

The Effect of Hurdles and Speed Jumping Training on the Increase in the Long Jump Squat Style of Class VII Students of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency

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Abstract: The purpose of this study was the effect of hurdles training and long jump speed in the squat style of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency. This research was conducted at Madinul Ulum Tungkal Jaya Middle School, Musi Banyuasin Regency, which is located on Jl. Poros Sri Damai No. 6 Rt. 19 Dusun VI, Like Peace, Kec. Tungkal Jaya, Kab. Musi Banyuasin Province of South Sumatra. The method used in this study is an experimental method with a one group pre-test and post-test design. The data collection technique uses the long jump test technique. The population of this study were all students of class VII at Madinul Ulum Tungkal Jaya Middle School, Musi Banyuasin Regency, while there were students of class VII.2 and VII.3 with a total of 62 people. The data analysis technique used is the inferential data analysis technique with the help of the t test SPSS version 23.00 for windows. Based on the discussion that has been stated above, it can be concluded that: (1) there is an effect of hurdles training on the squat style long jump; (2) Effect of speed training on long jump squat style.

Keywords: Exercise, Hoop Jump, Speed, Squat Style Long Jump

A. Introduction

Athletics is a sport that grows and develops along with the times. Athletic activities are synonymous with natural human activities, namely: running, walking, jumping and throwing. In Indonesia itself, the development of the athletics branch grew rapidly with the establishment of the PASI (All-Indonesian Athletics Association) organization in 1950 in the city of Bandung. Since then, athletics has become a sport that is very popular among the community, this is evidenced by the many parents, youths, and even children who do athletic sports, whether it is done in the morning or in the evening. According to Muhajir (2016), athletics is a sport that grows and develops together with natural human activities. Running, jumping and throwing are an integral part of the long history of human life (Muhajir, 2016).

Sports and health education is an integral part of the overall education. This education aims to develop aspects of physical fitness, movement skills, critical thinking skills,

reasoning, moral action and aspects of a healthy lifestyle and introduction to a clean environment through selected physical, sports and health activities that are systematically planned in order to achieve a national education goal (Kemendikbud, 2023).

Sports and health education is closely related to increasing achievement in certain sports and of course there are many factors that influence it. One of them is the completeness factor that must be owned to improve sports achievement, namely physical development, technical development, mental development, and maturity of champions. The most important of the four factors above in increasing sports achievement is physical development (Riswindra, et al., 2015). Therefore, to improve these abilities must be done from an early age, either directly or indirectly during the learning process and training programs.

Another important training requirement is to provide "overload", which means increasing energy requirements gradually by adding weights in the training program. The effect of training is obtained when the exercise is heavier than what has been obtained. It cannot be replaced by any other program. Overload factors for anaerobic and aerobic programs include an increase in exercise frequency, exercise intensity and duration of the exercise program. The emphasis on training from various energy systems is known, so the most appropriate way of training to produce the desired changes can be determined (Fox et al., 1993)

Much learning is given in sports and health education. One of them is learning the squat style long jump which is an athletic sport (Isnaini, 2020). The goal of long jump is to jump as far as possible by moving the whole body from certain points to other points by running as fast as possible then rejecting, flying in the air, and landing. Therefore, long jump learning needs to be studied in the world of education.

Based on the initial observations that the researchers made at Madinul Ulum Tungkal Jaya Junior High School, Musi Banyuasin Regency, it was found that there were several students who got long jump results above 3 meters. However, there were also students whose long jump results in the squat style were still in the low category, with the average long jump results obtained by Madinul Ulum Tungkal Jaya Middle School students, Musi Banyuasin Regency, only 2.34 meters. According to Khomsin (2021), the recommended performance standard for long jump for male students aged 13-14 years for the satisfactory category is 3.2 meters, 3.6 meters for the good category, and 4.1 meters for the very good category (Khomsin, 2021).

The low result of the jump is caused by various factors, one of which is the weak leg muscle strength and running speed at the start. It can be seen that when doing the long jump, SMP Madinul Ulum Tungkal Jaya Middle School students in Musi Banyuasin Regency still have not maximized their leg muscle strength. In addition,

there were also students who did not have running speed at the start of long jump. Sukadiyanto (2019) explained that strength is one of the basic bio motor components needed in every sport. To be able to achieve optimal performance, strength must be increased as an underlying basis for the formation of other biomotor components (Sukadiyanto, 2019). Kurniawan, (2021) also explains that the long jump movement is a combination of speed, strength, flexibility, endurance, and accuracy. Therefore, it is not yet known whether leg muscle strength and running speed are related to long jump results (Kurniawan, 2021).

Leg muscles are one of the most vital parts of the body in every human activity and in every sport, leg muscle strength definitely needs its contribution so that a movement is perfect. Sukirno (2011) said that "The muscles of the upper limbs (os. femur) are long and strong bones that support all of our body weight. Then the joints on os. femur between the os. femur and the ossicles. This is important for strengthening the joints, it is also still strengthened by connective tissue, namely the large muscles, which wrap the legs (femurs) of an athlete from all sports that strengthen the strength in the leg muscles, must prioritize these muscles in doing exercises (Sukirno, 2011).

Leg muscle strength is the strength and speed of muscle contraction that is dynamic and explosive and involves and releases muscles, maximum muscle strength in the shortest possible time (Ismaryati, 2018). The way the muscles work is divided into two parts, namely acyclic explosive power (acyclic strength) as in throwing, throwing in athletic sports numbers. elements of motion in gymnastics. fencing. diving. All sports that require jumping, namely in the game of volleyball, basketball, badminton, tennis, and others. Then there is another explosive power that is cyclic (cyclic strength) is the explosive power needed in the branches of running in sprint numbers (sprint), swimming and bicycle racing. The increase in acyclic and cyclic explosive power is a different form of movement, for movements such as kicking the side of pencak silat the movement enters an acyclic. Explosive strength/power development is a component of motion that is very important to develop. because almost all sports require it (Widiastuti, 2021).

One of the exercises that can increase leg muscle strength is the hurdles exercise. Hoop jump is a movement of lifting the body from a point from another point that is farther or higher by stance running fast or slow with the supporting leg and landing on the other body leg with good balance. The main purpose of this exercise in the teaching and learning process is to clarify understanding, concepts, and show or emulate how to do something or the process of something happening (Djumidar, 2014).

In addition, speed is also needed to improve the long jump squat style performance. There are all kinds of exercises to increase speed. One of them is sprint training. Included in the sprint category are numbers running up to a distance of 400 meters, 400 meters can still be classified as a sprint number. Although several athletes of world

caliber do a lot of sprinting in races outside the 400-meter distance, the numbers outside are usually categorized into medium or long distances. Sprints are always done in every running competition, so is Dula in a marathon race. This can be seen at the time of competition before the finish line from the shortest distance (50- and 60 meters) to longer distances (the distance changes according to the calculations of the athletes themselves (Khomsin, 2021).

Based on the background above, the researcher is interested in conducting research with the title "The Influence of Hoops and Speed Jumping Exercises on Increasing the Squat Style Long Jump for Class VII SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency".

B. Methods

The method used in this study is the pre-experimental design experimental method. The research design used in this study was a pre-test and post-test one group design. In this design, observations were made 2 times, namely before the experiment (O1) and after the experiment (O2) (Sugiyono, 2018). The data collection technique used in this study was the squat style long jump test technique. The population of this study were all students of class VII at Madinul Ulum Tungkal Jaya Middle School, Musi Banyuasin Regency. The sample was selected by means of simple random sampling and obtained students of class VII.1 and VII.3 with a total of 56 people. This study consisted of two independent variables, namely hurdles training (X1) and speed training (X2), while the dependent variable was the squat style long jump (Y). The data analysis technique used is inferential data analysis technique. The use of descriptive data analysis techniques to obtain an overview of the characteristics of the distribution of values for each variable studied. In this study, the authors used data analysis techniques with the help of the t-test SPSS version 23.00 for windows.

C. Results and Discussion

The Effect of Hoop Jump Training on Squat Style Long Jump

The results of the Pratama (2022) study stated that the effect of hurdles training on the results of the squat style long jump in junior high school students was in the good category. In the pretest, in the very poor category was 25%, the less category was 40%, the sufficient category was 35%, the good category was 0% and the very good category was 0%. Likewise with the results of the long jump posttest, most of them were in the very good category, which was 5%, the good category was 35%, the enough category was 45%, the less category was 15% and the very poor category was 0%, so it can be concluded that the initial test results the long jump showed the most dominant test results in the less category after being given training experienced a change from the less to good category (Rusdianto, et al., 2015).

The research results of Rusdianto, et al., (2015) stated that the results of data analysis obtained by the t test value were 10.99, with degrees of freedom $db=(N-1)$ were $40-1=39$ and at a significance level of 5% obtained a t-table value of 2.0399. Based on the learning outcomes achieved by students, that is, with an average initial and final test, students' abilities increased by 19.17% with an increase percentage of 33.12%. Based on the results of calculations using the t-test analysis, it can be concluded that there is an influence of variations in hurdles learning on squat style long jump learning outcomes, this is because students are more interested in participating in long jump learning after the teacher uses learning variations in the learning process (Hayanti, 2022).

Furthermore, the results of Hayanti (2022) showed that there was a significant effect between leg muscle power training and the results of the long jump squat style in male students of class XI MAN 2 Kampar. The statistical output value of "test statistics", it is known that Asymp.Sig (2-tailed) has a value of 0.000. Because the value of 0.000 is less than <0.05 by comparing the t-count value with t-table, based on table 4.7 above it can be seen that $t\text{-count} = 6,630 > t\text{-table} = 1,753$. Gaining an increase of 1.1125%. So, it can be concluded that "there is a significant effect of leg muscle power training methods on the results of the long jump squat style in male students of class XI MAN 2 Kampar" (Pandeleke, et al., 2014).

Based on the results of previous research and the theory above which states that there is an effect of hurdles training on the squat style long jump. Thus, the conclusion of this study is that there is an effect of hurdles training on an increase in the long jump squat style of class VII students of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency

The Effect of Speed Training on the Squat Style Long Jump

The results of the study stated that Pandeleke, et al., (2014) had an average (mean) long jump in the squat style of the experimental group students of 1.64 with a standard deviation of 0.39 and a level of spread of data (variance) of 0.1521 while the average The mean (mean) of the long jump squat style of the control group was 0.45 with a standard deviation of 0.29 and a variance of 0.0841. The conclusion of this study is that the average results of the long jump squat style in the experimental group that were given the treatment with running speed training were better than the average results of the long jump style of the control group that were not given the treatment (Pandeleke, et al., 2014).

The results of Firdaus & Hadisaputro (2021) stated that running speed had a relationship with long jump skills and obtained a correlation of $r_{x1y} = 0.410$. Greater than $r\text{-table} = 0.367$. And the correlation of long jump skills with leg muscle explosiveness results in a correlation of $r_{x2y} = 0.626$. Greater than $r\text{-table} = 0.367$. As

well as the correlation of the explosive power of the leg muscles and running speed has a long jump ability recount of 0.641 in the strong category. From this study it can be concluded that there is a relationship between the squat style long jump with the ability to run speed and leg muscle explosive power in class VIII students at Ketapang State Madrasah Tsanawiyah (Firdaus & Hadisaputro, 2021).

Based on the results of previous research and the theory above which states that there is an effect of speed training on the squat style long jump. Thus, the conclusion of this study is that there is an effect of speed training on increasing the long jump squat style of class VII students of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency.

D. Conclusion

Based on the discussion that has been stated above, it can be concluded that: (1) there is an effect of hurdles training on an increase in the long jump in the squat style of class VII students of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency, (2) there is an effect of speed training on an increase in long jump squatting style of class VII students of SMP Madinul Ulum Tungkal Jaya, Musi Banyuasin Regency.

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