Running head: PREACADEMIC EXPERIENCES ON KINDERGARTEN READINESS

The Effects of Preacademic Experiences on Kindergarten Readiness

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Abstract

The purpose of this study was to determine if children who attended preschool are better prepared for kindergarten as measured by their performance on the Dial-R Test of Kindergarten Readiness. Participants included 37 kindergarten students. One school in rural Washington County, Ohio was selected in a cluster sample of schools in a rural district in Washington County.

A paired sample T-test was conducted on the mean scores on the Dial-R Test of Kindergarten Readiness to determine if a significant difference exists between the groups. Implications for public policy regarding preschool attendance were discussed. This study concluded that children who attended preschool at least 3 times per week performed better on the DIAL-R Test of Kindergarten Readiness than children who did not attend.

Chapter 1

Introduction

Statement of the Problem

Does preschool significantly enhance scores on the Dial-R Test in showing kindergarten readiness?

The experiences a child has prior to kindergarten could affect how prepared they are for formal education. It needs to be determined as to whether preschool will give these children the experiences they need for kindergarten.

A study, such as this, that examines the importance of preschool prior to kindergarten to obtain all of the experiences needed to be successful. In a high quality preschool, a child would receive motor skills, language skills, and concept skills that are crucial for future success in formal schooling and beyond. Once the child received these experiences, they would demonstrate what they know when the DIAL-R Test of Kindergarten Readiness is administered prior to kindergarten.

A good, positive preschool experience needs to be followed up with the parents enhancing those skills already learned. Parents should strongly encourage their child to interact with other children to teach them how to solve problems and communicate their feelings. This helps a child to be able to get along with others and work as a team once he/she is in kindergarten. Also, parents should encourage their child to practice writing their name on paper as well as writing other letters of the alphabet. Parents and children should both read books and make up some stories together.

In this particular study, the readers will see the importance of preschool (public or private) by examining the students' scores on the DIAL-R Test of Kindergarten Readiness and how they correlate with the parent surveys sent out. This will help the readers see how important preschool is prior to kindergarten for each child's future success.

Purpose Statement

The purpose of this study is the children who attend preschool at least 3 times per week score higher on the Dial-R Test of Kindergarten Readiness than children who do not attend preschool.

Hypothesis Statement

Null Hypothesis

There is no difference between children who attend preschool 3 times a week and the scores on the DIAL-R.

Alternative Hypothesis

There is a difference between children who attend preschool 3 times a week and the scores on the DIAL-R.

Chapter 2

Literature Review

According to the research, the DIAL-R Kindergarten Screening Test has a sole purpose of determining where each child is developmentally. The DIAL-R measures motor, basic concepts, and language development of young children about to enter kindergarten (Conoley & Kramer, 1989). However, it is important to keep in mind that this test is purely used for screening, not for diagnosis (Docherty, 1983). The DIAL-R not only determines developmental delays, but also the potentially gifted students (Miller & Sprong, 1986). Chew and Lang (1990) went a little bit further to justify the outcome of the DIAL-R. These researchers went on to state that the DIAL-R is a good predictor of a child's success in school. In particular, the communications and the concepts subtests of the DIAL-R were "the most valid predictor of kindergarten performance" (Chew & Lang, 1990). All in all, the DIAL-R has proved to be a useful instrument for its intended purpose of pinpointing any developmental delays in children who may be in need of further testing (Suen, Czudnowski, & Goldenberg, 1989).

There are several articles by researchers who have investigated this very topic of whether preschool is necessary for academic success in kindergarten. According to Auerbach (2004), it becomes clear that academic success in formal schooling starts with a high quality environment prior to kindergarten. When children attend a high quality preschool prior to kindergarten, research has shown higher scores on tests of pre-academic skills and language (NICHD, 2002). In addition, the more hours spent in a preschool, childcare, or head start environment, increased a child's language skills as

well as better performance on memory tests (NICHD, 2002). Higher literacy and math skills have been evident with those children in a center-based or a head start environment (Plevyak& Morris, 2002). One of the most important things a child learns in a preschool setting is the respect and acceptance of others who may be from a different culture or background (Reece, 2004). This interaction with others will help him/her adjust well to other unfamiliar situations like the first day of kindergarten in a big school.

Teachers and parents have some thoughts about what characteristics incoming kindergarten children need to possess in order to be successful. A child's readiness has to do with pre-academic skills such as recognizing words, holding and showing interest in a book, and count on one's fingers (Auerbach, 2004). In a 1996 study by the American Educational Research Association, parents, teachers, and caregivers had three categories in common that they felt would better prepare children for kindergarten. One of these was being healthy, well fed, and rested. The second category was that a child should be able to express its own thoughts, needs, and wants. Lastly, a child needs to be enthusiastic and curious about new activities (Plevyak & Morris, 2002). Later in 1999, The American Educational Research did a follow-up to see if teachers, caregivers, and parents had the same responses. Teachers and caregivers went right along with the 1996 study. On the other hand, parents began to lean more towards academic skills like counting and word recognition as necessary skills to prepare for kindergarten (Plevyak & Morris, 2002). One of the most important characteristics a preschool must possess is a healthy attitude toward learning (Reece, 2004).

In combination of having a high quality environment conducive to learning and the DIAL-R Kindergarten Readiness Test, the research concludes that a child will be successful in kindergarten and beyond. According to Brown and Douglas (no date), students with pre-kindergarten experience scored significantly higher on standardized tests than those children who did not attend any kind of pre-kindergarten program. To break the findings down even further, kindergarten teachers rated pre-kindergarten children higher than head start children on readiness, academic, and communication skills (Henry, Henderson, Ponder, Gordon, Mashburn, & Rickman, 2002). All in all, when the DIAL-R or any other screening test is given, teachers need to make sure that this is a positive and fun experience for the child to ensure that he/she is relaxed (Ramirez, 2004).

Chapter 3

Method

Participants

Participants in this study were selected from the population of kindergarten students in a lower to middle socioeconomic class in a rural school in Washington County, Ohio. The student body was composed of approximately 90% Caucasian students and 10% of other ethnicities. The population was anticipated to contain approximately 51 kindergarten students.

At the beginning of the school year, students were assigned to kindergarten. One school was randomly selected in a cluster sample of schools in a rural school district in Washington County, Ohio until at least 35 participants have been identified.

Instrument(s)

DIAL-R scores were routinely obtained for new students entering kindergarten in a rural school in Washington County. Although the DIAL-R has very little research on reliability and validity (Conoley & Kramer, 1989), this is the only screening test that is currently in use in this area. A survey was designed and sent to the parents asking if their child did or did not attend preschool, what type of preschool attended, and what age the child began preschool, how many days of the week the child attended preschool, how many hours a day was the child in preschool, how long did the child attend preschool, how academically prepared the child is, and how socially prepared the child is. The survey was piloted with the parents who have a child in kindergarten to ensure clarity of questions and content (See sample in Appendix).

Experimental Design

This study utilized a causal-comparative design due to the researcher's inability to randomly assign subjects to preschool experiences. The possibility of differential selection must be seriously considered given that researchers have tended to find a significant correlation between preschool attendance and the DIAL-R Test for Kindergarten Readiness. A further threat to validity is differential selection based on cognitive ability. If significant group differential selection are found, this is a confound variable that was needed to be considered in the interpretation of the findings. *Procedure*

The principal was contacted to determine if they are willing to assist with the project including obtaining parent's permission to use their child in the study. The kindergarten teachers were notified of the study. Fifty-one surveys were sent at the beginning of the school year asking the parents if their child attended preschool or not, what preschool attended, what age the child began preschool, how many days of the week the child attended preschool, how many hours a day was the child in preschool, how long did the child attend preschool, how academically prepared the child is, and how socially prepared the child is. Once the survey was returned, each child's DIAL-R scores were obtained and analyzed. One school was randomly selected to obtain at least 35 subjects.

Chapter 4

Data Analysis

A T-Test was conducted on the mean DIAL-R scores for children in both groups.

Alpha was set at .05.

Table 1

Mean, Standard Deviation, and T-Tests for the Experimental and Control Groups. These tables show all 3 sections of the DIAL-R broken down to show each sections mean, standard deviation, and standard error mean.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
MOTOR	37	16.9189	7.87181	1.29412
CONCEPTS	37	18.6486	8.34072	1.37121
LANGUAGE	37	17.6486	8.01463	1.31760
TOTAL	37	52.9459	23.75096	3.90463

This table shows the average score from each section of the DIAL-R.

One-Sample Test

		Test Value = 0					
	95% Confide of the Di				ence Interval fference		
				Mean			
	t	df	Sig. (2-tailed)	Difference	Lower	Upper	
MOTOR	13.074	36	.000	16.9189	14.2943	19.5435	
CONCEPTS	13.600	36	.000	18.6486	15.8677	21.4296	
LANGUAGE	13.395	36	.000	17.6486	14.9764	20.3209	
TOTAL	13.560	36	.000	52.9459	45.0270	60.8649	

This table shows the average score for each section, but also gives the higher and lower scores obtained for each section.

Figure 1

Relationship Between the Major Variables

This figure shows the scores received on DIAL-R Test compared to those who did attend and those who did not attend preschool.





This figure shows the average DIAL-R scores for those who did not attend preschool and those who did attend preschool. Students scored higher on average with those who did attend preschool prior to kindergarten compared to those who did not attend.

Figure 2

This figure shows the number of students who received a certain score on the DIAL-R Test of Kindergarten Readiness.



The scores range from 0 to 78 points. Five students received a 0 because they did not take the DIAL-R Screening Test prior to kindergarten. Each of these scores is out of 100 points. The score of 47, 58, and 74 points had the highest number of students who received one of these three scores.

Out of 37 students in the study, 32 of the students' test scores were obtained. The remaining 5 were not tested before entering kindergarten. Results were compiled for the DIAL-R Kindergarten Screening test in each of the three areas: motor, concepts, and language. There was a total of 31 points possible for each of the three areas. In the motor section of the DIAL-R, 20 students scored between 20 and 30. Twelve students scored below 20 in the motor section of the test. One student was below the 10-point mark. In the concepts section of the DIAL-R, 22 students scored between 20 and 30. The scored below 20. In the language section of the DIAL-R, 20 students scored below 20. The range of the total number of points for all three sections was 32 to 78. Ten students scored between 70 and 80, 8 scored between 60 and 70, 8 scored between 50 and 60, 5 scored between 40 and 50, and 1 scored under 40 (See Table 2).

Thirty-seven surveys were returned out of a total of 51 sent out. Seven parent surveys stated that their child attended a private preschool. Seventeen parent surveys stated that their child attended a public preschool. Six parent surveys indicated that their child attended a daycare. Four parent surveys indicated that their child attended a head start. One parent indicated that their child attended both a head start and a private preschool. One parent indicated that their child attended a daycare and a head start. Two parent surveys stated that their child attended a public preschool and a daycare. Lastly, one of the surveys indicated that their child did not attend a private preschool, daycare, or head start (See Figure 3).

In comparing the DIAL-R scores to their corresponding results, students who previously attended preschool three times a week or more do possess higher scores. The scores are not significantly higher, but enough to be see the benefits. Fourteen out of the thirty-seven students in one of three rural Washington County Kindergarten classrooms, scored on or between 52 and 78 had previously attended preschool at least 3 times per week. Only 4 students who attended preschool 3 times a week were below 52 (See Appendix). This may be contributed to the quality of the preschool that these students attended which is a step beyond the scope of this study. Only one student in the study did not attend any kind of preschool, daycare, or head start. This student scored significantly lower on the DIAL-R than many others in the study. Those students who scored 51 or below may be considered potentially delayed. This means that these students will do further testing in the future in hopes to further pinpoint the difficulty a particular student may be having. A score of 52 and above indicated that the student tested as being okay in all of the areas. This means that students who scored in the "okay" range were able to demonstrate strong pre-academic skills such as word recognition, hold and show interest in a book, and count on their own fingers. Some social skills could be getting along with other children, sitting for a period of time, sharing with others, and being able to focus on an adult who is speaking to them.

This study has proven that those students who attended preschool (private or public) at least 3 times per week prior to kindergarten, showed the highest scores on the

DIAL-R. Their preschool classroom was most likely similar to their kindergarten classroom. Therefore, this transition to kindergarten becomes easier for the experienced child academically as well as socially.

Figure 3: This figure shows the number of days each child in the study attended preschool per week. The total number of students in the study was 37.



Days attended preschool

Table 2: These tables show the scores of each of the three areas as well as the total points scored for each student for the DIAL-R Test of Kindergarten Readiness. These tables show how many students (frequency) received each score (valid). The scores received range from 0 (students who did not take the DIAL-R) to 27 for each section of the test.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	5	13.5	13.5	13.5
	8.00	1	2.7	2.7	16.2
	14.00	3	8.1	8.1	24.3
	15.00	3	8.1	8.1	32.4
	16.00	2	5.4	5.4	37.8
	18.00	2	5.4	5.4	43.2
	19.00	2	5.4	5.4	48.6
	20.00	5	13.5	13.5	62.2
	21.00	5	13.5	13.5	75.7
	22.00	2	5.4	5.4	81.1
	23.00	1	2.7	2.7	83.8
	24.00	2	5.4	5.4	89.2
	25.00	1	2.7	2.7	91.9
	26.00	1	2.7	2.7	94.6
	27.00	2	5.4	5.4	100.0
	Total	37	100.0	100.0	

MOTOR

		_			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	.00	5	13.5	13.5	13.5
	14.00	1	2.7	2.7	16.2
	15.00	2	5.4	5.4	21.6
	16.00	3	8.1	8.1	29.7
	18.00	2	5.4	5.4	35.1
	19.00	2	5.4	5.4	40.5
	20.00	2	5.4	5.4	45.9
	21.00	3	8.1	8.1	54.1
	22.00	2	5.4	5.4	59.5
	23.00	2	5.4	5.4	64.9
	24.00	3	8.1	8.1	73.0
	25.00	2	5.4	5.4	78.4
	26.00	7	18.9	18.9	97.3
	27.00	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

CONCEPTS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	5	13.5	13.5	13.5
	13.00	2	5.4	5.4	18.9
	14.00	1	2.7	2.7	21.6
	15.00	2	5.4	5.4	27.0
	16.00	1	2.7	2.7	29.7
	17.00	1	2.7	2.7	32.4
	18.00	4	10.8	10.8	43.2
	19.00	2	5.4	5.4	48.6
	20.00	4	10.8	10.8	59.5
	21.00	1	2.7	2.7	62.2
	22.00	3	8.1	8.1	70.3
	23.00	3	8.1	8.1	78.4
	24.00	1	2.7	2.7	81.1
	25.00	4	10.8	10.8	91.9
	26.00	1	2.7	2.7	94.6
	27.00	2	5.4	5.4	100.0
	Total	37	100.0	100.0	

LANGUAGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	5	13.5	13.5	13.5
	32.00	1	2.7	2.7	16.2
	44.00	1	2.7	2.7	18.9
	47.00	3	8.1	8.1	27.0
	48.00	1	2.7	2.7	29.7
	51.00	1	2.7	2.7	32.4
	52.00	1	2.7	2.7	35.1
	53.00	1	2.7	2.7	37.8
	54.00	1	2.7	2.7	40.5
	57.00	1	2.7	2.7	43.2
	58.00	3	8.1	8.1	51.4
	60.00	1	2.7	2.7	54.1
	61.00	1	2.7	2.7	56.8
	63.00	1	2.7	2.7	59.5
	64.00	2	5.4	5.4	64.9
	66.00	1	2.7	2.7	67.6
	67.00	1	2.7	2.7	70.3
	69.00	1	2.7	2.7	73.0
	70.00	1	2.7	2.7	75.7
	71.00	1	2.7	2.7	78.4
	72.00	2	5.4	5.4	83.8
	74.00	3	8.1	8.1	91.9
	77.00	2	5.4	5.4	97.3
	78.00	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

TOTAL

Chapter 5

Discussion

This study of the data went as predicted. Therefore, the alternative hypothesis was accepted. Many of the students in the study had attended preschool and attended at least 3 times per week. However, the scores on the DIAL-R were not as high as expected, but those who did score high were those who had attended a public or private preschool. When reviewing the surveys, the researcher expected to find more than one student who did not attend any kind of preschool (public or private), daycare, or head start.

There is always room for improvement in any study including this one. If it were to be done differently, the researcher could have studied more than one school to increase the number of participants. In addition, there could have been more diversity among the participants. This may or may not hinder the results of the study.

If another researcher were to duplicate this study, there could be a few other factors to add. Another researcher could pull more of the social factor to explain it more in depth. In this study, the parents were asked about their child's social readiness for kindergarten on the survey, but it could have been looked at in more detail. Another researcher could investigate the quality of the preschool, daycare, or head start that the parents specified on the surveys.

As a researcher, a recommendation of what should occur in the educational system today falls on the parents. Parents need to make that decision to send their child to preschool prior to kindergarten. It has proven to be beneficial to the child to be at or a step ahead the level that he/she needs to be at to be successful in school and beyond. Preschool has truly proven to be a positive stepping-stone in the right direction for a child before he/she enters kindergarten.

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Appendix

ATTPRE

-			-		
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	36	97.3	97.3	97.3
	2.00	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

TYPESCH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	16	43.2	44.4	44.4
	2.00	9	24.3	25.0	69.4
	3.00	7	18.9	19.4	88.9
	4.00	4	10.8	11.1	100.0
	Total	36	97.3	100.0	
Missing	System	1	2.7		
Total		37	100.0		

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	5.4	5.6	5.6
	2.00	1	2.7	2.8	8.3
	3.00	1	2.7	2.8	11.1
	4.00	2	5.4	5.6	16.7
	5.00	16	43.2	44.4	61.1
	6.00	14	37.8	38.9	100.0
	Total	36	97.3	100.0	
Missing	System	1	2.7		
Total		37	100.0		

ATTAGE

	Ν	Minimum	Maximum	Mean	Std. Deviation
ATTPRE	37	1.00	2.00	1.0270	.16440
TYPESCH	36	1.00	4.00	1.9722	1.05522
ATTAGE	36	1.00	6.00	4.9722	1.31987
DAYSATT	36	1.00	5.00	3.2778	1.34400
HOURS	36	1.00	6.00	2.7500	1.27335
YEARSATT	36	1.00	5.00	2.4444	1.05409
PREPARED	37	1.00	3.00	1.5405	.55750
SOCPREPA	37	1.00	2.00	1.4054	.49774
Valid N (listwise)	36				

Descriptive Statistics



ATTPRE

Parent Survey Sample:

October 18, 2004

Parents: Please answer the following questions to the best of your ability and return this survey to your child's school by Friday, October 22, 2004.

1. Did your child attend any type of preschool/daycare/head start? Yes No

(If you answered no to the above question, please go to the bottom and answer questions 7 and 8)

2. How would you characterize the school your child attended? (Circle One)

Public Preschool Private Preschool Daycare Head Start

3. At what age did your child begin attending preschool/daycare/head start?

0-6 months	6 months-1 year	1 year- 2 years
2 years- 3 years	3 years- 4 years	4 years-5 years

4. How many days in a week on average did your child attend preschool/daycare/head start?

(Circle One)

1 2 3 4 5

5. How many hours in a day on average was your child in preschool/daycare/head start?

Less than 1 hour 1-2 3-4 5-6 7-8 9-10 10-11

6. How long did your child attend preschool/daycare/head start? (Circle One)

Less than 1 year	1 year-2 years	2 years-3 years
3 years-4 years	4 years-5 years	5 years-6 years

7. Based on your child's performance in kindergarten to date, how academically prepared do you think he/she was for kindergarten? (Circle One)

Very Prepared Prepared Not Prepared Very Unprepared

8. How socially prepared would you say your child was when he/she began kindergarten?

(Circle One)

Very Prepared Prepared Not Prepared Very Unprepared