

## The Effect Of The Traditional Fort Game On Improving The Physical Fitness Of Students At Sie State Elementary School

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### Abstract

*In today's digital era, it's clear that children prefer playing with gadgets to exercising or doing physical activities. This can interfere with students' physical fitness, so it's no wonder that many children today are less energetic, easily tired, and less mobile. This study aimed to determine the effect of traditional Benteeng games on increasing the physical fitness of SDN Sie students. This quantitative study used the pre-experiment method with 12 students as subjects. The sampling technique used was saturation sampling. Data were collected using the TKJI test instrument, which included the 40-meter run, elbow hanging (pull-up), 30-second sit-up, and upright jump tests. The students were then given treatment before and after the traditional fort game. Results of the homogeneity analysis showed a significance value of 0.516, which is greater than 0.05; therefore, the results (pre and post) are homogeneous. The normality test, using the Shapiro-Wilk test, showed significance values of 0.301 and 0.692 for the pre- and post-test data, respectively, indicating that the data were normally distributed at both measurement stages. The results of the two-sided paired sample t-test showed a significance value of 0.020, indicating a significant difference in the TKJI test results before and after the traditional fort game.*

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## 1. INTRODUCTION

Physical education is a teaching and learning process that focuses on increasing physical and mental activities that aim to improve a person's health and physical fitness (Subekti et al., 2020), a similar thing was conveyed by (Lengkana & Sofa, 2017) The purpose of physical education does not only emphasize the development of physical aspects, but also mental, social, emotional, and moral aspects. Meanwhile, according to (Andriansyah et al., 2025) Physical education is part of the formal education system that aims to improve the health and physical fitness of students by involving them in various physical activities and sports. According to (Ummah, 2019) Physical education plays an important role in shaping and strengthening students' character because it provides sports values by practicing them directly. Meanwhile, according to (Nurrochmah, 2016). Physical education, sports, and health can improve basic movements and increase honesty and perseverance. (Taqwim et al., 2020). A similar thing was conveyed by (Aziz & Zakir, 2022) Education is a conscious, planned effort to create a pleasant learning atmosphere so that students can develop their potential according to the curriculum in the educational unit.

Physical fitness is very important to achieve the goals of physical education in schools, where the goal of physical education in schools is to know the development of each student. As well as being able to know the level of healthy fitness, students can carry out activities in the school environment without feeling tired because students have good fitness (Ula et al., 2023) According to (Putra, 2021) a person's physical fitness is greatly influenced by sports activities, which play a direct role in fitness composition, Activities, safety precautions, and equipment must be appropriate for a person's age. Sports activities must be carried out with the correct rules and techniques, not carelessly. (PrAanata, 2022) According to Ruswan (in Nuhad Hanin & Anna Noordia, 2024), physical ability is an essential foundation for developing physical fitness.

With healthy physical abilities, a person will be able to perform physical activities well. Therefore, physical abilities must be instilled in children from an early age, including elementary school age.

Traditional sports are sports inherited from the ancestors of this nation, so every Indonesian is obliged to preserve them. In addition to preservation, these sports also have benefits and goals for maintaining physical fitness, channeling hobbies, and becoming a place to socialize and relax. (Akbar et al., 2023) Meanwhile, according to (Nuhad Hanin & Anna Noordia, 2024) sports are an important part of maintaining physical and mental health for everyone. According to (Laksono & Mandalawati, 2022) sports are activities that integrate the soul, body, and mind in a planned manner to improve, train, and develop physical, spiritual, social, and cultural abilities. Physical fitness is closely related to human movement and work.

The traditional game of fortification is very beneficial for sports because it can train speed, agility, endurance, and strength, as well as foster cooperation between groups. This game can be included in physical education with a focus on running athletics material, so that students can learn while playing. (Carolyn et al., 2024) This is reached (Samsu Rijal, Mujriah, 2025) Games that require teamwork and strategy, such as building forts, provide better results than games that rely more on individual skills. The Fortress game is demanding

dexterity and strategic skill. Two teams play the Fortress game, with each team consisting of four to six people. Each team chooses a location as its base. In the Fortress game, poles or pillars are usually used as forts. The goal is to attack and take over the opponent's fort by touching the poles or pillars and shouting "Fort!" (Adhariah, 2018) According to (Aulia et al., 2022) Traditional games, when linked to physical education, are a viable alternative in physical education and sports instruction in schools. This alternative can improve students' physical fitness. This is reinforced by

In accordance with the characteristics of Sie State Elementary School students, aged 10-11 years. In general, they really enjoy various physical activities. When playing things they like, they tend to do physical movements spontaneously, not just moving. So it is necessary to pay attention to their physical fitness. The results of observations conducted at Sie State Elementary School turned out that students had not taken a physical fitness test to determine the level of physical fitness. Students in physical education learning, and students also rarely like the traditional fort game which causes traditional games to be increasingly eliminated. This can be seen from the children who are busy every day after coming home from school. they prefer to play with gadgets\cellphones rather than playing with friends of the same age, this is what causes students' physical fitness to be lacking. The purpose of this study is to find out whether there is an influence of the traditional fort game on improving students' physical fitness at SDN Sie.

## 2. RESEARCH METHOD

This research method uses a quantitative research method that aims to collect analytical data and numerical data to discover knowledge. According to Sugiyono in (Carolyn et al., 2024), quantitative research aims to reveal relationships between variables, test theories, and find conclusions that can be predicted and generalized. This research uses a pre-experimental design, namely experiments that do not fully meet scientific criteria. According to (Candra Susanto et al., 2024) Quantitative research uses numerical data collection to test hypotheses, draw conclusions, and understand relationships between variables. The purpose of this study is to determine the effect of a treatment on a variable. The design used is a single group pretest-posttest design: An experiment conducted with one group without a comparison group. In this study, SDN Sie students took an initial test to determine their initial physical fitness. Then, they played the traditional fort game as a treatment. Finally, they took a final test to determine their final physical fitness. The population of this study took 12 SDN Sie students. The sample of this study was taken using the Saturated Sampling technique, which uses all members of the population as samples. Therefore, the number of samples used was 12 children with an average age of 10-11 years. The data collection instrument in this study was the TKJI Test (Indonesian Student Fitness Test) developed by the Ministry of National Education (Ministry of Education and Culture) through the Recreational Fitness Center in 1999, which includes: 40-meter run, pull up, Sit up, Vertical jump and so on. This research instrument is to test the physical fitness of SDN Sie students, after the test results are then tested for normality, Hypothesis testing, using SPSS Statistics.

## 3. RESULTS AND DISCUSSION

The results of a study conducted at SDN Sie (School of Elementary School) on the Effect of the Traditional Game of Benteng on Improving Students' Physical Fitness. The following data is available.

**Table 1.** Homogeneity test results  
**Tests of Homogeneity of Variances**

	Levene Statistic	df1	df2	Say.
D Based on Mean	.868	3	5	.516
a Based on Median	.868	3	5	.516
t Based on Median and with	.868	3	2.000	.575
a adjusted df				
Based on trimmed mean	.868	3	5	.516

Based on the table above, it can be concluded that the significance value of 0.516 above is greater than 0.05, so the data collected by the researcher is homogeneous..

**Table 2.**Uncle T  
**Paired Samples Test**

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pretest & post	-1.00000	1.27920	.36927	-1.81277	-.18723	-2.708	11	.010	.020

Based on the table above, it can be concluded that the significance value of 0.020 is smaller than the 0.05 level. This value indicates a significant influence, meaning that there is a meaningful influence of the traditional fort game on improving students' physical fitness.

**Table 3.** Normality Test Before and After Playing Benteng  
**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Say.	Statistic	df	Say.
before being treated	.183	12	.200*	.922	12	.301
after being treated	.174	12	.200*	.954	12	.692

Based on the table results, the significance value before treatment was  $0.301 > 0.05$  and after treatment was  $0.692 > 0.05$ , meaning that it can be concluded that the data is normally distributed.

#### 4. DISCUSSION

The main objective of this study is to determine whether there is an effect of the traditional fort game on improving students' physical fitness. From the results of the data collected through pre-test and post-test. From the results of the homogeneity data shows a significance value of 0.516 because this

significance value is greater than 0.05, then the data is homogeneous. The results of the normality test using the Shapiro-Wilk test show a significance value of 0.301 in the pre-test and 0.692 in the post-test of these two data are greater than 0.05, which means that both data are normally distributed at the measurement stage, in the sample t-test test shows this significance value is smaller than 0.05, which means there is a significant difference in the results of the TKJI test between before and after the traditional fort game.

This research stemmed from concerns about the declining physical fitness of elementary school children amidst the development of digital technology. Children today spend more time using gadgets than engaging in beneficial physical activities.

This poses a significant challenge to physical education in schools because fitness is the foundation of physical activity. In this digital era, the games children play today do not require the same social skills as traditional games. The interactions that occur are not as real because children use digital technology, which is a medium that does not facilitate direct interaction. Even when children play together in the same place, each child's focus remains on gadgets or digital technology with modern games. Even though technology is increasingly sophisticated, children's social development will not improve significantly without the efforts of teachers and parents. (Riadi & Lestari, 2017) According to (Samsu Rijal, Mujriah, 2025) digital development is currently increasingly developing, including in Indonesia, causing traditional games to be abandoned and forgotten by society.

Traditional games are not just games; Traditional games are also an important part of our culture that must be preserved. (Yudiwinata & Handoyo, 2014) Traditional sports games such as fortifications, jump rope, and gobak sodor are increasingly being pushed aside by modern games such as PlayStation and online games. According to Satria Traditional games have a positive impact compared to modern games, especially gadgets that seem sophisticated but can have a negative impact on children. One of the causes of the negative impact of modern games is the playing environment. The playing environment can affect children's language and behavior. Children can exhibit deviant language behavior in virtual spaces filled with inappropriate conversations, insults, threats, and other impolite actions towards other players, which are deliberately intended to provoke opponents and friends, resulting in verbal bullying. (Fitri Febri Handayani<sup>1</sup>, 2022) According to (Wurdiana Shinta, 2021) Compared to modern games, traditional games have several advantages. Traditional games can introduce a love for the nation's cultural heritage. They can also preserve it, and they can increase that love, in line with the values in it. This is reinforced by (Qory Jumrotul Aqobah, Masnur Ali & Raharja, 2020) Traditional games can be a form of communication, especially when played in groups.

Even in the era of digital and gadget development, if traditional games continue to be implemented and developed among young children, they will continue to thrive and remain relevant. This is because traditional games are effective in improving children's physical fitness.

## 5. CONCLUSION

Based on the results of the study, it shows that the application of the traditional fort game to improve the physical fitness of 12 students of SDN Sie., from the results of data processing and data analysis carried out, the hypothesis test is known that the value (Tow Sided) of 0.020 is smaller than 0.05. then it can be concluded that H1 is accepted and Ho is rejected, so it can be concluded that there is a significant influence on the application of the traditional fort game which can be an effective method in improving students' physical fitness, especially amidst the increasing tendency of children to engage in sedentary activities.

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