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## The effect of traditional game of rolling the ball on improving the motor development of children with tuna grahita

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### Abstract

The purpose of this study is to ascertain how the traditional game of rolling the ball affects children who have tuna grahita's motor development. In the sense that experimental research has a treatment, this kind of research is experimental. By the rolling game of bola, the experimental approach can be utilized to determine whether or not the treatment provided to pupils with disabilities in ordinary school (SLB) Asahan Regency, North Sumatra, has any effect. This study's design included a single pretest-posttest group (The One Group pretest-posttest).

Twenty students in Asahan Regency, North Sumatra, with exceptional school disabilities (SLB) made up the study's population. Data analysis using the following prerequisite tests: three tests: the normality test, homogeneity test, and T-test. With the aid of SPSS 2.1 for Windows, data analysis is carried out. According to the effectiveness test, the t-test is vulnerable at 0.00, thus if H<sub>0</sub> is rejected and H<sub>a</sub> is approved, the significant value of the t-test is 0.05 or less. This indicates that the age-old activity of rolling a ball has an impact on how well children with disabilities develop their motor skills.

**Keywords:** Traditional game, rolling the ball, tuna grahita

### 1. Introduction

In the realm of education, all students, even those with special needs, participate in a sport activity. According to the Constitution's article 31 paragraph 1 that states that "every citizen has the right to education," as well as the reading of the article above, which indicates that every citizen has the right to obtain an education that is true that human beings born in the world from birth already have the right to obtain education, citizens have the right to receive the same education, both normal children and abnormal children (children with disabilities) (Pambudi 2017) <sup>[10]</sup>.

Children with special needs, sometimes known as ABK (Children with Disabilities), and typically developing kids who have disorders can learn together in an inclusive environment (Widiyanto and Putra 2021) <sup>[16]</sup>. Tuna Grahita is one of the children who has unique requirements. Children with mental disability have intelligence that is much below average and struggle to change their habits as they mature. These children may have mild grahita IQs of 50 to 70, moderate grahita IQs of 30 to 50, or severely and extremely heavy grahita IQs of less than 30. (Widiastuti and Winaya 2019) <sup>[15]</sup>.

Children with mental disorders typically exhibit deficiencies in their movement abilities, unfit bodies, coordination of motions, lack of self-awareness of their surroundings, and loss of both gross motor and fine motor skills (fine motor) 2016's Oedjoe and Bunga Traditional games should be investigated by kids with impairments in order to help them develop their mootrik skills. A significant component of Indonesia's unique recreational cultural heritage are traditional games (Iman, Soraya, Pascal & Ahmed, 2021) <sup>[8]</sup>. Traditional permainan is a cultural heritage that must be preserved in a country since it is immensely popular throughout all aspects of life, including Indonesia (Hanief and Sugito 2015) <sup>[5]</sup>. Traditional sports can be used for learning and training in an organization or the martial arts in addition to being a pleasurable activity (Kylasov 2019) <sup>[7]</sup>. Traditional games should be a very user-friendly teaching or training tool for a certain sport (Sun 2016) <sup>[13]</sup>.

Jumping rope, hide-and-peek, engklek, catfish stakes, gobak sodor, and rolling the ball are among the classic games still played by kids today (Elma Arlina, Mardeli & Lidia Oktamarina, 2022) [2]. Children with disabilities can fully develop all of their potential through the age-old game of rolling the ball, including their physical potential as well as potential connected to kinesthetic motion intelligence, intellectual mental, spiritual, and motor development. Although rolling the ball is a traditional game that resembles playing the ball and helps with motor development, rolling the ball is more precise than turning the ball to a specific target.

Playing is fun for kids, especially when they are playing classic games that are good for them. Traditional games can foster children's creativity, serve as therapy, and aid in the growth of their emotional and interpersonal intelligence, can help them develop their logical and kinesthetic intelligence, can help them develop their natural intelligence, can help them develop their spatial intelligence, and can help them develop their musical intelligence.

This study aims to determine whether traditional games hinder the motor development of kids with disabilities. The advantages of this study include the following: 1) theoretically, this research opens up paradigms in the field of coaching in general and particularly for teachers to always use local wisdom in training to improve the motor skills of children with disabilities; 2) this research is expected to increase knowledge to trainers or teachers so that they can choose a simple exercise method but can improve various physical conditions for children with mental disabilities; and 3) as a reference value for the field of coaching, in which this research is conducted.

## 2. Method

In the extent that experimental research involves a treatment, this kind of research is an experiment (Tanner, 2018) [14]. By a game of rolling the ball, the experimental approach can be utilized to determine whether or not the treatment provided to pupils with impairments in Asahan Regency, North Sumatra, has any effect on their learning (Apuke, 2017) [1]. This study's design was based on the design of one pretest-posttest group (*The One Group pretest-posttest*). Experimental research methods are included in quantitative research methods. The exercise treatment was given for 8 weeks with a frequency of exercise 3 times per week so that the total treatment was given to 18 meetings every Monday, Wednesday and Friday at 15-16 WIB. The research was carried out in the field of extraordinary schools (SLB) of Asahan Regency, North Sumatra. The treatment will be carried out from 08 January 2022 – 08 March 2022.

The population of a study is the total number of participants (French *et al.*, 2013) [4]. Twenty students in Asahan Regency, North Sumatra, with exceptional school disabilities (SLB) made up the study's population. A sample is the segment of the study's population that will be examined (Rose *et al.*,

2017; Zalla & Yates, 2020) [12, 17]. The complete population of 20 outstanding school tuna grahita students (SLB) from Asahan Regency, North Sumatra, who were chosen and identified by the researcher according on the sampling criteria will be treated in this study. Careful sampling was performed in this investigation to ensure that the samples used matched the requirements and requirements of the study. An exceptional school tuna grahita (SLB) student from Asahan Regency, North Sumatra, served as the sample.

A data analysis technique is a strategy or approach to turning data into information so that its features are clear to grasp and effective for solving problems, most of which are difficulties pertaining to a study. Conversely, data analysis can be understood as a process used to transform study data into information that will subsequently be used to draw conclusions. In this work, the kolmogorov-Smirnov method was used to evaluate the data. With SPSS 20, a paired sample t-test was used to analyze the data. A 5% significance rate has been used.

Data analysis is used to explain data so that it can be understood and to draw conclusions about population characteristics using data from samples. These conclusions are often drawn using methods for estimating and testing hypotheses.

## 3. Results and Discussion

Considering the outcomes of the research that there is an improvement in the motor skills of children with extraordinary school disabilities (SLB) of Asahan Regency, North Sumatra from the game of rolling the ball. Data analysis using SPSS can be seen in the tables below.

**Table 1:** Normality Test Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	Df	Sig.
Pre-test	.161	20	.187	.873	20	.013
Post-test	.175	20	.112	.905	20	.051

a. Lilliefors Significance Correction

The normality test serves to test whether the observed distribution does not deviate or differs significantly from the expected frequency. The Lilliefors Test was employed in this study's normalcy test, and the outcomes are shown in Table 1 above.

The pre-test value has a significant level of 0.187, and the post-test value has a significant level of 0.112, according to the findings of Table 1 above. If a variable's significance value is greater than or equal to 0.05, it is said to have a normal distribution. In contrast, the variable or data is deemed to be undistributed normally if the significance of the is less than 0.05. Since all of the data groups in this investigation have significance values greater than or equal to 0.05, it can be inferred from Table 1 above that they are all regularly distributed.

**Table 2:** Homegenity Test

Test of Homogeneity of Variances					
		Levene Statistics	DF1	DF2	Sig.
Result	Based on Mean	.008	1	38	.930
	Based on Median	.000	1	38	1.000
	Based on Median and with adjusted df	.000	1	37.092	1.000
	Based on trimmed mean	.003	1	38	.956

An assessment of the similarity of the variances of two or more distributions is known as a homogeneity test. The SPSS test, as seen in table 2 above, was employed for the homogeneity test in this study. A value with a significant level of 0.930 was obtained for the homogeneity test based on the description of Table 2 given above. If a variable's significance value is greater than or equal to 0.05, it is

considered to have a homogenous distribution. In contrast, if the significance of is less than 0.05, the variable or data is deemed to be unequally distributed. Due to the fact that all of the data groups in this study have significance values greater than or equal to 0.05, it can be inferred from Table 2 above that they are all evenly distributed.

**Table 3:** Influence Test / Paired Samples Test

		Paired Samples Test					T	Df	Sig. (2-tailed)
		Paired Differences							
Pair	I	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pretest – posttest	-1.900	.641	.143	-2.200	-1.600	-13.262	19	.000

According to the above table's hypothesis testing findings (T Test), the variable significance value is 0.00, which is less than 0.05. This demonstrates how the Pretest variable affects the Posttest. The significance value in the Coefficients table is used to guide decision-making. The standard practice is to assess regression results with a 95% confidence level or a 5% significance level (= 0.05). In terms of the t statistical test's criterion, if the significance value is greater than 0.05, H<sub>0</sub> is accepted and H<sub>a</sub> is disregarded. When the significant value of the t test is less than 0.05, H<sub>0</sub> is rejected and H is accepted, indicating that the independent variable has no effect on the dependent variable. This indicates that independent factors and dependent variables have an impact on one another.

According to Table 3 above, H<sub>0</sub> is rejected and H<sub>a</sub> is accepted when the significance value of the t test is less than 0.05. This indicates that the age-old activity of rolling a ball has an impact on how well children with disabilities develop their motor skills. Motor development is the process by which muscles, nerve centers, and nerve veins work together to govern physical movement. The growth, development, and skill of children in performing locomotor and nonlocomotor movements in gross and fine motor can be used to observe children's motor development, which can influence the child's cognitive development.

Traditional games are types of games that exist in one particular area based on the culture or culture of the area. Traditional games are usually played by people in certain areas with traditional rules and concepts. This claim is confirmed by a number of prior research, including Prasetia (2019) <sup>[1]</sup> Pengaruh traditional games on the development of gross motor abilities in male primary school pupils. According to 166/iii Cutmutia Kerinci, traditional games have a big impact on people's motor skills. According to research by Efendi (2017) <sup>[3]</sup>, "Pengaruh Traditional Games Fortification on the Physical Abilities of Early Childhood Motor," traditional games have a substantial impact on motor skills and successfully enhance them. Also, research from Ismoko (2019) <sup>[6]</sup> on the impact of traditional games on children's motor development has led to the conclusion that these games have an impact on grade-level children's psychomotor development.

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