and 194 were females. The simple random sampling method was used for the selection of students from these schools. For studying the effect of parents' education on the achievements of their students both fathers and mothers were categorized into groups as-(a) less educated group – parents educated upto xii class were in this category. (b) medium educated group – parents who had done graduation and post-graduation courses were in this category.(c) high

educated group – parents who had done Ph.D. and professional courses were in this category.

### III. RESULT AND DISCUSSION

Father's Education	Students	M	SD	Less	t- value Medium	High
Less	163	62.18	14.86			
Medium	172	71.44	14.36	5.80**		
High	119	80.04	11.76	10.86**	5.40**	

\*\*Significant at 0.01 level

Table 1: Comparison of mean mathematics achievement scores on the basis of fathers' education

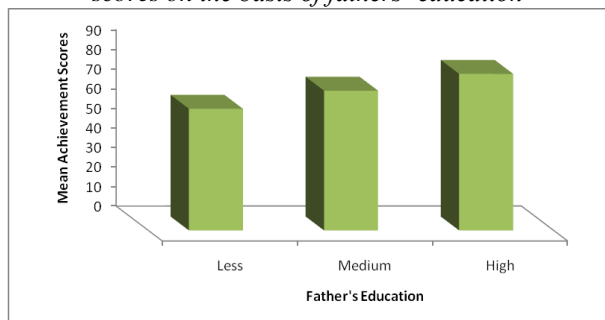


Figure 1: Graphical representation of mean mathematics achievement scores on the basis of fathers' education

It is evident from the table 1 that the numbers of children of less, medium and highly educated fathers were 163, 172 and 119 respectively. The mean achievement score of less educated fathers was 62.18 and SD =14.86, the mean achievement score of medium educated fathers was 71.44 and SD = 14.36 and the mean achievement score of highly educated fathers was 80.04 and SD = 11.76. The calculated t-value obtained is 5.80 of less educated father and medium educated father, 10.86 of less educated father and high educated father, 5.40 of medium educated father and high educated father. The calculated t-value of 5.80, 10.86 and 5.40 was found to be significant at 0.01 level. This result indicates that there is significant difference between the means of achievement scores of the children of less and medium educated fathers, less and highly educated fathers and medium and highly educated fathers.

Mother's Education	Students	M	SD	Less	t- value Medium	High
Less	308	66.59	15.23			
Medium	125	77.89	13.56	7.22**		
High	21	81.12	9.15	4.32**	1.05	

Significant at 0.01 level

Table 2: Comparison of mean mathematics achievement scores on the basis of mothers' education

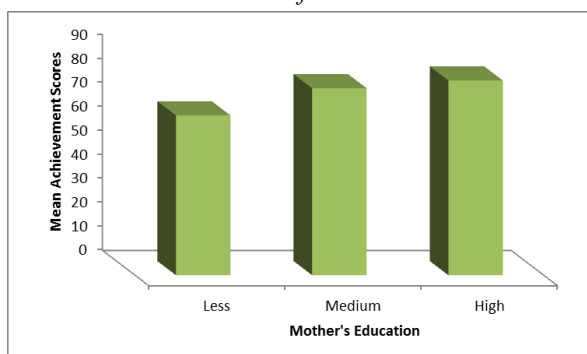


Figure 2: Graphical representation of mean mathematics achievement scores on the basis of mothers' education

It is evident from the table 2 that the numbers of children of less, medium and highly educated mothers were 308, 125 and 21 respectively. The mean achievement score of less educated mothers was 66.59 and SD =15.23, the mean achievement score of medium educated mothers was 77.89 and SD = 13.56 and the mean achievement score of highly educated mothers was 81.12 and SD = 9.15. The calculated t-values obtained are 7.22 of less educated mother and medium educated mother, 4.32 of less educated mother and high educated mother, 1.05 of medium educated mother and high educated mother. The calculated t-value of 7.22 and 4.32 was to be significant at 0.01 level. This result indicates that there is significant difference between the means of achievement scores of the children of less and medium educated mothers, less and highly educated mothers and medium and highly educated mothers.

### IV. CONCLUSION

The statistical results indicated that the children of highly educated parents had high mathematics achievement as compared to medium and less educated parents, the children of medium educated parents had high mathematics achievement as compared to less educated parents. Thus it was concluded that there was a significant difference between mathematics achievement of children in relation to parental education. Parents' play an important role in their children's learning. Parents serve as a model for learning, determine the educational resources available in the home and hold particular attitudes and values towards education.

Children's mathematics success was related to parents' educational level. The reason for the relationship was because highly educated parents held more positive feeling towards mathematics and set higher success expectations from school than less educated parents (Halle et.al 1997).

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