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The Effect of Passing Preschool Course on First Grade Boy's And Girl's Adaptive Behavior, Academic Achievement With The Intelligence Control.

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ABSTRACT

This study aimed to investigate the effect of passing preschool course on boy and girl first grade students adaptive behavior and academic achievement with the intelligence control . The research method was ex-post facto. The populations studied in this research concluded all first elementary school boys and girls students(N= 1800) in Behbahan city in the academic year of 2012-2013 . The study sample consisted of 320 first grade students selected by stratified sampling technique . They were divided into two groups of students who have passed the pre-school period (160 total, 80 boy and 80 girl) and the students who have not passed it (160 total, 80 boy and 80 girl). The Rutter Children's Behaviour Questionnaire (Rutter, 1967) is a form by behavioral problems children aged between 6 to 13 identified by teachers or parents was completed by only teachers in this study . Student academic performance was measured through their correct answers to the standard questions developed by Department of Education with regard to content and purpose of the training of first class . Raven's colored Progressive Matrices Test (Raven et al., 1990) was also used in this research . Results showed that first-grade girl students who have passed the pre-school had significantly higher academic performance and adaptive behavior than those students who have not passed with the intelligence control . Similarly , significant difference was found between first-grade boy students who have passed the pre-school and the students who have not passed it in terms of academic performance and adaptive behavior with controlling IQ.

Keywords: Preschool course , Academic Achievement, adaptive behavior intelligence

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INTRODUCTION

Children's entry into kindergarten is often considered the first step into a more formal learning environment. It seems that the activity of preschoolers is not very important because they work with young audiences. However, 75 percent of a child's brain and 90 percent of their abilities are formed in the first 6 years of their life (Bahmani, 2009). Also with growing the child and getting into the development social, he/she need to to adapt the environment. Preschool programs are a community resource that promotes the well-being of young children (Shapourian, 1996) . Some believe that children who are suffer from lack of social skills (adaptive behavior) have very problems in adaptation with classroom environment (Mahmoodi, 2007). In fact, the base of self-confidence, responsibility, independence and creativity in children is created in pre-school course and the kindergartens and teachers of these centers play an important role in the development of children and achieve the above objectives. The authors have shown that strengthening primary childhood experiences can be effective in increasing children's intelligence (Hunt, 1961). They believe that a preschool program improve children's mental and intelligence skills who are deprived of adequate facilities for the necessary experience. High quality early childhood programs improve the cognitive and social-emotional functioning of preschool children, which, in turn, influences readiness to learn in the school setting (Anderson, et al, 2003) . Nelson, et al (2003) goes on the note that high quality early childhood education programs influences future school success .

Most previous studies of preschool have focused on the question of whether or not preschool attendance influences future school success . Taiwo, and Tyolo (2002) Indicated that pupils with pre-school education experience significantly out-performed their counterparts without such experience in all the school subject areas surveyed by the study. According to Sammons et al, (2005) , the reading level of children who passed the preschool course was higher than the groups who were at home during this period Barnett 's (2008) research concluded that Well-designed preschool education programs produce long-term improvements in school success, including higher achievement test scores, lower rates of grade repetition and special education, and higher educational attainment. Arshad and wilayat (2008) revealed that pre-school education equip children with prerequisite skills which make learning easier and faster for children so exposed. They are very much responsible and take active part in curricular and co-curricular activities . A 2009 study by Osakwe found a significant difference between pupils who had pre-primary education and those without in their academic performances-cognitive ability, and motor skills.

Others found that preschool programs produced better long- term cognitive and social adjustment outcomes . A few recent reviews also wondered whether the effects of preschool programs differ by gender . Akbarzadeh (2003) concluded that students who have passed the pre-school period were very better in social development and compatibility and they have fewer emotional problems in their education period . A comparative study by (Sylva and pugh, 2005) showed that children attended pre-school in comparison with those didn't passed the course had high academic achievement in all courses , but social behavior there was no difference between them . They also found that girl students with preschool skills are better than the girls who have not passed preschool, in cognitive skills, cooperation, independence, focus and responsiveness in courses . Berlinski , et al ,(2009)

demonstrated that attending pre-primary school had a large positive effect on third grade standardized Spanish and Mathematics test scores and non-cognitive behavioral skills. Their attention, effort, discipline, and participation were positively affected by pre-primary school attendance that result in student's self-control . Sheykhlo (2007) found that there was a significant difference between the performance of students in math, science, reading, writing and the average of this courses in terms of preschool education and adaptive behavior and the average of girls' scores was more than the boys .

In spite of all the benefits of preschool programs , TIMSS and PIRLS international study in 2011 conducted among 35 participating countries estimated the Iranian boy and girl students' ability in reading as average and relatively favorite (Mullis, et al , 2011) . It seems that preparation of special programs for pre-school children with the aim of developing a culture of storytelling to foster listening skills, comprehension and retelling concepts is a key requirement.

Initially, understanding the effect of preschool education on boy and girl children's performance can be a best way to enrich the content of these centers' training . Therefore, the following hypotheses were formulated :

First hypothesis: there is a significant difference between the academic performance of first-grade girl students who have passed or have not passed the pre-school course with controlling intelligence.

Second hypothesis: there is a significant difference between the adaptive behavior of the first-grade girl students who have passed the pre-school or have not passed it , with controlling intelligence.

Third hypothesis: there is a significant difference between the academic performance of first-grade boy students who have passed the pre-school or have not passed it, with controlling intelligence.

Fourth hypothesis: there is a significant difference between the adaptive behavior of first-grade boy students who have passed the pre-school or have not passed it, with controlling intelligence.

METHODS

The populations studied in this research concluded all first elementary school boys and girls students(N= 1800) in Behbahan city in the academic year of 2012-2013. Using krejcie and Morgan table (1970) , The study sample consisted of 320 persons selected by stratified sampling technique . They were divided into two groups of students who have passed the pre-school period (160 total, 80 male and 80 female) and the students who have not passed it (160 total, 80 boy and 80 girl).

The Rutter Children's Behaviour Questionnaire (Rutter, 1967) is a form by which behavioral problems children aged between 6 to 13 identified by teachers or parents was completed by only teachers in this study . student academic performance was measured

through their correct answers to the standard questions developed by Department of Education with regard to content and purpose of the training of first class . Teachers estimated students' performance in the form of the words as "require more effort" (from 0 to 12), "acceptable" (12 to 15), the "good "(15 to 17)," very good "(18 to 20). Raven’s colored Progressive Matrices Test (Raven et al., 1990) , recognized as a culture fair or culture reduced test of nonverbal intelligence for young children , was also used in this research .

Findings:

This research has four hypotheses that the results of each hypothesis with the analysis of them has been explained below. Before considering the hypothesis for observing the default equality of variance of research variables was used Leuven test.

Table 1: Leuven's test results for Leuven default equality of variances in the scores of groups in research variables

Significant level	second degree of freedom	first degree of freedom	F	Variable
0/162	158	1	1/97	Academic performance of girls
0/001	158	1	40/2	Adaptive behavior of boys
0/89	158	1	0/018	Academic performance of boys
0/20	158	1	1/61	Adaptive behavior of boys

As seen in Table 1, assuming equal variances of scores confirmed in academic performance variables for the two group of girls, also academic performance and adaptive behavior confirmed for two group’s of boys, but assuming equal variances are not met in the adaptive behavior variable for the two group’s of girls.

To compare and test the hypothesis, the average of groups in research's variables (academic performance and adaptive behavior) with controlling student's IQ by analysis of univariate covariance (ANOVA) was used. We will mention the results of analysis and testing the hypothesis after.

First hypothesis: there is a significant difference between the academic performance of first-grade girl students who have passed or have not passed the pre-school course with controlling intelligence.

Table 2: the results of analysis of Univariate covariance on academic performance scores of the two groups of girl students who have passed or have not passed the pre-school course with controlling IQ

squares	Significant level	F	Average of squares	degrees of freedom	Sum of squares	The source of variations	Variable
0/02	0/07	3/18	2/02	1	2/02	IQ	Academic performance of female students
0/12	0/001	21/98	13/97	1	13/97	Group	
			0/693	157	99/81	Error	

As seen in Table 2, there is a significant difference between first-grade girl students who have passed the pre-school and the students who have not passed it in terms of

academic performance with controlling IQ. With regard to $F=21/98$ and significance level $P<0/001$, so the first research hypothesis is accepted.

Table 3: comparison of the academic performance of girl students who have passed the pre-school education and the students who have not passed it

Significant level	degrees of freedom	t	average difference	standard deviation	average	Number	Girl students	Variable
0/001	158	79/6	0/86	0/71	3/33	80	students who have passed per-school	Girl students' academic performance
					2/47	80	students who have not passed per-school	

According to the data of Table 3 and t calculated (6/79) and significant level (0/001) can be concluded that there is a significant difference between the academic performance of girl students who have passed preschool education and the students who have not passed it and search hypothesis is confirmed.

Second hypothesis: there is a significant difference between the adaptive behavior of the first-grade girl students who have passed the pre-school or have not passed it, with controlling intelligence.

Table 4: the results of analysis of univariate covariance on the adaptive behavior scores of two group of girl students who have passed preschool or have not passed it, with controlling IQ

squares	Significant level	F	Average of squares	degrees of freedom	Sum of squares	The source of variations	Variable
0/11	0/001	19/58	363/34	1	363/34	IQ	Adaptive behavior of female students
0/46	0/001	137/14	2509/82	1	2509/82	Group	
			18/3	157	2873/23	Error	

As seen in Table 4, there is a significant difference between the first-grade girl students who have passed the pre-school and the students who have not passed it, in terms of adaptive behavior with controlling IQ, so regard to $F=137/14$ and significance level $P<0/001$, so the second research hypothesis is accepted.

Table 5: comparison of the adaptive behavior of the girl students who have passed the pre-school education and the students who have not passed it

Significant level	degrees of freedom	t	average difference	standard deviation	Average	Number	Girl students	Variable
0/001	158	15/16	11/56	3/15	86/85	80	students who have passed per-school	Adaptive behavior of female students
				5/57	75/28	80	students who have not passed per-school	

According to the data in Table 5 and t calculated 16/15 and significant level $P < 0/001$ can be found that there is a significant differences between the Adaptive behavior of girl students who have passed the pre-school education and the students who have not passed it.

Third hypothesis: there is a significant difference between the academic performance of first-grade boy students who have passed the pre-school or have not passed it, with controlling intelligence.

Table 6: the results of analysis of univariate covariance on the Academic performance scores of two groups of boy students in who have passed or did not pass it, with controlling IQ

squares	Significant level	F	Average of squares	degrees of freedom	Sum of squares	The source of variations	Variable
0/001	0/65	0/20	0/168	1	0/168	IQ	Academic performance of male students
0/05	0/002	9/62	7/81	1	7/81	Group	
			0/812	157	127/51	Error	

As seen in Table 6: there is a significant difference between the first-grade boy students who have passed pre-school and students who have not passed it, in terms of academic performance, so according to $F=9/62$ and significance level $P < 0/002$, the third hypothesis is accepted.

Table 7: comparison of the academic performance of boy students who have passed Preschool education and the students who have not passed it

Significant level	degrees of freedom	t	Average difference	standard deviation	average	Number	Boy students	Variable
0/001	158	5/89	0/83	0/9	3/23	80	students who have passed per-school	Male students' academic performance
				0/89	2/40	80	Students who have not passed per-school	

According to the data in Table 7 and t calculated (5/89) and significant level (0/001) can be found that there is a significant difference between the academic performance of boy students who have passed Preschool education and the students who did not pass it.

Fourth hypothesis: there is a significant difference between the adaptive behavior of first-grade boy students who have passed the pre-school or have not passed it, with controlling intelligence.

Table 8: the results of analysis of univariate covariance on the adaptive behavior scores of two group of boy students who have passed preschool or have not passed it, with controlling IQ

squares	Significant level	F	Average of squares	degrees of freedom	Sum of squares	The source of variations	Variable
0/87	0/001	1114/73	5080/27	1	5080/27	IQ	Adaptive behavior of male students
0/92	0/001	1908/39	8697/28	1	8697/28	Group	
			4/557	157	715/51	Error	

As shown in Table 8: there is a significant difference between the first-grade boy students who have passed pre-school and students who have not passed it, in terms of adaptive behavior so according to $F=1114/73$ and significance level $P<0/001$, the fourth hypothesis is confirmed .

Table 9: Comparison of adaptive behavior of boy students who have passed preschool education and the students who have not passed it

Significant level	degrees of freedom	t	average difference	standard deviation	average	Number	Boy students	Variable
0/001	158	10/76	10/31	5/58	83/61	80	students who have passed per-school	Adaptive behavior of male students
				6/25	73/3	80	students who have not passed per-school	

According to the data in Table 9 and t calculated 10/76 and significant level $P<0/001$ can be concluded that there is a significant difference between the adaptive behavior of boy students who have passed Preschool education and the students who did not pass it.

DISCUSSION

The purpose of this study was to investigate the effect of passing the pre-school period on adaptive behavior and academic performance of students in the first grade . To achieve this objective four hypotheses have been proposed that we will discuss each of their results in this section. The results of first hypothesis was confirmed as first-grade girl students who had passed the pre-school had higher academic achievement than the students who had not passed it . This finding was consistent with (Sheykhlo , 2007) who found that the performance of girl students who had passed the pre-school in terms of math, science, reading, writing education and adaptive behavior was higher those of boy students . Sylva and pugh (2005) believed that girl students with preschool skills were better than the girls who had not passed preschool, in cognitive skills, cooperation, independence, focus and responsiveness in courses . The second hypothesis was supported as first grade girls' adaptive behavior scores who had passed the pre-school were higher than the students who had not pass it. The study by (Abbasian, 2001) also showed that the

students who had passed the pre-school period, in proportion to students who had not passed it were more compatible. In addition, social and emotional development of girl students who had passed the pre-school period were better than the girl students who had not passed the course. It should be noted that having more experience with peers and teachers in preschool contribute to socialization and lead to better preparing for latter formal education. Taylor et al,(2000) stated that Preschool Children would experience less anxiety in first class. The third hypothesis showed that boy students who had passed pre-school had higher academic performance those of counterparts who hadn't passed the preschool course.

This finding was supported by (Amiri & Asadi, 1996 and Shahim , 2007) who found preschool students had high academic achievement and social development scores in all grades of elementary school. It should be noted that an enriching preschool program certainly provides opportunities for children to develop their cognitive skills. Particularly, preschool programs develop cognitive skills of boy children who are from poor Families and are deprive of facilities at home to doing the necessary activities for the development of sensory-motor such as the games. The fourth hypothesis with controlling intelligence showed that there was a significantly difference between the first-grade boy students who had passed or hadn't pass preschool education. It is worth mentioning that as boys are more nose, passing this course make them better adjust to environment. They learn peace and social order through community participation with group. Fathi,(2012) goes on the note that children's socialization process in a coherent and systematic producers begins with pre-school course and the child learns the necessary skills needed to communicate with others.

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