

## The Effectiveness of Indonesian Traditional Games and Agility on Student's Gross Motor Skills in Elementary School Hj. Isriati Baiturrahman 2 Semarang

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### Abstract

The purpose of the study is to find out and analyze (1) The Differences effect between Indonesian traditional games with and without tools on gross motor skills in fourth grade male students of Elementary School Hj. Isriati Baiturrahman 2 Semarang, (2) Differences affect between students who have high and low agility towards gross motor skills in fourth grade male students of Elementary School Hj. Isriati Baiturrahman 2 Semarang, (3) Interaction between the types of Indonesian traditional games and the agility towards gross motor skills in fourth grade male students of Elementary School Hj. Isriati Baiturrahman 2 Semarang. This study uses an experimental method with a 2x2 factorial design. The data analysis technique uses Analysis of Variants (ANOVA) at the significance level ( $\alpha$ ) = 0.05. The results of this study (1) There is a significant differences between the Indonesian traditional games using traditional tools and without using traditional tools for gross motor skills by obtaining  $F_{\text{value}} = 5.597$  with a significance value of 0.028, with a significance level of  $0.028 < 0.05$ , (2) There is an influence between high and low agility on gross motor skills with  $F_{\text{value}} = 13.159$  with a significance value of 0.002, with a significance level of  $0.002 < 0.05$ , (3) There is an interaction between Indonesian traditional games and the agility towards gross motor skills with  $F_{\text{value}} = 15.547$  and  $F_{\text{table}} = 3.47$ , this means  $F_{\text{value}} > F_{\text{table}}$ .

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## INTRODUCTION

According to Indonesian Law of Republic Indonesia Number 20 of 2003 concerning the National Education System, Education is a conscious and planned effort to realize the learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by them, society, nation and state. Physical education, sports and health (PJOK) are basically an integral part of the overall education system that aims to develop the aspects of health, physical fitness, critical thinking skills, social, emotional stability and action through physical and sporting activities. Physical Education began to be applied at all levels of education, both from the level of Kindergarten, Elementary School and even to the level of Higher Education (Abe, 2013).

The learning process can be packaged more planned, systematic, active, and interesting. This method is expected to make the teaching and learning process easier to implement through binding. This kind of learning can improve students' creativity and also develop teacher creativity (Kawuryan, Hastuti, and Supartinah, 2018).

Through playing activities, it is appropriate to develop the basic motion skills of children in elementary school because basically the world of children is the world of play. The game is one type of activity that is very popular with children (Nugroho, 2012) Traditional games are very popular before technology entered Indonesia.

In the past, children played using makeshift tools. But now, they have played with technology-based games from abroad and they have begun to abandon the traditional games. Along with the changing times, the Indonesian traditional games are slowly being forgotten by Indonesian children. In fact, not a few of them are completely unfamiliar with traditional games (Saputra, 2017).

Indonesian Traditional games that are often found throughout rural areas are increasingly extinct. In Indonesia, this kind of

traditional game can support team work as the main activity in working together and the principle of cooperation. Unfortunately, this type of game is largely replaced by such modern games as video games, and other modern and digital games that can be played individually without social interaction (Rahmawati, and Junining, 2018).

Indonesian Traditional games are also referred to as folk games that are full of the value of education and character. It is not only train the intelligence wisely, but also educate children emotionally and spiritually, instill tolerance, mutual cooperation, family and courage in life. (Bishop, and Curtis in Hidayat, 2013) Physical development is closely related to children's motoric development. At the age of the child in elementary school is a period of growth in motoric skills. Motoric learning can be interpreted as a learning process that leads to the dimensions of motion (Hasbi, and Sukoco, 2014). Rough motoric is a body movement that uses most of the large muscles or all body parts that are affected by the child's own maturity including locomotor, non-locomotor, and manipulative movements (Gustiana, 2011). Motoric ability or basic motion ability is basically an underlying ability of the movement that was carried out from birth that is general or fundamental which has the role to perform movements both sports and non-sports movements (Dony, Imran, and Supriatna, 2014). The use of appropriate learning methods is possible to achieve the learning objectives that have been planned beforehand. The teacher uses the play method so in learning of the Basic Motion material of Running, the teacher to collaborate with traditional children's games. Students in learning the material are introduced to how to play, so students learn athletical indirectly (Sutrisna, 2017).

The types of Indonesian traditional games themselves are divided into two, they are using tools and without using tools (Satwika, Supratiwi, Anggarani, and Setyowati, 2017). The Traditional games that using the tools are called "*boi-boian*" and "*kasti*" meanwhile the game without using tools is "*Gobak Sodor*" and "*Bentengan*". Children's world as a world of

learning while playing has introduced many traditional game concepts. Based on the opinions of experts in various sources, the traditional game is a game that are easier to obtain, without expensive costs, without forgetting the surrounding environment, making us more involved in interaction with peers, and making children or young people are not forget their local cultural values which is usually done by more than one person, so that in the process of playing, the children is required to interact with the other person, besides that in traditional games there are also rules that must be adhered to by each child so that each child is responsible for the rules of the game (Hadi, Sinring, and Aryani, 2018).

“*Kasti*” or “*Kastik*” is one of type of traditional team game. This exercise is carried out by two squads using a Ball and a stick as a ball bat to carry out movements to hit and catch the ball. There are two teams that play in each game, they are the hit squad and the guard team squad. “*Benteng*” or “*Bentengan*” is a traditional game that requires agility, running speed and precise strategy. The essence of this game is to attack and take over the fort or “*benteng*” of the opponent. *Bentengan* game requires a large enough yard because it is used for running. The game is played by two groups, each group consisting of 4 to 8 people. Both groups will choose a place for headquarters, usually a pillar, stone or pillar called “*benteng*” (Mulyani, 2013)

“*Gobak Sodor*” comes from the words “*gobak*” and “*sodor*” which means moving freely and spear. “*Gobak Sodor*” or people familiar with “*Galah Asin*” or “*Galasin*” in Indonesia are well known from the past until now. “*Gobak Sodor*” is a traditional game that is rarely played by Indonesian children. This game is very interesting, fun, and very difficult because everyone has to keep on guard and run as fast as possible to win. Therefore this study uses a game of “*Gobak sodor*” to develop the gross motor skills of children. Students will be more interested and happy with the learning activities carried out with the game (Iswantiningtyas, and Wijaya, 2015).

The description of the problem above uses 2 types of traditional games, they are using tools

and without using tools to improve student’s gross motor skills in elementary school.

## METHODS

This research is a quasi-experimental study that looking for the influence of the independent and bound variables with a 2x2 factorial design. According to Sugiyono (2015) the factorial design is a modification of true experimental design that is paying attention by the possibility of the existence of a moderator variable that influences the treatment (independent variable) on the outcome (dependent variable). The treatment in this study is the treatment of traditional games using tools and traditional games without using tools. The population in this study are fourth grade students at Elementary School Hj Isriati Baiturrahman 2 academic years 2018/2019 with total 36 students. The sampling technique uses purposive samples with sample 24 children. The variables in this study consist of 2 independent variables and one dependent variable.

The data normality test aims to show that the data comes from populations are normally distributed. The normality testing of the data in this study uses the Kolmogorov-Smirnov test and also the SPSS program at a significance level of  $\alpha > 0.05$ .

The homogeneity test aims to show that two or more groups of data come from populations that have the same variation. The homogeneity test of the data in this study is the levene test with the help of the SPSS 16.0 application at the significance level  $\alpha > 0.05$ .

The research data obtained must be accountable, then the data collection in this study is doing a final test or post-test by performing gross motor skills tests. Before the exercise program is carried out, agility tests are carried out first in order to determine the level of agility in the high and low categories. Then carry out the initial test or pre-test by doing a test of gross motor skills.

## RESULTS AND DISCUSSION

The results of the effectiveness of the traditional games types and agility on gross motor

skills in fourth grade male students of Elementary School Hj. Isriati Baiturrahman 2 Semarang on January 28 - March 25, 2019, at Elementary School Hj. Isriati Baiturrahman 2 Semarang is as follows:

The research process carried out produces comparative data between pre-test and post-test as a form of data to obtain answers to the research hypothesis. The data can be seen in table 1.

**Table 1.** The Data of Pre-test and Post-test Gross Motor Skilled

Exercise method	Agility	Average of gross Motor Skill		
		Pre-test	Post-test	Gaint score
Traditional game using tools	High	11.33	18.17	6.83
	Low	13.00	16.33	3.33
Traditional game without using tools	High	13.17	16.17	3.50
	Low	14.00	16.33	2.33

The Data obtained through the use of instruments produces preliminary data in the form of pre-test and final data in the form of post-test, then the data tested for normality using Kolmogorov Smirnov at a significant level of 5%

( $\alpha = 0.05$ ) Data is normal if the probability value is more greater than the level of error (0.05). The researcher uses the SPSS 23.0 program to carry out the Kolmogorov Smirnov test, the result of the calculation is in the following table 2.

**Table 2.** The Result of Kolmogorov-Smirnov Normality Test

Exercise method	Agility	Sign	Explanation
Traditional games using tools	High	0.117 > 0.05	Normal
	Low	0.117 > 0.05	Normal
Traditional games without using tools	High	0.200 > 0.05	Normal
	Low	0.200 > 0.05	Normal

The hypothesis testing of the study is conducted based on the results of data analysis and the interaction analysis of variance. The difference in the results of hypothesis testing can

be seen by conducting a two-way Anova test (SPSS 23), the Anova calculation results indicate a significant difference. The results of hypothesis testing can be seen in table 3.

**Table 3.** The Outline of Two-way Anova

Source	Type III sum of squares	df	Mean square	F
Corrected model	57.458 <sup>a</sup>	3	19.153	11.434
Intercept	392.042	1	392.042	234.055
V <sub>1</sub>	9.375	1	9.375	5.597
V <sub>2</sub>	22.042	1	22.042	13.159
V <sub>1</sub> * V <sub>2</sub>	26.042	1	26.042	15.547
Error	33.500	20	1.675	
Total	483.000	24		
Corrected total	90.958	23		

a. R squared = .632 (Adjusted R squared = .576)

V<sub>1</sub> = Traditional games

V<sub>2</sub> = Agility

Hypothesis 1 stated that there are differences in the effectiveness of the traditional games types using traditional tools and traditional games without using tools on gross motorics tested using Anova test and obtained  $F_{value} = 5.597$  with a significance value of 0.028, with a significance level of  $0.028 < 0.05$ . So,  $H_a$  stated there are differences in influence between the types of traditional games using tools

and traditional games without using tools on gross motor skills in male students of Elementary School Hj. Isriati Baiturrahman 2 Semarang is accepted.

Hypothesis 2 stated that there are differences in the effect of high agility and low agility on gross motor skills tested using Anova test and obtained  $F_{value} = 13.159$  with a significance value of 0.002, with a significance

level of  $0.002 < 0.05$ . So,  $H_a$  stated there is a difference in influence between high agility and low agility on student's gross motor skills in elementary school Hj. Isriati Baiturrahman 2 Semarang is accepted.

There are two types of traditional games, they are games that using tools and without using tools, which is the traditional game itself contain elements similar to sports in general, they are gestures using the large muscles of the body that are affected by locomotor, non-locomotor basis and manipulative. The type of exercise in general is also influenced by physical components, one of which is agility. Agility occurs because of the explosive movements of the muscles, the magnitude of which is influenced by the contraction of muscle fibers and the speed of muscle contraction (Baley, James, 1986). It is concluded that exercise is the result of gestures using the body's large muscles.

Anova test is used to test the third hypothesis, there is an interaction between the types of traditional games and agility towards gross motor skills, obtained  $F_{value} = 15.547$  with a significance value of 0.001. The results of this calculation then are consulted with  $F_{table}$  of the 0.05 significance level with dk numerator =  $1(b-1)$  and denominator  $(kb(n-1))$ , then  $F_{table} =$

3.47 is obtained, because  $F_{value} > F_{table}$  which is equivalent to  $15.547 > 3.47$  and a significance value of  $0.001 < 0.05$ , then  $H_a$  stated there is an interaction between the types of traditional games and agility towards gross motor skills is accepted.

**Table 4.** Estimated Marginal Means traditional Games towards Gross Motoric Skill

Traditional games	Mean	Std. error	95% Confidence interval	
			Lower bound	Upper bound
Using tools	4.667	.374	3.887	5.446
Without using tools	3.417	.374	2.637	4.196

Table 4 shows that traditional games using tools is better to improve gross motor skills compared to traditional games without using tools can be seen with a mean of  $4.667 > 3.417$ .

**Table 5.** Estimated Marginal Means Agility towards Gross Motor Skills

Agility	Mean	Std. error	95% Confidence interval	
			Lower bound	Upper bound
High	5.000	.374	4.221	5.779
Low	3.083	.374	2.304	3.863

Table 5 shows that students who have high agility are better for improving gross motor skills compared to students who have low agility, can be seen with a mean of  $5.000 > 3.083$

**Table 6.** Estimated Marginal Means Traditional Games and The Agility Towards Gross Motor Skills

Traditional games	Agility	Mean	Std. error	95% Confidence interval	
				Lower bound	Upper bound
Using tools	High	6.667	.528	5.565	7.769
	Low	2.667	.528	1.565	3.769
Without using tools	High	3.333	.528	2.231	4.435
	Low	3.500	.528	2.398	4.602

Table 6 shows that the traditional games using tools with a high level of agility are better for increasing gross motor skills compared to traditional games using tools with low agility or traditional games without using tools with high or low agility. It can be seen with a mean value of 6.667.

## CONCLUSION

Based on the results of research and discussion of the effectiveness of traditional types

of play and agility on gross motor skills are as follows: (1) There are differences effectiveness between Indonesian traditional types of games using traditional tools and types of games without using tools for gross motor skills. Traditional types of games that use tools have a better effect on gross motor skills because their movements are more complex and manipulative, (2) There are differences effectiveness between students who have a high level of agility and members who have a low level of agility towards gross motor skills. students who have a high level of agility

have a better influence on gross motor skills than students who have a low level of agility, (3) There is an interaction between the types of Indonesian traditional games and agility towards gross motor skills.

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