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## The Study of the Relationship between Mother's Studies with Study Skills and Mathematics Performance of Students

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### Abstract

Certainly teaching study skills of mathematics has special importance and plays important role in mathematics performance of students. As mothers spend more times with self-children then they can be effect on study and their mathematics performance. Present research implements to study of the relationship between mothers' studies with study skills and mathematics performance of their children. Population of this research is all girl students of first grade in high school at zone one of Tehran and sample is 97 people. For collecting data of this research through standard questionnaire of mathematics studies skills is used for measuring of study skill of mathematics and questions for studying information related to mothers' studies and a math exam for getting information of mathematics performance of students are used. The results indicated that there is not significant relationship between mothers' studies and study skill of mathematics among students. Also, it is indicated that there is positive significant relationship between mothers' studies and mathematic performance of students.

**Keywords:** Mathematics, studies, study skill, mothers, performance, students.

### 1 Introduction

Education ministry has main role in education of people and their attitudes regard to life. Alibakhshi & Zare (2010) states that academic achievement of students is important index in the evaluation of Education and all efforts and tractions of this system is to perform of it in real. Regard to achievement rate and academic failure is one of the criterions of efficiency of educational system, the exploration and study of effective variables on academic performance make to recognize and predicate of effective variables in school effectively. Therefore, the study of variables which have relationship with achievement academic in various lessons, is one of the research subjects in education system [1]. Regard to parents' studies has important role in the behavior of children and fathers spend more time out of home usually, then this case makes that children spend more time with mothers. Then, mothers' study level can be effect on academic direction and vocation of children. Usually, parents that have higher studies, they more study and self-children encourage to more study. Increasing study rate make to learn of skills and get to study skills usually. Regard to the role

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of mathematics in life, teaching mathematics study skill has especial important. With getting mathematics study skills, learning level of students improved and will have better performance. At first, decreasing academic and culture level of family make that parents could not essential contributes to students and help to them in solving problems and at second, it makes that parents less used of newspaper, magazine and book. In result, children of such families have limitations in terms of this case. Also, in order to the lack of thinking, such families could not give necessary attitudes to self-children for suitable studies. The children of families with higher studies do the part of task in home with supervision of self- parents and even, it's possible that be more head of self-class. In home, parents response and there is more possibilities in term of social and material. Students who their parents have higher studies, they can use of possibilities, guide and contributions of parents for solving problems of self-lesson. Parents who have studies, probably they inform of the importance of studies rather parents with low level of studies. They more interested to the development of academic achievement of self-children and operate of supervision seriously [2]. Mathematics has more importance than main skills of arithmetic and in each society, is to develop higher cognitive skills and logical thinking of students as instrumentation [7]. One of the reasons of failure academic among some students in mathematics is that the method of their study does not accord to corrective method and principle and they do not study very infrequently. When a student studies, he/she has to note to cases such as confidence, programming, focusing, grouping contents, comprehend, repeat, place of study, light and temperature of study circumference, study time, note, dividing contents and suitable regime [8]. Family is as first of educational center of children and a child spends self-time in family considerably. Family circumference is effective on their academic achievement more than their IQ. Maybe, it can indicate that the important effective factor is the family for forming attitude of student regard to study. If attitude of family is negative regard to school, teacher and lesson, and or there is different between whatever they say and whatever they do, it's natural that their child will have negative attitude regard to lesson and study usually. Parents that consider a study as ineffective work and dawdle, then this attitude transport to self-children and they do not effort on achievement of them [2]. Mothers' studies level has important role in getting information, attitude and their behaviors. This effect is more considerable for academic studies in university. With view to the place of mothers in home and presence of women in society, main focus of this study is to study of the relationship between mothers' studies with study skill and mathematic performance of students. Questions of present research can show as following:

- Is there relationship between mothers' studies with mathematics study skill of students?
- Is there relationship between mothers' studies with mathematics performance of students?

## 2 Literature Review

Kadivar et al.(2010) in research entitled "Meta-analysis of studies relate to the performance of mathematics among students" reported that learning strategies variables, teaching method and study methods have very correlation with mathematics performance of students, then it needs that schools have to prepare workshops for introduction of learning strategies and methods of studies for students via counselors and with the hold of educational courses of pro-service for teachers, they informed to modern methods of teaching and through this, promoted the level of mathematics performance of students [5]. Research of Gauvain (1995) entitled "Effects of different cultures on the development of people's cognition", indicated the strong relationship between the academic studies level of fathers, mothers and mathematics achievement of their high school students. The results indicated that 51/9% of children that their parents have studies less than Diploma and 43/1% of children that their parents have Diploma, are weak in mathematics. Consequently, increasing studies of parents made to problem for children [3]. Shahi et al. via Youngblade (2009) express that increasing studies of mothers make to promote social behaviors and the performance of children. Also citation of Steelmana et al. indicated that there difference between increasing studies of mother and social skill rate of child [9]. Malekpour et al. with citation of Shoenfeld said that beliefs of students about

mathematics knowledge and method of get it, effect on their motivation of mathematics and related lessons. Also with citation of Stipek, said that attitude of parents to mathematics and to how comprehend of students regard to this attitude, is one of the effective variables on the performance of mathematics. Parents do not encourage to learn of the mathematics and even they told them that mathematics has not any application in their future job [6].

### **3 Research Method**

Regard to the selection of research, descriptive method with the kind of correlative is full method for implementation of this research. In descriptive researches, researcher follows to how is the subject and one wants knew how is event, variable and thing or content. On other words, this research study of self-status and stated current status of it systematically and study of its features and if it's be needs, it will be studied the relation between variables. Present descriptive research is the kind of correlation. Correlation research is sub-set of descriptive researches and to perform with this aim that indicated the relationship between variables.

#### **3.1. Participants**

Population of this research is all students of girly high school in Zone one of Tehran. In this study, sampling method was quasi-cluster sampling method so that two high schools are chosen among all girly high schools then have analyzed data on some students at first grade of two high schools. Among population, sample was 97 students via Cochran formula.

#### **3.2. Instrumentation**

In this research, for getting information of mathematics study skill of Math study skills inventory [4] is used that this questionnaire has adopted of study skill work book that is written by Hooper. This questionnaire included of 34 questions that has acceptable reliability ( $>0.7$ ). Also for getting information related to mothers' studies, some question (short responses) has added. Also it is used of math exam. Math exam is prepared by experts, is used for the study of mathematics performance of students. It is noted that these questions has emphasized by experts and its reliability and validity have emphasized. Also questions were designed so that was in middle level and standard fully.

#### **3.3. Collecting Data Method**

For collecting data, researchers refer to chosen schools and respected classes are chosen. For getting information, it is used of questionnaire. Then after entering to classes, at first, list of names is prepared then aim of research has expressed for them. In this phase, expressions are introduced for numbers of questions and its time. Then questionnaires have distributed among them then it is asked that response to them exactly. After spending 30-40 minutes, all questionnaires have collected. After collecting questionnaires, scores lists of math exam have taken of teacher.

### **4 Findings**

For analysis of data, it uses of descriptive and inferential sections. In descriptive statistics section, descriptive status of mothers' studies and study skills and performance of mathematics among students (Note: Interval of mathematics performance data is between 0-20, mathematics study skill; 0-102, mothers' studies; 1-6.) indicated in Table 1.

Table 1: Information of mothers' studies and study skill and performance of mathematics among students

	Mathematics Performance	Mathematics Study Skill	Mothers' Studies
<b>N</b>	97	97	97
<b>Mean</b>	14.85	63.54	3.04
<b>Median</b>	16	64	3
<b>Mode</b>	17	75	2
<b>Std</b>	4.38	12.1	1.44

From Table 1, it is indicated that most students get to 17 in math exam. Mark of mathematics study skill was 75 among most students that it indicates that mathematics study skill of students is in middle level. Mothers who have diploma, have most frequency and mother with doctoral certificate have the least frequency. In inferential statistics part, analysis of data indicated through Spearman coefficient test in Table 2 that correlative coefficient is -0.05 between mothers' studies and mathematics study skill of students. Since P-value is more than 0.05 ( $0.62 > 0.05$ ), then null hypothesis accept base on the lack of relationship between two variables. On other words, there is not significant relation between mothers' studies with study skill of students.

Table 2: The study of correlation between mothers' studies and mathematics study skills of students

Mothers' studies	Mathematics Study Skills	
	<b>P-Value</b>	0.62
	<b>Spearman Coefficient</b>	-0.05

In Table 3, analysis of data indicates through Spearman coefficient test that correlative coefficient is 0.29 between mothers' studies and mathematics study skill. Since P-value is less than 0.05 ( $0.000 < 0.05$ ) therefore null hypothesis rejected base on the lack of relationship between two variables. Regard to correlative coefficient of Spearman is positive, then there is significant relationship between two variables in positive direction. That is, whatever the level of mothers' studies is be more, mathematics performance of their children will be better.

Table 3: The study of correlation between mothers' studies and mathematics performance of students

Mothers' studies	Mathematics Performance	
	<b>P-Value</b>	0.000
	<b>Spearman Coefficient</b>	0.29

## 5 Conclusion

Study skills are lifelong skills to be applied both at school and throughout life generally. Without the capacities to study well, opportunities for future and vocation success inevitably will be lost. In addition, study skill is one of the most challenging areas in the education system in particular for mathematics education. If students like to get the most out of the materials they are assigned, they have to learn to study skill regard to logical methods. Studies shows good learners are actively involved with the materials and contents, and they are informed of the processes they apply to comprehend what they study. Teachers or parents in particular, mothers can help promote student comprehension through instruction of study skills strategies. Since mathematics is one of the important subjects in schools that teachers and parents encourage with finding various methods for study skills. In this study, one of the circumference factors such as mothers' studies is studied regard to study skills. Research findings in the relation to first question indicated that there is not significant relation between mothers' studies with mathematics study skills of students. This result is

not far of mind, because study skill is a personal problem and depends on different internal factors of person and circumference and people have not any effect on it. Of course study skill promote, people such as mothers can be effective in teaching skills, therefore, as results indicate, mothers' studies has not any effect on mathematics study skill. The study of this research for second question indicates that there is significant relationship between mothers' studies with mathematics performance of students in positive direction; therefore mathematics performance of students will be better if mothers' studies increased. Mathematics performance depends on internal and circumference factors that mothers' studies is one of the circumference factors that has positive effect on mathematics achievement and performance regard to the results. Then suggestions are introduced following as:

- Teachers and authorities of schools can promote skills studies through courses of teaching-learning study skills for mothers, and
- Study skills can improve as other capacities through innovative methods. Then getting information in this field through knowledge of mothers can help to create new methods.

## References

- [1] Z. Alibakhshi, H. Zare, Effects of teaching self-regulation of learning and study skill on academic achievement, *Applied psychology Journal*, 3 (15) (2010) 69-80.
- [2] E. Biyabangard, *Methods of protection of academic failure* (6 th edition), Tehran: Parent and educators association pub, (2008).
- [3] M. Gauvain, Thinking in niches:Sociocultural influences on cognitive development, *Human Development*, 38 (1) (1995) 25-45.  
<http://dx.doi.org/10.1159/000278297>
- [4] C. H. Hooper, *The study skills workbook* (third ed.), 117, New Yourk McGraw-Hill, (1995).
- [5] P. Kadivar, V. A. Farzad, M. Arabzadeh, M. Negahban-Salami, Meta-analysis of studies related to mathematics performance of students, *Education evaluation journal*, (2) (2010) 75-93.
- [6] N. Malekpour, A. Zandaniyan Naeeni, A. Salahian, The relationship between perception of students regard parents' attitude and personal variables with mathematics' marks in students at 9th grade in Esfehan, *Psychology and discipline sciences faculty of Esfehan*, 7th year, 16 (2) (2012) 53-76.
- [7] D. Muijs, D. Reynolds, *Effective Teaching: Evidence & Practice*, Sage Publications, (2001).
- [8] M. Rahimi, *The study of the reasons of academic failure in elementary mathematics* (1th edition), Tehran: Publication and edition organization, (2013).
- [9] Y. Shahi, M. Mirzamani, Gholamli Afroz, M. Pourmohamadrezae Tajrishi, M. Salehi, Effect of level of parents' effects on social skills and behavioral problems of students given Down disease, *Journal of mental health principles*, 42 (2) (2009) 141-148.