Motor Adventure: Exploring the Influence of the Snakes and Ladders Game on the Gross Motor Development of Children Aged 4-5 Years at RA Ilyasa Nurul Qomar

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Abstract: *If gross motor development is not stimulated, it will not develop as we expect. However, there is a lack of learning media, especially for motor development, especially media that can be used indoors and outdoors. Therefore, playing snakes and ladders can help stimulate gross motor development in children aged 4-5 years. The research method used is a quantitative research method with a one-group design experimental approach, only looking at the results of the pre-test and post-test. In this study, 20 samples were taken for validation tests and 15 samples for research. The results of this research were obtained from the hypothesis that gross motor development in children during the pre-test and post-test was different. This can be seen in the results obtained, namely if Sig. (2-tailed) < 0.005 there is an influence or change. Because the Sig value. (2-tailed) in the hypothesis test above the value of 0.00.*

Kata Kunci:
Anak usia dini, permainan, perkembangan motorik.

Abstrak: Perkembangan motorik kasar jika tidak dirangsang maka tidak akan berkembang seperti yang diharapkan. Namun media pembelajaran khususnya untuk perkembangan motorik masih kurang, terutama media yang dapat digunakan di dalam dan di luar ruangan. Oleh karena itu, bermain ular tangga dapat membantu merangsang perkembangan motorik kasar anak usia 4-5 tahun. Metode penelitian yang digunakan adalah metode penelitian kuantitatif dengan pendekatan eksperimen one-group design, hanya melihat hasil dari pre-test dan post-test. Dalam penelitian ini diambil 20 sampel untuk uji validasi dan 15 sampel untuk penelitian. Hasil penelitian ini diperoleh hipotesis bahwa perkembangan motorik kasar anak pada saat pre-test dan post-test berbeda. Hal ini terlihat dari hasil yang diperoleh yaitu jika Sig. (2-tailed) < 0,005 terdapat pengaruh atau perubahan. Karena nilai Sig. (2-tailed) pada uji hipotesis diatas nilai 0,00.

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INTRODUCTION

Changes in the rotation of the education sector and developments in science and technology influence various aspects of education, including education policy. As time went by, the government began to focus on pre-basic education, or early childhood education (PAUD). This attention reflects the commitment of the Indonesian government as a UN member country to the results of the World Conference on Education for All which was held in Dakar in 2000. This conference reaffirmed our commitment to early childhood education and care, which determines the development of young children. Since then, PAUD

has become a central issue in the world of education, including Indonesia. Children are the most important people in Indonesian society, because they are the current and future owners of the country. The history of Indonesian society is passed down in the hands of the country's children and is very important for the continuity of ethnic traditions (Lathif Mukhtar & Dkk, 2013).

Apart from that, early childhood education (PAUD) is an educational institution that helps or makes efforts to provide stimulation, teaching, promotioand providing learning activities that can develop children's skills and abilities. Early childhood education refers to education for children from birth to eight years of age. In Indonesia, early childhood refers to children aged 0 to 6 years. Children at an early age have a strong desire to learn more about nature and their social environment. Then in the management of early childhood education, groups are grouped based on age. For example, children aged 2-3 years are accepted in the TPA (Child Care Center) group and children aged 3-4 years are accepted in the play group (KB). Children aged 4 to 6 years are sent to Kindergarten (TK) or Raudhatul Athfal (Masnipal, 2013).

Each school's learning process is different, some are effective or vice versa, even the stimulation process carried out in developing aspects of development in children is different. Stimulating the motor skills of early childhood is not an easy job, it requires certain methods so that the stimulation can be received by the child. Of course the method must be fun for young children so that it can be accepted easily. In formal and non-formal schools, a fun learning system needs to be facilitated, there are many kinds of media or eductive game tools that can help stimulate children's motoric development.

During the learning process, early childhood requires various learning media to help the learning process be more optimal and help develop developmental aspects according to expectations. Learning media used to develop children's potential and development usually use educational game tools or often called (APE) because when an educator at a creative institution uses learning media to implement plans that have been made, then the class and learning will attract students' interest, even will be a fun learning process. Fun learning can help children realize their imaginations, therefore a teacher has an important role in arranging a learning atmosphere that children like, so that they

can help develop the developmental aspects of each child. Learning media is an alternative that helps teachers realize learning in the classroom, either using educational games or other media, which have the same function.

Based on observations at RA Ilyasa Nurul Qomar Bungursari, there are indeed activities there to stimulate physical motor development, especially gross motor skills, but only a few times and only a few games are facilitated to stimulate gross motor development in early childhood. The majority of these games are outdoor (available outdoors). Based on this problem, the researchers plan to create a game that can help stimulate gross motor development in young children, which can be carried or used anytime and anywhere (flexible).

Several studies related to motor development show mixed results, because the use of different media increases motor skills in early childhood using the snakes and ladders game can help teachers stimulate the development process of early childhood, this is proven by the results of research from Ruhil Jamil with research conducted entitled "The Role of the Traditional Game of Engklek in Improving Gross Motorcycles in Children Aged 5-6 Years at RA Al Muhsin Medan" which contains the role of the traditional game of engklek which has been running well, and is able to improve motor development in children. Then the teachers have a suitable strategy in teaching each game. The results of what has been researched show that when children learn to use facilities and infrastructure that can help develop aspects of the child's development (Alwafi Ridho Subarkah, 2018).

Then another research from Tridiah Safitri (2021) in her research entitled "Implementation of the Traditional Engklek Game Strategy in the Development of Children's Gross Motor in Al Ulhaq Kindergarten Sukabumi Bandar Lampung" shows that the implementation of the Engklek game strategy has gone well, it can be proven by the readiness of a teacher, namely the teacher prepares and facilitates activities carried out by students, starting from planning, time, tools and materials and explaining the rules of the game, so that it makes students enthusiastic about learning and can help stimulate gross motor development (Safitri, 2021)

Apart from that, another research from Rahayu Kurniasih (2021) entitled "Implementation of the Traditional Congklak Game in Cognitive Development in

Tiara Persada Kindergarten, North Metro District". The results of this research show that the use of educational game tools can help improve gross motor development. Because of the differences when carrying out learning without media and using media that has been designed by researchers. So you can see the influence of learning media on motor development in early childhood (KURNIASIH, 2021).

Then Wahyuni's latest research is entitled "Identification of the use of APE in developing gross motor skills in children aged 5-6 years in PAUD throughout Sekarbela District in the 2015/2016 implementation year". The results of this research show that the use of APE has not been maximized. The facilities provided by teachers are very minimal, only 14 APE. Therefore, as an educational institution it is best to provide facilities that can help stimulate children's abilities. (Wahyuni, 2022) Children's growth and development can increase It is significant if teachers and parents always provide positive and varied stimulation in all things aspects of children's physical development and growth (Purnamasari, 2018)(Amelia et al., 2022).

Based on the results of several studies, and the problems at RA Ilyasa Nurul Qomar related to obstacles to the development of gross motor skills in children aged 4-5 years who have not developed significantly, learning media is needed that can stimulate the development of gross motor skills to develop as expected. Therefore, learning media can help stimulate motor development in children aged 4-5 years. Therefore, researchers took the initiative to carry out treatments to see the development of gross motor skills before and after being given treatment in learning using learning media or the snakes and ladders game. So this research is entitled "The Influence of the Snakes and Ladders Game in Developing Gross Motorcycles in Children Aged 4-5 Years at RA Ilyasa Nurul Qomar".

RESEARCH METHODS

According to Dr. Amir Hamzah in his book entitled Research and Development Methods Research and Development means quantitative methods, namely research methods that collect and then present data in the form of numbers or can be calculated which are objective. (Hamzah, 2019) Researchers used a quantitative experimental approach method in this research. Because

quantitative experimental research methods include research methods that are used to test hypotheses. The experimental method can reveal the influence or impact that occurs between two or even more variables that are related to one another.

In this research, researchers used quantitative methods. Quantitative methods refer to research methods based on the philosophy of positivism that involve studying a specific population or sample and using research instruments to collect data with the aim of describing and testing a given hypothesis, used to analyze quantitative or statistical data (Sugiyono, 2022)

Then the design chosen by the researcher is Pre-Experimental Design, namely the researcher uses pre-test and post-test in this research, because it will measure how much influence the snakes and ladders educational game has on increasing gross motor development in early childhood. What is meant by "pre-experimental design" is a design that is actually an experiment that does not include extraneous variables that also influence the dependent variable (Sugiyono, 2022).

The research design used in this research is OneGroup Pretest-Posttest Design. One-Group-Pretest-Posttest Design means a pre-test is carried out before the learning treatment is given. Then after that a post-test was carried out after the learning treatment (treatment). In this way, the results of the treatment can be known more accurately, because it can be compared with the situation before the treatment was given. This design can be described as follows:

$O1$ = Pre-test value (before treatment)

$O2$ = Post-test value (after treatment)

X = Treatment

One-Group Pretest-Posttest Design research was carried out on a single group without a control group by first being given a pretest (initial test) and after being given treatment the sample was given a posttest (final test). Thus, the PreExperimental Design experimental method is a research method used to find the effect of certain treatments under controlled conditions in a group. The One-Group Pretest-Posttest Design research design was carried out by giving a pretest (O1) to class A students aged 4-5 years, to determine the initial conditions of gross

motor development before receiving treatment. Next, the research sample was given treatment in the form of playing the snakes and ladders game. The difference between the initial test and the final test ($O1$ and $O2$), namely O2 – O1 is assumed to be the influence of treatment (X). This design was carried out in accordance with the goal to be achieved, namely wanting to know how to increase gross motor development using the snakes and ladders game. This research was conducted to find out whether there were significant changes in improving the motor development of young children. Before being given treatment and after being given treatment in one class. Without control and experimental classes.

RESULTS AND DISCUSSION

Early childhood is a group of children who are in a unique process of growth and development. Children have a mindset, thinking power, language, intellectual intelligence, emotional intelligence and religious or religious intelligence. At an early age, children still need help and stimulation from the environment, teachers and parents, so that their character can be formed or their abilities developed. (M. Fadlillah, 2018).

As for children aged 4-5 years, namely children who attend school in group A, at this time children are very active and enjoy being involved in various activities which can help develop their muscles. Apart from that, children's vocabulary skills begin to increase in language skills, and they often talk about the activities they have experienced and are happy to be invited to discuss them. Then the mindset at this time is always to be curious and express itself during activities, such as starting new things (Asni, 2020)

Then Masganti's definition of motor development is the actual changes that occur in parts of the body that can be observed. In this way, motor development can also be called the ability that a person has from birth to move their body using both large muscles (gross motor skills) and small muscles (fine motor skills. (Sit, 2019). Motor development is a maturity process that is related to developmental aspects and is an ability that a person has from birth as a form of skill to move their body which involves both gross motor skills (large muscles) and fine motor skills (small

muscles) to achieve a goal (Sit, 2019)

According to the book written by M. Fadlillah with the title "Playing and Games" it is revealed that playing is an activity carried out without coercion to obtain satisfaction or pleasure for each player. Playing is a reflection of physical, motoric, intellectual, emotional and social abilities. Playing is one of the means that children can use to gain pleasure in playing while learning which can help stimulate children's development (M. Fadlillah, 2018).

Then apart from that, the book also reveals that games are something that is used whether in the form of real objects or not and is used as a play activity that is interesting and can be done by every individual without coercion and is fun for children. Games in early childhood education are very important for stimulating children's development because through games children will feel comfortable and can explore themselves and games in every lesson they learn, especially for early childhood.

Play tools are all play tools used by children to develop children's creativity and potential, such as grouping, looking for matches, taking apart toys, assembling, forming, knocking, jumping, walking, stringing, forming, knocking, jumping and walking. . The benefits of games are to help teachers and parents stimulate motor development in young children. Educational game tools have two main meanings, namely game or educational tools, the game tool itself means a facility that can be played by children and is fun, while educational is related to education, meaning it has values that can provide education to young children. Therefore, educational games are a means facilitated by educational institutions or parents to develop creativity and provide fun learning (M. Fadlillah, 2018).

Figure 1. Snakes and Ladders Game

The snakes and ladders learning media created helps teachers stimulate gross motor development in children, so they can see whether there is significant development after being given treatment to children aged 4-5 years so that in the future teachers can be more creative in using learning media according to their needs. child. However, before carrying out research, carry out a validity test first. The instrument testing or validity test was carried out by researchers at the KB Arraudhoh school, Tegalwaru subdistrict, Purwakarta district with a sample of 20 people, to see whether the instrument was valid and suitable to be used as a research instrument or not. Researchers created 10 instruments and all of them were valid. The validation data is as follows:

Table 1. Instrument Validation

Item	r tabel	r hitung	Criteria
1	0, 444	0, 876	*Valid*
2	0, 444	0, 797	*Valid*
3	0, 444	0, 803	*Valid*
4	0, 444	0, 762	*Valid*
5	0, 444	0, 800	*Valid*
6	0, 444	0, 740	*Valid*
7	0, 444	0, 775	*Valid*
8	0, 444	0, 636	*Valid*
9	0, 444	0, 530	*Valid*
10	0, 444	0, 570	*Valid*

Table 2. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.901	10

Based on the Cronbach's Alpha value in the table above, the statistical reliability value is 0.901, where this value can be interpreted using the following criteria:

Table 3. Reliability Table

Alpha	Level of Reliability
0,00 – 0,2	Less Reliabel
≥ 0,20 – 0,4	Somewhat Reliabel
≥ 0,40 – 0,60	Quite Reliabel
≥ 0,60 – 0,80	Reliabel
≥ 0,80 – 1,00	Very Reliabel

Referring to the reliability table, the instrument created is at a very reliable level, namely 0.901 (Very Reliable). This means that this research instrument is very reliable in terms of data measurement. Thus, it can be said that the data collection measuring instrument in this research is accurate and precise, and can be used as a research instrument.

Then after that research and testing was carried out pre-test (before treatment) then post-test (after treatment). The results of the research at RA Ilyasa Nurul Qomar showed significant gross motor development seen from the Pre-Test and Post-Test conducted by the researcher. The results are:

Table 4. Pre-Test and Post-Test results

NO	NAME	PRETEST	POSTEST
7	Abinaya	22	34
2	Adiba	21	36
6	Anindya	20	27
1	Arvino	22	32
9	Asyyifa	22	26
4	Dhilara	23	32
15	Elmaira	20	29
5	Kansa	20	29
12	Kartika	15	27
11	M Abizar	19	31
8	Natajalu	15	26
14	Raditya	17	27
13	Rafka	19	27
3	Syakira	21	30
10	Yuke Dwi	18	28
	Amount	294	441

Then, after conducting the pre-test, experiment and post-test, they were tested for normality (to find out whether the results of both were normally distributed), paired and independent (to find out the final result or significant effect).

Table 5. Normality Test

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Pre test	0.164	15	.200*	0.921	15	0.201
Post Test	0.185	15	.178	0.905	15	0.114
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Based on the table and statistical data above, the significant value of the pre-test and post-test results for testing using Kolmogorov-Smirnov shows that the data is normally distributed with a value of 0.200 for the pre-test and 0.178 for the post test. Because in the normality test the significance level is greater than 0.05.

Table 6. Paired Sample Test

Paired Samples Test									
		Paired Differences							
					Interval of the				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Pre test - Post Test	-9.800	2.541	0.656	-11.207	-8.393	-14.937	14	0.000

Based on the results of the paired sample test, it can be seen that the t value, there is a change of -14,937 from the pre-test and post-test.

Table 7. Hypothesis testing

Independent Samples Test										
		Equality of Variances		t-test for Equality of Means						
									Interval of the	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
hasil	Equal variances assumed	0.904	0.350	-9.681	28	0.000	-9.800	1.012	-11.874	-7.726
	Equal variances not assumed			-9.681	26.876	0.000	-9.800	1.012	-11.878	-7.722

From the calculations above, the numbers obtained from the hypothesis are that motor development in children during the pre-test and post-test is different. This can be seen in the results obtained, namely if Sig. (2-tailed) < 0.005 there is an influence or change. Because the Sig value. (2-tailed) if the hypothesis test above is worth 0.00 for this research, the hypothesis test is accepted because it is less than 0.05.

CONCLUSION

Motor development is a maturity process that is related to developmental aspects and is an ability that a person has from birth as a form of skill to move their body which involves both gross motor skills (large muscles) and fine motor skills (small muscles) to achieve a goal. The research used quantitative research methods with a pre-experimental one group design approach. Then the results of research conducted at RA Ilyasa Nurul Qomar using the snakes and ladders game were obtained from the hypothesis that gross motor development in children aged 4-5 years during the pre-test and post-test was different. This can be seen in the results obtained, namely if Sig. (2-tailed) < 0.005 there is an influence or change. Because the Sig value. (2-tailed) in the hypothesis test above is worth 0.00. Judging from these results, the snakes and ladders learning media has an effect on gross motor development in children aged 4-5 years, so it can be used in the process of stimulating children.

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