

The Effect of Standing Board Jump and Jump Rope Training on the Ability of Long Jump Squatting Style of Students in SD Negeri 12 Palembang

Rizka Febrian Fachma¹, Meilia Rosani², Siti Ayu Risma Putri²

¹SD Negeri 12 Palembang, South Sumatra, Indonesia, ²Universitas PGRI Palembang, South Sumatra, Indonesia

Corresponding author e-mail: febrigoal934@gmail.com

Abstract: The problem in this study is whether there is a difference in the effect between *standing board jump* training and jump rope training on the results of long jump squatting style in class VI students of SD Negeri 12 Palembang. This study aims to determine the difference in the effect of *standing board jump* training and jump rope training on the results of long jump squatting style in grade VI students of SD Negeri 12 Palembang. This type of research is experimental research, using the M-S Pattern method. The population in this study were 6th grade students of SD Negeri 12 Palembang with a total of 30 people. The sampling technique in this study used *total sampling* technique. The variables of this study consisted of independent variables, namely standing board jump and jump rope training, as well as the dependent variable of squatting style long jump ability. Data collection using the squatting style long jump test method. The data analysis technique uses the *t-test* formula. Based on the results of research that has been conducted on grade VI students of SD Negeri 12 Palembang, about the effect of *standing board jump* training and jumping rope on the learning outcomes of long jump squatting style as many as 30 students (sample). The results showed that $t \text{ value } 4.42 > t \text{ critical } 2.66$ at a significant level with $df 58$ means that there is a difference in influence between Standing board jump and jump rope training on the ability of grade VI students of SD Negeri 12 Palembang. From the calculation of the mean, it shows that the mean of experimental group 1 is greater than group 2 ($3.63 < 3.53$). Thus, it can be concluded that jump rope training has more effect than standing board jump training.

Keywords: Jump Rope, Squatting Style, Standing Board Jump

A. Introduction

The development of sports can never be separated from the situation, conditions, culture, outlook on life and the level of progress of a nation. The development of a nation's sport is an incarnation of the standard of living of the nation's progress itself, thus the more advanced development of both participation and sports achievements is increasingly felt by the competition of athletes individually and in groups.

Athletics is one of the subjects taught to students in elementary schools (SD) in accordance with the 2004 curriculum material competency standards for elementary schools and madrasah Ibtidaiyah. Long jump is one of the numbers of athletic sports that needs to be trained early so that later athletes can achieve maximum achievement. In a long jump race, a jumper will rest on the pedestal beam as hard as possible to land in the jump tub as far as possible. According to Yusuf (1992) the long jump is a form of jumping movement lifting the legs up, forward in an effort to carry the body's weight point as long as possible in the air which is done quickly and by making a repulsion on one leg to reach the furthest distance. Because the long jump includes a jump number that is contested, the right training method is needed to improve achievement.

The purpose of sports is not only physical development but also mental, spiritual development and forming Pancasila Indonesian humans who are physically strong and healthy as well as creative and prosperous, (Susmayanti, 2023). Talking about sports in Indonesia today in athletics, especially in jumping numbers, namely the long jump. Sports at this time has become a necessity for the community to maintain and improve the physical condition of the body in order to remain enthusiastic in carrying out daily activities and have the ability to perform well. This is in accordance with the specific objectives of sports activities, sports activities in Indonesia are not just for physical fitness or recreation, but must think towards improving achievements to be able to make the nation and state proud in the national or international arena.

Athletics is one of the oldest sports and is also considered the mother of all sports. Athletics since ancient times has unconsciously been done by people such as walking, running, jumping, shooting while hunting in daily life. Athletics in Indonesia was known through the Dutch colonizers, at that time those who had the opportunity to practice were only limited to certain groups and places. According to Schiffer (2009) the numbers in athletics include walking, running, jumping and throwing. For the jump number itself consists of high jump, pole vault, jump and long jump.

The long jump sport requires movement when the athlete makes a jump after starting with running so as to produce a long jump (Kurnia, 2018). The winner is determined by how far the athlete jumps in the sand pool as a measuring medium. Long jump is a form of jumping movement that begins with a horizontal movement and is changed to a vertical movement by making a repulsion on one of the strongest legs to get the furthest distance (Wiarto, 2013). The long jump is a jumping motion performed on a track with a sandbox used for landing whose size has been determined.

According to Peterson et al., (2006), the purpose of the long jump is to achieve the furthest jump distance that has four elements of movement, namely the prefix, repulsion, body attitude in the air, body attitude at the time of falling or landing. In

the same case Galton & Mizoguchi (2009), argues that these four elements constitute a unity, namely a sequence of uninterrupted jumping movements. In the long jump there are several styles commonly used by jumpers, namely squatting style, hanging style or also called bouncy style and walking style in the air. The difference between one jumping style and another is characterized by the state of the jumper's body attitude at the time of floating in the air, (Triasmono, 2017). So, regarding the start of the pedestal /rejection and how to make a landing of the three styles is in principle the same. One of the styles used in this study is the squatting style. It is called squatting style because of the motion and attitude while the body is in the air like a squatting person (Makadada & Lolowang, 2020).

Long jump is a movement of rejecting the legs and lifting the legs up to make a landing as far as possible (Husdarta, 2009). The development of sports, especially long jumps in athletics, no longer achieves brilliant achievements, this is due to the lack of good coaching. If athletes or students want to achieve higher achievements, there must be good coaching through methods suitable for improving achievement, for example through optimal physical condition coaching. Like the power element which is the main component in sports performance. As in a long jumper.

Because the most important elements in a long jumper are speed related to the prefix and explosive power related to repulsion on the reject board to get vertical speed (Wiarto, 2013). According to Suherman et al., (2001) a good category in the long jump is at least 7.50 meters. If you look at the reference of expert opinion above, there is a concern of the author with the achievement of the long jump at SD Negeri 12 Palembang now, where it has not been able to speak much in every competition event, especially at the competition between schools, districts and provincial levels. So, the researcher is interested and intends to conduct research at SD Negeri 12 Palembang.

B. Methods

This experimental method in this study uses a matched by subject design which is often known as the M - S pattern. Matching is done subject by subject because the nature of subject matching is such that the separation of pairs of subjects (pairs of subjects) each to the experimental group will automatically balance the two groups. The pairing of subjects that are level or balanced is carried out on the basis of pre-experimental measurements or on the basis of other preliminary investigations (Winarno, 2007). The existence of experimental group 1 and experimental group 2 is very important in order to get the conclusion of the research correctly, it must compare at least two groups in the aspects being experimented. Experimental group I and experimental group 2 will automatically balance the two groups.

This training program lasted 16 treatment meetings plus two meetings for the initial test and final test. According to the opinion of Sugarwanto & Okilanda (2020) an exercise program carried out four times a week for six weeks is quite effective, but apparently the coach carries out training 3 times a week so as not to become exhausted with a long training of six weeks or more. In providing training, you must pay attention to the principles of training which include warm- up, core training and cooling.

This study was conducted at SD Negeri 12 Palembang in April 2023 which is located at Jl. Tanjung rawo.Rt.54 Bukit lama village, Ilir Barat 1 District Palembang City, South Sumatra 30163. Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics that are determined by research to be studied and then draw conclusions (Sugiyono, 2008). The population in this study were grade VI students of SD Negeri 12 Palembang with a total of 30 students.

The sample is part or representative of the population being studied. So, the sample here is part of the number of characteristics possessed population as a representative of the population under study (Arikunto, 2010). This sampling is intended to obtain information about the object of research, and be able to provide an overview and population. Sampling in this study using total sampling technique. Saturated sampling is a sampling technique when all members of the population are used as samples (Arikunto, 2010). So, the sample in this study amounted to 30 students.

Data collection techniques are the most important step in research, because the main purpose of research is to get data. Without knowing the data collection technique, the researcher will not get data that meets the specified data standards (Sugiyono, 2008). To collect research data where the target of this study was Class VI students of SD Negeri 12 Palembang as many as 30 people. The population in this study has several similarities, among others: 1. Both are currently studying at SD Negeri 12 Palembang. 2. The same gender, namely male. 3. They are relatively the same age between 10-12 years old.

Based on the description above, the population in this study has met the requirements as a population. The sample used in this study was the entire population of grade VI students of SD Negeri 12 Palembang in the 2022/2023 academic year as many as 30 students from total sampling so that this research is called population research. According to Arikunto (2010) instruments are tools when researchers use a method. The instrument used in this study was a long jump test. The purpose of this test is to measure students' jumping ability after being given Standing Board Jump training and Rope jumping training.

C. Results and Discussion

To find the difference in training results from experimental group I and experimental group 2 can be seen in the analysis of t-test results as listed in the table below:

Table 1. The t-test result

Group	Mean	t-count	t-table	Concussion
Experiment 1	3,63	4,42	2.66	significant
Experiment 2	3,75			

Based on the results of data analysis obtained t- count 4.42 then the results of t-table with db58 and a significant level of 5% obtained from 2.66. Thus, it means that the t-count is greater than the t-table, namely $4.42 > 2.66$, so the hypothesis in this study states that there is a difference in the effect between Standing Board Jump training and rope jumping training on long jumping ability in grade VI students of SD Negeri 12 Palembang can be accepted.

Then to find out which name is more influential between Standing Board Jump training and Jump Rope training on long jump ability, a mean comparison test was conducted. It is known that the mean of experimental group 1 = 3.63 and the mean of experimental group 2 = 3.75 means that the mean of experimental group 1 is greater than the mean of experimental group 2, namely $3.63 > 3.75$. This means that jumping rope training has a better effect than Standing Board Jump in improving the ability to long jump squatting style in male students of class VI SD Negeri 12 Palembang in the 2022/2023 academic year.

Judging from the analysis of the movement, the two forms of exercise above are the same, namely the contraction of the muscles, where there will be changes muscle length and motion at the joints or several joints. In addition, there is also a rhythm of movement, namely bouncing upwards. In both exercises there is a muscle approach and muscle lengthening. Thus, the two exercises above can be used to improve long jump ability (Sukirno & Pratama, 2018). Based on the description above, it turns out that Jump Rope training is more influential than Standing Board Jump training (Rahmani, 2014; Jarver, 2005). This is because jump rope training has a heavier load than Standing Board Jump training. This can happen because in jump rope training students only jump up and down the rope like playing. Conversely, in the Standing Board Jump exercise, students jump using a two-legged pedestal which is done simultaneously so that the increase in leg muscle power (Bernhard, 1993; Kurniawan, 2012; Lengkana, 2018).

D. Conclusion

Based on the results of the research and the results of the calculation, it can be concluded that there is a difference in the effect between Standing Board Jump training and Jump Rope training on long jump ability in grade VI students of SD Negeri 12 Palembang in the 2022/2023 academic year. Based on the results of the study, several suggestions are made as a follow-up effort as follows: For PE teachers in elementary schools in fostering or training long jump ability exercises can use the form of rope jumping exercises. Interested researchers can re-examine and the results of the study can be used as a comparison.

E. Acknowledgement

We would like to express our sincere gratitude to our family, friends in grade VI students of SD Negeri 12 Palembang in the 2022/2023 academic year.

References

- Arikunto, S. (2010). *Research Procedures a Practical Approach*. Rineka Cipta.
- Bernhard, G. (1993). *Athletics Basic Principles of Training for High, Long, Spring and Pole Vaulting. Translation of String Training Voor Djeugh*. Semarang: Dahoro Prize.
- Galton, A., & Mizoguchi, R. (2009). The water falls but the waterfall does not fall: new perspectives on objects, processes and events. *Applied Ontology*, 4(2), 71.
- Husdarta, H. J. S. (2009). *Physical Education Management*. Bandung: Alfabeta.
- Jarver, J. (2005). *Learning and Practicing Athletics*. Pionir Jaya.
- Kurnia, M. (2018). The Effect of 50 Meter Sprint Training on Long Jump Results of Class X Students of SMA Negeri 11 Palembang. *Nusantara Sports Page (Journal of Sports Science)*, 1(2), 133-148.
- Kurniawan, F. (2012). *The smart book of sports knowledge*. Jakarta: Laskar Aksara.
- Lengkana, A. S. (2018). The Contribution of Learning Frog Jumping and Engklek to the Performance of Squatting Style Long Jump Techniques in Elementary Schools. *Nusantara Sports Page (Journal of Sports Science)*, 1(2), 149- 159.
- Makadada, F. A., & Lolowang, D. M. (2020). The Effect of Plyometric Training towards Long Jump of Squat Style Ability on Second Grade Male Students in SMP Negeri 2 Manganitu. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 3(2), 1250-1258.
- Peterson, M. D., Alvar, B. A., & Rhea, M. R. (2006). The contribution of maximal force production to explosive movement among young collegiate athletes. *The Journal of Strength & Conditioning Research*, 20(4), 867-873.
- Rahmani, M. (2014). *The Complete Super Book of Sports*. Jakarta: Dunia Cerdas.
- Schiffer, J. (2009). The high jump. *New Studies in Athletics*, 34(3), 9-22.
- Sugarwanto, S., & Okilanda, A. (2020). The Effect of Single Leg Hops Training on the

- Results of Jumping Jangkit Students SMP 1 Sungai Lilin. *Kinesthetic: Scientific Journal of Physical Education*, 4(1), 85-89.
- Sugiyono. (2008). Educational research methods: (quantitative, qualitative and R & D approaches). Bandung: Alfabeta.
- Suherman, A., Saputra, Y. M., & Hendrayana, Y. (2001). Athletic Learning: Games and Competition Approach. Jakarta: Directorate General of Education and Directorate General of Sports, 133.
- Sukirno, S., & Pratama, R. R. (2018). Development of a Game-Based Athletic Learning Model in Primary Schools. *Altius: Journal of Sport and Health Sciences*, 7(2).
- Susmayanti, R. (2023). Character Building as One of the Focuses of National Development Planning in Indonesian Legislation. *Waskita: Jurnal Pendidikan Nilai dan Pembangunan Karakter*, 7(1), 1-16.
- Triasmono, H. K. (2017). Prediction of hanging style long jump achievement reviewed from physical ability factor of male students.
- Wiarto, G. (2013). *Athletics*. Graha Ilmu.
- Winarno, M. E. (2007). *Research Methodology in Physical Education*. Malang: Faculty of Education, Malang State University.
- Yusuf, A. S. (1992). *Athletics Choice Sports*. Department of Education and Culture.