

Bowling Number's Game as an Effort to Improve Children's Ability to Recognize Number Symbol

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ABSTRAK.

Pada anak usia 4-5 tahun di TK X Darussakam Petapahan Jaya Kec. Tapung-Kampar Riau. Adapun metode yang digunakan dalam penelitian ini adalah Pre-Experimental dengan rancangan design One-Group Pretest-Posttest Design. Design ini menggunakan Pre-test di awal sebelum penelitian sebagai cara untuk mengetahui bagaimana kemampuan anak dalam mengenal konsep bilangan pada anak di TK X Petapahan Jaya sebelum diberikannya perlakuan. Kemudian selanjutnya akan dilakukan Treatment ataupun memberi perlakuan terhadap subjek penelitian dengan menggunakan Permainan Bowling Angka. Setelah itu akan dilakukan post-test untuk memperoleh data kemampuan mengenal konsep bilangan setelah diberikannya perlakuan. Berdasarkan analisis uji wilcoxon signed Rink Test yang pada saat Pretest menunjukkan hasil dari 9 orang anak terdapat 6 Orang (60%) kemampuan mengenal bentuk bilangan berada pada rentang belum berkembang dan 3 orang (40 %) mulai berkembang. Setelah adanya perlakuan (Posttest) permainan Bowling terdapat 9 orang anak berada pada kriteria berkembang sangat baik (BSB). Selain itu hasil Test Statistic menunjukkan bahwa $Asymp.sig$ (2-tiled) $0,007 < 0,05$. Artinya adalah bahwa terdapat pengaruh permainan Bowling terhadap kemampuan mengenal bentuk Lambang bilangan pada anak.

Kata Kunci: Permainan Bowling, Lambang Bilangan, Anak Usia 4-5 tahun

ABSTRACT

The aims of this study is to determine the ability to recognize number symbols in children aged 4-5 years at Darussakam Petapahan Jaya Kindergarten before and after using the Bowling game. The method used in this research was Pre-Experimental with a One-Group Pretest-Posttest Design. This design used a pre-test at the beginning before the research as a way to find out children's ability to recognize the concept of numbers in children before being given treatment. Then, further treatment was carried out or given to research subjects using the Number Bowling Game. A post-test was carried out to obtain data on the ability to recognize the concept of numbers after being given treatment. Based on the analysis of the Wilcoxon signed Rink Test, which at the time of the Pre-test showed the results of 9 children, there were 6 people (60%) could recognize number forms were in the undeveloped range and 3 people (40%) started to develop. After Post-test of the Bowling game, 9 of the children were in very well-developed criteria (BSB). Statistical Test show that $Asymp.sig$ (2-tiled) $0.007 < 0.05$. This means that there is an influence of bowling games on the ability to recognize the shape of the number symbol in children

Keyword: Bowling Games, Symbol of Numbers, Early Childhood 4-5 year olds. (

INTRODUCTION

Early Childhood Education is education focused at preschool-age children with the goal of developing children's potential from a young age so that they can develop organically as children. The goal of Early Childhood Education is to provide intellectual, social, and emotional stimulation to children at their proper age level. PAUD is defined as "a coaching effort aimed at children from

birth to the age of six that is carried out through providing educational stimulation to help growth and physical and spiritual development so that children are ready to enter further education in Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional Bab 1 Pasal 1 ayat (14). (<https://Pusdiklat.Perpusnas.Go.Id/Regulasi/Download/6>, 2003). Early childhood education, particularly in Kindergarten, is essentially education that is carried out to support or emphasize the development of all aspects of the child's personality. Cognitive aptitude is one part of development that is the focus of learning in early infancy. The main task of the learning process, or teaching and learning process, is cognitive capacities. (Fadlillah, 2012)

Cognitive or logical-mathematical development in Kindergarten is a way of providing educational stimulation through counting games, which aims to stimulate children's thinking abilities through activities designed according to developmental stages so that children are ready to learn mathematics at the next level (Suwardiman, 2003). Cognitive development of children aged 5-8 years, according to Copley and Wortham, children's cognitive development begins to move from the preoperational stage to the concrete operational stage, also known as the transition period. The thinking process of children aged 5-8 years is a transition period from concrete understanding to recognizing abstract symbols, where the concrete objects still exist, and their symbolic forms are starting to be revealed (Siti Aisyah, 2009). It means that the ideal cognitive abilities of early childhood, especially those related to logical-mathematical abilities or counting numbers, can develop well when children understand the operationalization of the number object.

Cognitive abilities are closely related to the development of mathematical logic. Logical-mathematical development in early childhood has three stages of mastery of numbers in the mathematics pathway, namely: mastery of concepts, transition period and symbols (Mutiarra & Agustin, 2017). This means that at this stage, the development of children's mathematical logic is related to a child's ability to master the concepts and symbols of ordinary numbers. It is called a child's ability to recognize numbers. The ability to recognize numbers at preschool age (TK A) is as follows: (Susanto, 2011), 2011) (1) recognize number symbols (numbers), (2) connect concepts with number symbols (numbers), (3) pair objects in the form of pictures or concrete objects with numbers (children are not asked to write), (4) knowing which objects have more, less and the same number.

Based on observations in the field of children aged 4-5 years at TK D Kindergarten, it was found that some children had difficulty understanding mathematical concepts. Children's conceptual understanding is still limited to remembering numbers, so when children are asked to determine the symbol of the number mentioned, the child still experiences difficulties. 8 Children tend to be verbalistic and can say the number in question. However, when faced with problems with concrete objects in the form of numbers or symbols, children cannot make associations between the number called and the number of objects the child shows. It was also found that 8 children still had difficulty understanding the concept of objects having more, less, and the same number of objects. Some children can name numbers from 1 to 10 or even more, but these children do not know the number symbols.

Observations in the field also show that during this time, learning is known. Number symbols in children do not appear to have developed optimally. Of the 18 children, 10 did not know the numbers 1-10. It can be seen when the teacher asks children to match the number of concrete objects according to the number symbol. It can be seen that children still need clarification in determining the number symbol according to the number of concrete objects. Most of these children only memorize because teachers often introduce the concept of numbers

abstractly; this indicates that children still need to learn the form of these numbers. Apart from that, some children said the order of numbers is still not regular, for example, the numbers 1, 2, 4, 6, even though if they look at the order, they are 1, 2, 3, 4, 5, and 6. When the teacher asks the children individually to show the numbers, they still need clarification and correction. When a child writes the number 6 and what is called the number 9, the position of the number 7 is still reversed. Apart from that, the learning media provided by the teacher has not been varied, giving the impression that children are not interested in the existing learning process. It means that data in the field shows that there are still young children who are not yet able to recognize number symbols.

Based on Minister of Education and Culture Regulation no. 137 of 2014 concerning National Standards for Early Childhood Education, it is stated that the Child Development Achievement Level Standards (STPPA) for recognizing numbers for children aged 4-5 years are included in the scope of development of symbolic thinking, where the levels of development are: 1) counting the number of objects 1-10, 2) get to know the concept of numbers, and 3) get to know number symbols. This suggests that ideally, in the age range of 4 - 5 years old, children can reach the developmental stages of symbolic thinking, including recognizing the concept of numbers (F. Nurhayati & Rasyid, 2019).

Based on National Education Goals Panel, cognitive capacities are one facet of children's preparation for school and learning. Number recognition is directly tied to cognitive abilities. According to the Minister of Education and Culture Regulation Permendikbud (Peraturan Menteri Pendidikan dan Kebudayaan No 17 Tahun 2017), students who have not reached the age of seven can enter elementary school if they have unique talents or are ready to learn as demonstrated by written recommendation from a Professional Psychologist. It suggests that children's capacity to recognize numbers shows their preparation for learning and school in early life (W. Nurhayati, 2018)

Games are one of the stimulations that can be provided in the learning process and stimulate school readiness in early childhood. Games direct children to grow and develop in all aspects of their development. The meaning of games for children is very influential in introducing the ability to recognize the concept of numbers, especially in the cognitive aspect (Tedjasaputr, 2010). The learning process in Kindergarten (TK) can be carried out in various places, both in and outside the classroom, as long as it is guided by developing aspects of children's development and is carried out in fun. Many types of games can be used in kindergarten learning as a means of developing aspects of children's development, including cognitive aspects. One type of game that can be played with children is Bowling. Both adults and children can play this bowling game. It means that young children can also play this bowling game, but it still has to be adapted to the characteristics of the young children themselves. Based on research conducted by Kurnialita, the results showed that this bowling game can be applied to kindergarten children aged 4-5 years and can improve children's gross motor skills (An et al., 2013).

Meanwhile, another article carried out by Koesdyantho shows that this bowling game can also improve the ability to recognize numbers in kindergarten children aged 4-5 years (Riyadi, 2016). Based on several articles that have been carried out, it indicates that this Bowling game can be applied to children's learning, especially kindergarten children aged 5 -6 years. However, this Bowling game must be modified first to be safe and appropriate to the characteristics of young children.

The bowling game played by young children provides various benefits to aspects of children's development, such as physical motor aspects and also cognitive aspects of children. Based on writing by Kurnialita and Hikmah, it is stated that Bowling benefits the gross motor skills of children aged 4-5 years. It is because, in the bowling game, children do many activities using their large muscles; for example, children run, jump and swing their arms when throwing the ball. Apart from that, children can improve coordination between their eyes, hands and feet so they can drop the pins that have been arranged. Another article states that with a modified bowling game, young children benefit from their ability to count and recognize numbers. (An et al., 2013). Koesdyantho and Jubaedah state that a modified bowling game can improve their ability to count and recognize numbers effectively significant (Riyadi, 2016).

It can mean that this bowling game can be applied to kindergarten children, especially kindergarten children aged 4-5 years, to introduce the numbers 1-10, but with modifications that are adjusted to the child's age and characteristics. The modified bowling game has very important goals and benefits for young children. Purnomo stated that the aim of the bowling game for early childhood is to train movement coordination, concentration, and estimate the strength to drop cans/bottles (Ari, 2017). Furthermore, Purnomo stated that by playing this game, there are 6 intelligences that can be developed: 1) intelligence spatial, and bodily- kinesthetic, when the child looks for strategies, estimates strength used, throwing the ball, and trying to drop as many cans as possible, 2) logical- mathematical intelligence, children can count the cans/bottles that have fallen, 3) intrapersonal and interpersonal intelligence, when working together to put back cans/bottles that have fallen, 4) verbal/linguistic intelligence can develop when children discuss this game (Purnomo, 2013)

In this research, the bowling game that has been prepared is a bowling game that has been modified, namely by modifying the tools used in the bowling game. First, the bowling ball that should be used in the bowling game is a ball weighing 14-16 pounds (7-8 kg) for adult men, and the 10-14 pound (5-7 kg) ball for adult women is replaced with a ball made of rubber. so that when the child holds the ball, it is lighter and easier. Second, the track, which was supposed to be 18,288 m long, was changed to 5 meters long. This is because one of the gross motor development tasks for children aged 4-5 is throwing at a target within a distance of 5 meters (*PAUD4201 – Bermain Dan Permainan Anak*, n.d.). Based on this, the modified bowling lane was replaced with a length of 5 meters. Third, bowling pins are replaced with plastic bottles to make them safer for children to use. This reason is used so that children do not have the risk of burden when playing with lighter equipment and shorter distances. Based on this description, it is necessary to examine in more depth the influence of "The Role of the Number Bowling Game on the Recognition of Number Symbols in Early Childhood".

METHOD

This is a quasi-test. According to Arikunto, quasi-experimental research is an experimental study that cannot achieve the conditions expected in purely experimental research (True Experiment), namely conditions that cannot be strictly controlled and can have students influences on final learning, such as economic status, psychology, location and so on. The objective of a quasi-experimental design is to gather information that provides information that can be collected through real experiments under conditions where not all necessary factors can be controlled and used (Arikunto, 2007).

This study is similar to a pure experimental study because it can be done using the treatment (medicine) from the experimental class with cotton card medium and the normal (normal) medium from the control class. The Quashi test uses an equivalent type control group design for analysis. the effect of the independent variable on the dependent variable after the application of the bowling game. This study was carried out on children aged 4 to 5 years at Darussalam Petapahan Jaya kindergarten. This survey was carried out in July.

According to Sugiyono, a population is a broad group of things and people with certain characteristics that scientists can study and draw conclusions from. Meanwhile, the sample is a subset of the population in terms of size and characteristics. Samples are important when the population is very large and the researcher cannot study the entire population due to financial, time, and energy constraints (Sugiono, 2000). The population of this study consisted of children aged 4 to 5 years from Darussalam Petapahan Jaya kindergarten, which had one class. Consequently, the population of this study is nine children. The sample used in this study included children aged 4 to 5 years from Darussalam Petapahan Jaya kindergarten, totaling 9 children who presented characteristics of children who knew the concept of numbers.

The methods used in this research are: Pre-Experimental with a Single Group design Pretest-Posttest Design (Rahmalia & Sumedi Priyana Nugraha, 2018). This project uses a pre-test at the beginning, before the survey, as a way to find out what is the ability of children to recognize the concept of numbers in Darussalam Petapahan Jaya Kindergarten before treatment. Then, the treatment will be done, or the research subjects will be treated through the Numbers Bowling Game. Then, a post-test will be conducted to obtain data on the ability to recognize the concept of numbers after treatment. And then the data will be analyzed to check if the Number Bowling Game has a significant impact on the ability to recognize number concepts in Darussalam Petapahan Jaya Kindergarten children. The form of a pretest-posttest group design is as follows:

Table 1. One-Group Pretest-Posttest Design

<i>Pre-test</i>	<i>Treatment</i>	<i>Post-test</i>
O ₁	<i>t</i> X	O ₂

Information:

O₁ : Pre-test before being given treatment

X : Treatment or treatment using APE Pistol Number symbols : Post-

O₂ test after being given treatment

The steps taken in this experimental activity are as follows:

a. Pre-test (O₁)

This pre-test stage was carried out before the researcher carried out the research. With the aim of understanding the concept of numbers in children aged 4-5 years. Later, the results of the Pre-test will be compared with the post-test results after the treatment is given. In this research, the pre-test given was using the LKA (Children's Worksheet) and the assessment was carried out using the Observation Sheet.

b. Treatment (X)

At the Treatment stage, children aged 4-5 years were given treatment in the form of a Number Bowling Game. This treatment was given 4 times over 2 weeks by the researcher and carried out during core learning.

c. Post-test (O2)

This stage is carried out at the end of the research after treatment or treatment has been given. In this Post-test, the researcher will observe or observe the development of recognizing the concept of numbers after children are taught about number forms using the Bowling Game which is intended to find out whether the experiment that has been carried out is truly successful and effectively applied to recognize the concept of numbers in children in Kindergarten. Darussalam Petapahan Jaya. The post-test was carried out on the children's core learning activities the day after the experiment. The post-test was carried out using LKA (Children's Worksheet).

According to Sugiyono, an instrument is a measuring tool in writing that is used to measure observed natural and social phenomena (Sugiono, 2000). Data collection instruments are tools chosen and used by the author in collecting data so that the activity is focused. In this research, primary data was used, namely data taken and obtained directly from the research subjects, namely 9 children in class B3 at Darussalam Kindergarten Petapahan Jaya. The instrument used in this research was an observation sheet with several indicators based on Standar Tingkat Pencapaian Perkembangan Anak (STPPA) dalam permendikbud No. 137 Tahun 2014

Table 2. Observation Sheet on Ability to Recognize Number Symbols

No	Indicator	Sub indicators	Assessment Score			
			BS	BSH	MB	BB
			B	B	B	B
			4	3	2	1
1	Mention number 1-10 Bowling game	symbol through	<ul style="list-style-type: none"> Saying with pointing to objects Create a sequence number d ith things-object Connect or pair number symbol with things-object 			
2	Use numbers to count	symbol	<ul style="list-style-type: none"> Can mention number symbol Can say lots of things. Can Get match number with number symbol. 			

3	Match with symbols between (1-10)	number number	<ul style="list-style-type: none">• Can differentiate numbers with shows numbers or numbers with symbols or symbols.• Can count thing with Bowling media
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The assessment indicators will be filled with the following assessment criteria: 1). Not Developed is given a score of 1, if the child is not yet able to show development research indicators, 2). Starting to Develop (MB) is given a score of 2, if the child begins to be able to show development from research indicators, 3). Developing According to Expectations (BSH) is given a score of 3, if the child is able to show development from the indicators research, 4). Developing Very Well (BSB) is given a score of 4, if the child is able to show development from the research indicators very well.

Data collection methods are the methods and tools that will be used to collect data that is an important part of the research. The data collection methods used in this study are observation and documentation. According to Sutrisno Hadi who said that observation is a complex process and that there are different biological and psychological processes (Sugiono, 2000). The aim of this observation is to see an interesting phenomenon to use as the focus of the study, which is to observe and record the children's activities in the learning process to gather research data. Observations were used to collect data on the effectiveness of the significant effects of the Flower Number Game on the ability to recognize number concepts in children at the Kindergarten Darussalam Petapahan Jaya.

The data analysis technique of this study used the t-test to see the effect of the number bowling game on children's ability to recognize number concepts before and after treatment. The formula used by SPSS V.23.0. For this reason, this study uses the Wilcoxon test formula, including comparing the pre-test and post-test results with the Wilcoxon test auxiliary table. The Wilcoxon test Signed Rank test is an alternative test to the paired sample T test or if the data do not meet normality assumptions (Sugiono, 2000). In the Wilcoxon signed rank test, variables are compared between abnormal returns before and after the company repurchases shares under the following conditions: 1). If the Wilcoxon statistical value is a significant value then H_1 is accepted, 2). If the Wilcoxon statistical value is significant, then H_0 is accepted. We conclude that based on the statistical tests conducted, the author uses a confidence level of 95%, i.e. α 0.05.

RESULTS AND DISCUSSION

The knowledge of number symbols was measured in 4-5 year old children at TK Darussalam Petapahan Jaya (pre-test) using the observation technique with 8 indicators given to 9 children. Based on the pre-test centers, the ability to recognize the shape of the number keys in 4-5 year old children at TK Darussalam Petapahan Jaya can be seen in the table below before using the bowling game:

Table 3. Ability to Recognize Pre-test Number Symbols

No	Indicator	Score End	Score Ideal	Means	%	Category
1	Saying with pointing to objects	14	40	1.6	39.00%	MB
2	Make a sequence of numbers with objects	15	40	1.7	42.00%	BSH
3	Connecting or pair symbols numbers with objects	17	40	2	47.00%	BSH
4	Can say number symbols	16	40	2	44.00%	BSH
5	Can say a lot object.	12	40	1	33.00%	MB
6	Can Get match numbers with symbols number.	18	40	2	50.00%	BSH
7	Can distinguish numbers by showing numbers or numbers with symbols	16	40	2	44.00%	BSH
8	Can count objects with Bowling media	16		2	44.00%	BSH
	TOTAL	124	235	13,8	43,00%	BSH

Based on the table above, it can be seen that the highest final score is found in indicator 6, namely Telling by pointing to objects with a score of 18, a percentage of 50.00% is in the criteria of starting to develop according to expectations (BSH). The lowest final score is in indicator 5, namely grouping the shape of number symbols with a score of 12, a percentage of 33.00% is in the low or starting to develop (MB) criteria. Based on the calculation results in the table above, it can be seen that the percentage of performance as expected (BSH) is still below 50%, namely 43.%. An overview of the ability to recognize the shape of number symbols in children aged 4-5 years at the Darussalam Petapahan Jaya Kindergarten (Pre-test) before using the Bowling Game can be seen in the table below:

Table 4. Frequency Distribution of Pre-test Scores

No	Category	Score	Frequency	%
1	Undeveloped	0%- 25%	0	40.00%
2	Starting to Develop	25%-5%	3	40.00%
3	Developing According to Expectations	52%-76%	6	60.00%
4	Developing Very Well	77%-100%	0	0.00%
	Amount		10	100.00%

Based on the table above, it can be seen that the ability to recognize geometric shapes in children before the Bowling Game was obtained, data showed that there were no children who were in the very well developed (BSB) criteria, while those who developed according to

expectations (BSH) were 6 children with a percentage of 60.00% However, there are still 3 children who are at the beginning to develop (MB) stage with a percentage of 40.00%.

Measurement of the ability to recognize the shape of the Bilanagan symbol (Post-test) in children aged 4-5 years at Kindergarten Darussallam Petapahan Jaya was carried out using observation techniques with 8 indicators given to 9 children. Based on the post-test results, it can be seen that the ability to recognize number symbols in children aged 4-5 years at the Darussallam Kindergarten in Petapahan Jaya can be seen in the following table.

Table 5. General description of the ability to recognize the shape of post-test number symbols

Post-Test Indicator Scoring Categories						
No	Indicator	Score End	Score Ideal	Means	%	Category
1	Saying with pointing to objects	31	36	3,4	86.00 %	BSB
2	Make a sequence of numbers with objects	33	36	3.7	92.00 %	BSB
3	Connectin g or pair symbols numbers with objects	32	36	4	89.00%	BSB
4	Can say number symbols	34	36	4	94.00 %	BSB
5	Can say a lot object.	34	36	4	94.00 %	BSB
6	Can Get match numbers with symbols number.	33	36	4	92.00 %	BSB
7	Can distinguish numbers by showing numbers or numbers with symbols	30	36	3	83.00 %	BSB
8	Can count objects using Bowling media	33	36		92.00 %	BSB
Amount		260	288	13.8	722.00 %	BSB

Based on the table above, it can be seen that the highest final score on indicators 4 and 5 with a percentage of 94.00% is in the very well developed (BSB) criteria. The lowest final score is in indicator 7 with a percentage of 83.0% which is also in the very well developed (BSB) criteria, namely being able to differentiate numbers by showing digits or numbers with the nda symbol. An overview of the ability to recognize the shape of number symbols in children aged 4-5 years at the

Darussalam Petapahan Jaya Kindergarten (Post-test) before using the bowling game can be seen in the table below:

Table 6. Frequency Distribution of Pre-test Scores

No	Category	Score	Frequency	%
1	Undeveloped	0%- 25%	0	0.00%
2	Starting to Develop	25%-5%	0	0.00%
3	Developing According to Expectations	52%-76%	0	0.00%
4	Developing Very Well	77%-100%	9	100.00%
Amount			9	100.00%

The hypothesis test in this study employed the t-test method to see the changes before and after and how much influence the Bowling Game had on children's ability to recognize numerical symbols. If Sig>0.05, then Ho is accepted and Ha is rejected, and if Sig. 0.05, then Ho is rejected and Ha is accepted.

Table 7. Hypothesis Testing

		Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		Q	Df	Sig. (2-tailed)	
				Lower	Upper				
Pair 1	Pre-test - Posttest	- 15,111	2,934	, 978	- 17,367	- 12,855	- 15,449	8	, 000

Based on table 7 above, it can be seen that the sig (2-tiled) result is .000. It can be concluded that sig (2-tiled) 0.000 < 0.05. This means that there is an influence of the game of Bowling on children's ability to recognize number symbols. while the test results The Wilcoxon matched-paired signed test is a non-parametric test used to measure whether there is a difference in the average value of 2 paired (dependent) sample groups. The Wilcoxon test is commonly used in pre - post test design research.

3Table.7. Wilcoxon test

	N	Mean Rank	Sum of Ranks
Posttest - Pretest			
Negative Ranks	0 ^a	,00	,00
Positive Ranks	9 ^b	5,00	45,00
Ties	0 ^c		
Total	9		

- a. Posttest < Pretest
- b. Posttest > Pretest
- c. Posttest = Pretest

Test Statistics ^b	
Posttest –Pretest	
Z	-2,677 ^a
Asymp. Sig. (2-tailed)	,007

a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

The results of the analysis from the Wilcoxon Test obtained a z value of -2.677 with a significance level of 0.007. As for the conditions for accepting or rejecting a hypothesis, if the significance is below or equal to 0.05 ($p \leq 0.05$), then the hypothesis is accepted (Sugiyono, 2001). In this case, the probability (p) of the stimulation variable of the Bowling game on the ability to recognize the shape of number symbols in children is included in the category of strong relationship level, so the hypothesis proposed in this research is accepted (proven), namely that there is an influence of the Bowling game on the ability to recognize the shape of number symbols in children. child. This means that the game of Bowling affects children's ability to recognize number symbols.

The discussion of the results of this research was carried out through the results of comparative analysis in research with the type of experimental research on the independent variable, namely the game of Bowling (X) and the dependent variable, namely the ability to recognize the shape of number symbols (Y). To see changes before and after learning on the sample. After determining the results of the difference in scores before (pre-test) and after (post-test) of the treatment, the next step is to look at the level of ability to recognize the shape of the child's number symbols with the treatment that has been applied to the child.

The aim of this research is to see whether or not there is an influence of Bowling on the ability to recognize numbers. The results of the research show that Bowling can improve the ability to recognize numbers in young children at the Darussalam Kindergarten in Petapahan Jaya. According to Nurhayati, the advantage of Bowling is that through the game, children can learn to coordinate their eyes and hands, measuring carefully how much force is needed to knock over all the bowling bottles. Young children can also learn to count how many bowling bottles fall (F. Nurhayati & Rasyid, 2019).

Furthermore, from this game, children learn a lot about recognizing numbers, apart from that, when children are asked to rearrange the bowling bottles in sequence, children have learned about the sequence and arrangement of numbers. The success of the research seen in the research has shown that there is a correspondence between the research results, and this can be seen by using the game of Bowling, which can improve the ability to recognize numbers in children aged 4-5 years.

Based on the data management analysis and percentage results above, it can be seen that the results of the pre-test on recognizing the shape of number symbols in children aged 5-6 years at the Darussalam Kindergarten in Petapahan Jaya show that the percentage of developing according to expectations (BSH) is still below 50%, namely with a percentage value of 43, %.. Based on the data above, this means that the ability to recognize the form of number symbols requires stimulation. It was proven that during the learning process, researchers made observations using a checklist of indicators for children's ability to recognize numbers. It could be seen that the ability to recognize the shape of number symbols in children aged 4-5 years was still low, where children were still unable to match the shape of number symbols according to color,

matching. shape number symbols according to shape, match the shape of number symbols according to size, create shapes from pieces of number symbols, call objects around them according to the shape of number symbols, exemplify the shape of number symbols, and group the shapes of number symbols.

The low ability to recognize the shapes of number symbols in children is partly caused by environmental factors due to the lack of introduction of number symbol shapes around the environment and also the lack of interesting media at school to build children's interest in learning to become more familiar with the shapes of number symbols. Another thing is also indicated because during the learning process there is no operational definition in stimulating children's cognitive development, especially in number recognition abilities. Where it can be seen that there are no 8 indicators consisting of the following: 1) Saying by pointing to objects can be seen through the presentation; 2) Make a sequence of numbers with objects; 3) Connect or pair number symbols with objects; 4) Can say number symbols; 5) Can count many objects.; 6) Can match numbers with number symbols; 7) Can distinguish numbers by showing numbers or numbers with symbols; 8) Can count objects using Bowling media

After giving children the stimulation of the bowling game in recognizing numbers, the results of the Post-test data analysis showed an increase where the children's ability to recognize numbers was already in the very well developed (BSB) range. This means that there is an influence of the Bowling game on the ability to recognize the shape of number symbols in children. From this statement, the game of Bowling has a significant influence on children's ability to recognize number symbols. Piaget revealed that play is the main way for children to appear active in their environment and is a stimulation of thinking and learning. One of the factors that causes children to quickly learn to recognize numbers is learning that is packaged in an interesting and fun way. Because the true world of early childhood is a world of play (Morrison., 2012). Another thing also expressed by Sujiono is that it is necessary to create fun learning so that children are able to focus their full attention on the learning process so that their attention intensity is high. According to research results, high levels of children's attention can improve learning outcomes. Fun, safe and comfortable conditions will activate the neo- cortex (thinking brain) and optimize the learning process and increase children's self- confidence (Sujiono, 2013).

CONCLUSION

Based on the data analysis and discussion in this research, it can be concluded that the ability to recognize the shape of number symbols in children aged 4-5 years at the Darussalam Petapahan Jaya Kindergarten before treatment was given was at the beginning to develop (MB) criteria as many as 3 people and 9 people were at developing. according to expectations (BSH), where children are still not able to match the shape of the number symbol according to color, match the shape of the number symbol according to shape, match the shape of the number symbol according to size, create shapes from pieces of number symbols, name the objects around them according to the shape of the number symbol, imitate the shape of number symbols, and group the shapes of number symbols. After indentation (Post test) 9 people were given treatment that was at very well developed (BSB) criteria, where the children were able to match the shape of the number symbol according to color, match the shape of the number symbol according to shape, match the shape of the number symbol according to size, create shapes from pieces of

number symbols, name objects those around it correspond to the shape of the number symbol, imitate the shape of the number symbol, and group together the shape of the number symbol.

There is a significant effect of using the Bowling Game on the ability to recognize the shape of number symbols in children aged 4-5 years at the Darussalam Petapahan Jaya Kindergarten, before and after carrying out experiments by implementing the Bowling Game using the Wilcoxon test, which shows that H_a is accepted. This bowling game can be used as an effort to improve the ability to recognize numbers in young children. This research is not perfect, there are various weaknesses and shortcomings. Therefore, it is recommended that future researchers can conduct research using a correlational quantitative approach so that they can add variable factors that can influence the ability to recognize numbers in early childhood, such as family functions or family functioning.

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prasekolah dengan tujuan agar anak dapat mengembangkan potensi- potensinya sejak dini sehingga mereka dapat berkembang secara wajar sebagai anak. Tujuan dari Pendidikan Anak U. kencana Perdana Media Group.

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