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The Effect of Tire Jumping Method On Long Jumping In Class V State Primary School Students Integrated Civil Model

Liana Anjani[1A-E*], Jumain[2B-D], Krisyanto Batong Lumbaa[3B-D], Muhammad Ismail[4B-D]

[1,2,3,4] Universitas Tadulako, Central Sulawesi, Indonesia

lianaanjani44@gmail.com[1], jumainkempo77@gmail.com[2], chrisyantobatong@untad.ac.id[3], mail.jaket@gmail.com[4]

ABSTRACT

This study aims to determine the effect of the tire jump training method on improving long jump ability in grade V students of SD Negeri Model Terpadu Madani. This study uses a quantitative approach with a pre-test and post-test experimental method. The research sample consisted of 20 students selected by purposive sampling. The data collection technique used a long jump ability test before and after treatment. Data analysis used the Paired Sample t-test. The results showed that there was an increase in long jump ability after students were given tire jump training for six weeks. The average pre-test result was 2.651 meters, while the post-test increased to 3.043 meters, with a percentage increase of 60.21%. The results of the t-test showed that the calculated t value (16.678) was greater than the t table (1.729) with a significance of 0.00 <0.05, so Ha was accepted. Thus, it can be concluded that the tire jump method has a significant effect on improving students' long jump ability.

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INTRODUCTION

Physical education is basically education through physical activity, physical games and selected sports that are used as a medium to achieve overall individual development. Through physical education, students are socialised into physical activities, including sports skills. Therefore, physical education is believed to be part of comprehensive education and has strategic potential to educate.

In the implementation of athletic learning in elementary schools, physical education teachers can utilize simple tools. Teacher creativity is needed to generate movement ideas that are easy for students to do. The most important thing is the joy factor in children that arises from athletic activities, so that children will be interested and start to like athletics. To create a joyful atmosphere, it is necessary to develop athletics with a game nuance.

Liana Anjani[1A-E*], Jumain[2B-D], Krisyanto Batong Lumbaa[3B-D], Muhammad Ismail[4B-D]
lianaanjani44@gmail.com[1*]

Jumping is an activity that develops motor skills that are carried out from one place to another, and jumping is a form of locomotor movement (Anjani, 2025).

The development of dominant motor skills in jumping movements helps teachers develop students' abilities optimally. However, elementary school students are very susceptible to injury, so teachers must be more careful in observing the various movements made by their students. Modifying simple tools, such as using used tires, can arouse enthusiasm for doing basic athletics, such as jumping into a jumping park. Modification is a way to change the shape of an item from less attractive to more attractive without eliminating its original function. Modifying learning media using simple tools is one of the efforts that can be made by physical education teachers so that the learning process runs optimally.

Based on the results of initial observations at SD Negeri Model Terpadu Madani, it was found that the ability of fifth-grade students in the long jump is still low. This can be seen from the minimal distance achieved during the Pre-Test, where the average student jump result only reached 2.651 meters. Some students even showed performance below that number, one of whom was only able to jump as far as 2.11 meters.

This situation is exacerbated by a monotonous learning approach, where teachers emphasize the result without paying attention to variations in methods or modifications to learning media. Students appear less enthusiastic and tend to be afraid to do push-offs and landings, which causes suboptimal movements and endangers safety. Another phenomenon identified is the lack of use of aids that can facilitate active and enjoyable learning.

In response to this phenomenon, researchers implemented the tire jump method as an intervention. The results of 18 meetings over a period of six weeks showed a significant increase in students' long jump abilities. Post-test data showed that the average student jump increased to 3.043 meters, with an average increase of 0.392 meters or equivalent to 60.21% of the initial value. Hypothesis testing using a paired sample t-test produced a calculated t value of 16.678, which far exceeded the t table of 1.729, indicating the significance of the influence of the tire jump method on improving students' long jump abilities.

Previous studies also support that modifying aids can improve long jump learning outcomes. According to Suhati (2021), the use of cardboard as an aid in long jump learning can significantly improve student learning outcomes through a structured play approach. In addition, Syahriannor et al. (2024) stated that the play method in basic athletics, including the long jump, can significantly improve leg muscle power, coordination, and student self-confidence. Based on the description, this study aims to determine the effect of the tire jump method on improving the long jump ability of fifth-grade students of Madani Integrated Model Elementary School.

METHODS

According to (Sugiyono, 2019), Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics that are determined by the

researcher to be studied and then drawn conclusions. The population in this study were all students of grade V of SD Negeri Model Terpadu Madani, Palu City. This class was chosen because it has characteristics that are in accordance with the needs of the study, namely related to the improvement of basic long jump movement abilities, which are still relatively low based on the results of initial observations. The total number of students in the class is 26. However, due to various considerations such as time constraints, meeting intensity, and effectiveness of training implementation, the researcher determined the sample purposively, namely directly selecting 20 students from the class who were considered capable of representing the population based on considerations of the homogeneity of basic abilities, attendance, and willingness to follow the entire series of scheduled training.

The data collection technique in this study was carried out through a series of systematic procedures to ensure the accuracy and relevance of the data obtained. Data were collected using a long jump ability test, which was carried out before (pre-test) and after (post-test) the provision of treatment in the form of tire jump method training to grade V students of SD Negeri Model Terpadu Madani. The instruments used in data collection included a long jump pit, whistle, meter, camera, and stationery to record the results of each student's jump. Each student was called one by one to jump from the starting point to the sand pit, with the test being repeated twice for each student. The jump distance was measured from the take-off board to the closest part of the body that touched the sand. The data obtained from the pre-test and post-test were then analyzed to determine the increase in long jump ability after being given tire jump method training, with the success criteria measured based on the difference in jump results between the Pre-Test and the Post-Test.

The data analysis technique in this study uses a quantitative approach with descriptive and inferential statistical methods. Data obtained from the results of students' long jump ability tests before (pre-test) and after (post-test) were given treatment in the form of tire jump training methods were analyzed to determine the effect of the treatment. The first step, the pre-test and post-test data were calculated for the average value (mean), the highest value, the lowest value, and the percentage of improvement in students' long jump ability. Furthermore, to find out whether there was a significant difference between the pre-test and post-test results, a data normality test was carried out using Kolmogorov-Smirnov to ensure that the data was normally distributed.

After the data was declared normal, the analysis was continued with a hypothesis test using the Paired Sample t-test. This test is used to compare the average results of the pre-test and post-test in the same group, so that it can be known statistically whether the tire jump training method has a significant effect on improving students' long jump abilities. The results of the t-test show that the calculated t value is greater than the t table and the significance value (p) <0.05, so it can be concluded that there is a significant effect of the use of the tire jump method on improving the long jump abilities of fifth-grade students of SD Negeri Model Terpadu Madani.

RESULTS AND DISCUSSION

The results of the study on long jump ability before and after being given tire jump training. This study was conducted in 18 meetings and is described as follows:

The Pre-Test data and Post-Test results for long jump ability are listed below.

Table 1.
Pretest and Posttest of long jump ability

Name	Pre-test	Post-test	Difference
AHMAD GANI	2.11 M	2.68 M	0.57
AMIRAH MARYAM	2.46 M	2.89 M	0.43
AHMAD DANDI	2.3 M	2.73 M	0.43
DIMAS GALANG	2.75 M	3.21 M	0.46
DONI TRIYAS	3.19 M	3.43 M	0.24
HENDRA SON	2.12 M	2.72 M	0.6
DIAMOND MAULIDA	2.20 M	2.65 M	0.45
MELISA AYU	3.14 M	3.48 M	0.34
MAYA RANI	3.2 M	3.52 M	0.32
NABILA SYAKIRA	2.35 M	2.68 M	0.33
MIRA MARWAH	2.5 M	2.84 M	0.34
LISNA AULIA	2.24 M	2.64 M	0.4
FAHRI AKBAR	2.99 M	3.42 M	0.43
SAMUEL ARYA	3 M	3.34 M	0.34
LUKMAN KARIM	2.59 M	2.86 M	0.27
LUKMAN SAPUTRA	2.9 M	3.44 M	0.54
NANDO ARYA	3.4 M	3.85 M	0.45
SABRINA ARUM	2.78 M	3 M	0.22
KARTI UTARI	2.52 M	2.92 M	0.4
PRINCESS UTAMI	2.28 M	2.56 M	0.28
∑	**2,651**	**3,043**	**0.392**

Based on Table 1(Pre-Test) of the long jump ability of fifth grade students of Madani Integrated Model Elementary School, before being given tire jump training from 20 students, the results of the long jump ability were obtained with the highest score of 3.4 meters and the lowest score was 2.11 meters, the average overall value was 2.651 meters.

Based on Table 1(Post-Test) the long jump ability of fifth grade students of Madani Integrated Model Elementary School, after being given tire jump training for 6 weeks from 20 students, the results of the tire jump ability were obtained with the highest score of 3.85 meters and the lowest score was 2.56 meters, the average overall value was 3.043 meters. Furthermore, the data on the results of the long jump ability of fifth-grade students of Madani Integrated Model Elementary School before and after being given

The normality test in this study was used to determine whether a distribution was normal or not. The normality test in this study used the Kolmogorov-Smirnov test. The criteria used to determine whether a distribution was normal or not are if $p > 0.05$ (5%), the distribution is declared normal, and if $p < 0.05$ (5%), the distribution is said to be abnormal.

The results of the normality test of the initial and Post-Tests of the long jump ability of grade V students of Madani Integrated Model Elementary School can be seen in the table below:

Table 2.
Data normality test results

(Tire jumping exercise)	Kolmogorov Smirnov	Sig	α	Criteria
Pre-Test	0.569	0.902	0.05	Normal
Post-Test	0.789	0.562	0.05	Normal

Based on the table above, it is a summary of the results of data normality for each research variable, which can be described as follows:

For the long jump ability before being given the tire jump exercise (Pretest), the data normality value was obtained through the Kolmogorov-Smirnov test of 0.569 with a probability level of sig. (2 Tailed) or (P) of 0.902 greater than α = 0.05 (0.902> 0.05), which means that this shows that the data has followed a normal distribution or is normally distributed. For the jumping ability after being given the tire jump exercise (Postest), the data normality value was obtained through the Kolmogorov-Smirnov test of 0.789 with a probability level of sig. (2 Tailed) or (P) of 0.562 greater than α = 0.05 (0.562> 0.05), which means that this shows that the data has followed a normal distribution or is normally distributed.

Table 3.
Results of the Pre-Test and Post-Test Acceleration Test

Variables	T ht	T tb	Sig
Pretest & Posttest	16,678	1,729	0.00

Based on the results of the Paired Sample Test pretest and posttest showed that the significance of 0.00 < 0.05, then Ho is rejected and Ha is accepted, meaning that there is an effect of Tire Jumping Exercise on improving the long jump ability of fifth-grade students of SD Negeri Model Terpadu Madani. From the statistical calculation of Tire Jumping Exercise t count = 16.678 using a significance level of 5% (N-1) = 20 -1 = 19, the t table value = 1.729 is obtained, this means that the t count value is greater than the t table 16.678 > 1.729 or there is an increase between the Pre-test and Post-test. Based on these results, the hypothesis states that there is an effect on the long jump ability of fifth-grade students of SD Negeri Model Terpadu.

This study aims to determine the effect of tire jump training on the long jump ability of fifth-grade students of SD Negeri Model Terpadu Madani. The results of the study obtained, it can answer the previous research hypothesis. The discussion of the results can be described as follows. Based on the results of data analysis, after being given treatment for 6 weeks.

The average pre-test result was 2.651 meters, while the post-test result increased to 3.043 meters, which means that there was an average difference of 0.392 meters or an increase of 60.21%. The results of the statistical test using the Paired Sample t-Test showed that the t-count value = 16.678 was greater than the t-table value = 1.729 at a significance level of 5% (df = 19), so H_0 was rejected and H_1 was accepted. This means that the tire jump method training has a significant effect on improving students' long jump abilities. This finding is in line with research by Asriansyah & Mahendra (2020),

which shows that the approach of playing using used tires can increase students' activity and motor skills.

The tire jump method provides a fun learning experience, which makes students more enthusiastic about participating in learning. This is in accordance with the theory of kinesthetic learning that learning through movement and active physical involvement can improve students' retention and motor performance (Ma'mun, 2017). This exercise also stimulates several important aspects of long jump skills, including: Leg muscle explosive power, Movement coordination, balance, start and landing skills

In other words, this method is able to provide learning that is not only functional but also interesting and safe, very suitable for implementation at the elementary school level. According to Yoyo Bahagia (in Mulato, 2011), long jump skills are largely determined by the coordination of the start, push, hover, and landing. Training using tires indirectly trains these four aspects systematically. Meanwhile, Henjilito et al. (2024) emphasize the importance of horizontal speed and vertical push in producing an optimal parabolic trajectory—all of these aspects are also improved through tire jump training. In addition, the success of this training is also related to the game-based learning approach, which is very appropriate to the characteristics of elementary school students who like fun and challenging activities.

Although the results of the study showed improvement, some students showed lower results. This is due to several factors such as a lack of confidence, fear of jumping, and differences in physical conditions. Therefore, teachers need to provide additional motivation and adapt methods so that all students feel comfortable.

Hypothesis of the Effect of Tire Jumping Exercise on the Long Jump Ability of Fifth Grade Students of Madani Integrated Model Elementary School. The results obtained from this study consist of test data in the form of a pretest (Pre-Test) and posttest (Post-Test). The results of both tests are used to determine the effect of tire jumping exercise on the long jump ability of fifth-grade students of Madani Integrated Model Elementary School. However, after being given tire jumping exercise for 6 weeks and re-conducting the Post-Test (post-test, the long jump score increased.

As for students who scored low during the test due to a lack of self-confidence, fear or lack of confidence in their abilities, this hinders students from doing maximum jumps. The results of the hypothesis test prove that the average difference in the long jump ability of fifth grade students of SD Negeri Model Terpadu Madani before being given tire jump training was 2.651, while after being given tire jump method training, the long jump ability of fifth grade students of SD Negeri Model Terpadu Madani increased by an average of 3.043, increasing by 60.21%.

Based on the results of the Paired Sample Test pretest and posttest showed that the significance of 0.00 < 0.05, then Ho is rejected and Ha is accepted, meaning that there is an effect of the tire jump method training on improving the long jump ability of fifth-grade students of SD Negeri Model Terpadu Madani. From the statistical calculation of the tire jump method training with t count = 16.678 using a significance level of 5% (N-1) = 20 -1 = 19, the t table value = 1.729 is obtained, this means that the t count value is

greater than the t table 16.678 > 1.729 or there is an increase between the Pre-test and Post-test.

The tire jump method training using used tires affects the ongoing learning process. In this study, the experimental group was given long jump learning by providing training or treatment. Long jump learning with tire jump method training given during learning affects enthusiasm, motivation, and creativity, which is different from the actors, so that it can provide different effects or influences. Long jump learning with modifications to learning media applied to learning also affects the differences in the formation of movement learning outcome patterns. Mastery of long jump learning outcomes with tire jump method training is very influential. Therefore, the group that was given treatment with the tire jump method training approach to the long jump learning outcomes of grade V students of SD Negeri Model Terpadu Madani.

According to Ma'mun (2017), to get an optimal jump, a long jumper must have good leg muscle strength, speed, starting technique, push-off, and coordination skills. To get a good jump, a jumper (student) must have strength, explosive power, speed, accuracy, flexibility, and movement coordination, and must also master the technique for performing the long jump movement and be able to do it quickly, precisely, flexibly, and agilely.

CONCLUSION

Based on the results of the study, it can be concluded that the tire jump training method has a significant effect on improving the long jump ability of fifth-grade students of SD Negeri Model Terpadu Madani. The use of simple aids, such as used tires, has proven effective in improving long jump learning outcomes, both in terms of technique and student motivation.

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