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The Influence of Jumping Training with Ball Obstacles on the Ability to Squat Style Long Jump in Class XI Students of SMA/SMK in Banyuasin

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Abstract: This study aims to determine the Effect of Exercise Jumping with a Ball Obstacle Against Squatting Style Long Jump Ability in Class XI Students SMA/SMK In Banyuasin. This research was conducted on some class XI students in Banyuasin Regency. This research is an experimental method with a Quasi-Experimental design in the form of One Group Pretest Posttest Design. The sample used is 20 people. Based on the results of the study, the average results of the squat-style long jump obtained in the pre-test Experimental group is 2.28 m and pre-test implementation The control group is 2.27 m, and the average result of the squat-style long jump in the post-test of the Experiment Group is 2.90 m and the implementation of the control group post-test is 2.30 m. Based on the results of the statistical calculations of the data above, the value of t-count = 13.33 is obtained and t-table = 1.7 29, so t-count = 13.33 **>** t-table = 1.729, then the hypothesis that reads, The Effect of Training Jumping With a Ball Obstacle Against Squatting Style Long Jump Ability in Class XI Students SMA/SMK In Banyuasin. Research is acceptable.

Keywords: Jump with Ball Obstacles, Long Jump, Squat Style

A. Introduction

Sport is part of human life. By exercising one's physical fitness or physical condition can be improved to carry out daily activities without experiencing significant fatigue. Through sports activities, it is possible to form people who are physically healthy and have a disciplined and sportsmanlike character which will eventually form quality human beings.

In carrying out sports, humans have different goals depending on their wishes. There are 4 basic goals for someone to do sports activities, namely those who do sports for recreation, namely sports to fill leisure time, who do sports activities to heal illness or recover from illness, and those who do sports activities for the highest achievement goals high, those who do sports activities to achieve educational goals (Sartono, 2018).

Physical and health education is essentially an educational process that utilizes physical activity and health to produce holistic changes in individual quality, both physically, mentally, and emotionally (Taufan et al., 2018).

Based on the above, it is expected that students can develop according to their respective potentials, while these potentials are psychomotor, cognitive, and affective. Specifically for psychomotor potential, the government has arranged sports to be included in the school curriculum at all levels of education. Starting from the Kindergarten level up to the High School level, which we know as Physical Education, Sports, and Health.

As a subject that focuses attention on the physical and psychomotor domains, but does not ignore the cognitive and affective domains, the subject of physical education has developed by using models of physical fitness, health, and sports education. In this case sports material is one of the activities or subject matter contained in the High School Physical Education Sport and Health Curriculum, it can also provide adequate opportunities for students to be able to participate in sports activities.

The long jump is one of the athletic sports in school learning. a movement of lifting the body from one point to another that is farther or higher by stance running fast or slow with the pedestal of one foot and landing on the other foot or limb with good balance (Kurniawan et al, 2021). To incorporate locomotor exercises, such as jumping, into their regular physical activities, students can participate in traditional games. In Indonesia, these traditional games are frequently embraced due to their familiarity and are utilized as a means to complement physical education (Syaflin et al., 2021). The long jump is a movement whose implementation requires speed, jumping power and goals directed at the correct movement skills in making the movement and the jump's distance (Sobarna, 2020). The squat style long jump technique is one of the simplest compared to the other styles (Widiastuti & Hutumo, 2018). A fast start and a strong repulsion are influenced by the speed and power of the jumper's limbs, while the harmony of a very good start and repulsion depends on the mastery of the technique. Long jump learning model, kids can learn effectively, efficiently, and enjoyably through game activities, according to the findings of other studies (Tiza et al., 2018; Sumantri, 2015). Elementary school students can acquire the fundamentals of throwing motion with the help of a game-based learning strategy (Setiawan, et al., 2021). To achieve good performance in the long jump a jumper must have strength, explosive power, speed, accuracy, flexibility, and coordination of movements, one must also understand and master the techniques to perform the long jump movement and be able to do it quickly, precisely, flexibly and smoothly (Ghazali et al., 2022). The technique for the correct long jump needs to pay attention to the elements: prefix, repulsion, body posture in the air (floating), and landing (Salahuddin, 2018).

Of the several components of physical condition, the component that has the greatest influence on the results of the jump in long jump is leg muscle strength which includes speed, namely at the start, and strength, namely at repulsion. Both of these physical elements are used to increase explosive power or power. Leg power is very important for long jumpers, this is to the understanding of one of the elements of physical condition in long jump events, namely explosive power or power. Leg muscle power plays an important role in the movement of the support to resist. The ability to exert leg muscle power in the correct technique will result in a high jump as far as possible so that the squat-style long jump performance can be achieved more optimally. Efforts to increase power require training that is tailored to the abilities of students because students from each branch both from the same branch and even from different branches have different abilities. Thus it is necessary to find the right and effective form of exercise to increase muscle power, especially in the ability to jump.

Forms of exercise that can increase leg muscle strength are jumping exercises with ball obstacles. This exercise aims to spur and stimulate the leg kick so that it is strong it produces a high soaring jump.

Based on the results of observations and observations of researchers at schools in the Banyuasin district. From the observations of researchers from all students of several schools in Banyuasin, almost 85% of the students had not mastered the long jump technique properly and correctly. well, and also the strength of the leg muscle power is still weak.

Based on the description above, researchers are very interested in conducting research related to athletics, especially in long jump numbers as a step to encourage the community, especially coaches to continue to provide training programs and look for good training programs for athletes or students so that students can prefer athletics and also to increase achievement in athletics, especially long jump.

B. Methods

This research is experimental research with the research design used is Quasi-Experimental Design. The design in this study used a form of experimental research using the One Group Pretest Posttest Design. This study consisted of one independent variable, namely jumping with ball obstacles (X1), while the dependent variable is the Long Jump Squat Style (Y).

In the study the population in use are all students the number of high school/vocational high school students in all 90 students. Sampling was carried out using a purposive sampling technique, namely sampling based on certain characteristics or characteristics that have a relationship with a known population,

namely students who have the same characteristics, 1) are male, 2) like sports, The sample used in this study was 20 students from SMA/SMK In Banyuasin.

C. Results and Discussion

Results Study

Table 1. Data Results Pretest Experiment and Control Group

Name	Results
Experiment	2.28m
Control	2.27m

Table 2. Data Results Posttest Experiment and Control Group

Name	Results
Experiment	2.90m
Control	2.30m

Table 3. Statistical Calculation Data Experiment Group

Name	Results
t-count	13,33
t-table	1.7 29
t-count 13.33 > t-table 1.729	

According to (Wesli, 2021) valid research results if there are similarities between the data collected with actual data occurring on that object researched. Influence exercise Jump with ball obstacles to Squat Style Long Jump ability can be seen from the increase in results pre-test to results post-test. For knowing influence so can compare the average results of the data pre-test with the average post-results test. Mark average pre-test group experiment is equal to 2.28m and the results of the average pre-test control group is 2.27m. While the average yield of the post-test mean of the experimental group is as big as 2.90m And the results average post-test of the Control group was 2.30m. There was an increase in the experimental group pretest and posttest with a different value of 0.62, whereas the enhancement group Control pretest and posttest with a different value of 0.03. Pretest experimental group with group Control has a different value of 0.01, and Posttest experimental group with group Control has a different value of 0.60.

Study exercise jumps with ball hurdles used as exercise For increase squat style long jump ability. Jumping with a ball obstacle course is a sports exercise that can be useful for strengthening the leg and thigh muscles. This exercise is done for 3 sets. This exercise is carried out by jumping over 5 balls that are in front of the students. "Exercise jumping with ball obstacles is a form of exercise that aims to increase leg

muscle strength (Sihabudin et al., 2017), in practice the target is behind the starting line jump over 5 balls to the front, and do 3 sets".

In research, this is the long jump ability of the squat style which is done 3 times for each player, both pre-test and post-test. For now so far where the effect of Jumping practice with ball obstacles on Squat Style Long Jump Ability on Class XI Boys High School / Vocational High School In Banyuasin counted with compare the results of the pre-test and post-test students in each group.

Discussion Results in Pre-test and Post-test Group Experiment

The experimental group is the group That is subject to treatment from exercise jumping with ball hurdles Before exercise, the sample group experimented by doing the initial test (pre-test) which is used as a measure of how big results the exercise was done. Based on the results pre-test Which has done, the results are obtained Lowest score 1.89m, and results in the highest with a score of 2.68m with an average score results is 2.28m. After the initial test (pre-test) was done, furthermore the sample of the experimental group Practice jumping with ball obstacles on 6 Sundays with an intensity of 80% – 90%.

Practice jumping with ball obstacles used To increase squat style and long jump ability in athletic learning. After finishing doing jumping exercises with ball obstacles for 6 Sundays, Then the sample was returned to the test end (post-test) treatment. Results post-test obtained a score highest as much 3.29m, whereas the score Lowest is 2.22m with an average of 2.90m. Based on the description there is a yield increase of 0.62. Enhancement Which obtained after the player is given treatment exercises jumping with ball hurdles for 6 weeks.

Based on the results of data analysis results in each of the groups have been done. After being tested it turns out the data pretest distributed normal And homogeneous. The data This processed using the t-test, the results obtained are show that the experiment t count = 13.33> t table = 1.729. High jumps are influenced by several elements including muscle strength, this is in line with the statement "Muscle strength in the large limbs and accompanied by good coordination to profitably gather all the elements of the swing, then the point of body weight is raised as high as possible (Hiskya, 2017). Therefore, researchers use jumping exercises with ball obstacles as a way to improve achievement in long jump sports.

Improving leg power strength can use plyometric exercises. Plyometrics are exercises that are done on purpose to improve the ability of the athlete, Which is a combination of exercise speed And strength". The combination of speed and strength is the embodiment of power exploding muscle (power). Plyometrics are exercises or tests that aim to connect movement speed and power to produce explosive movements.

This term is often used in connection with the jumping movement repeatedly or the exercise of the stretch reflex to produce a positive reaction explosive. Chu says that plyometric exercises are exercises that allow the muscles to reach their maximum strength in the shortest possible time short maybe (Juntara, 2019).

For some of the definitions above, it can be concluded that plyometric training is a method of exercise To increase Power and explode muscle with form combination of isometric and isotonic (eccentric-concentric) exercises that use dynamic loading. Stretch that occurs suddenly before the muscle contract back or an exercise that allows the muscles to reach strength maximum in time Which is short maybe. Some models or ways to increase leg power, namely jumping with a ball obstacle.

The results of the research on jumping exercises with the ball obstacle above on the ability to jump long squat style show that there is a significant effect. It turns out that according to the theories that have been put forward by each expert that the practice of jumping with ball obstacles has advantages and can increase the ability to jump long in the squat style, in terms of the analysis of the form of exercise in this study, the height of the jumps produced in jumping exercises with ball obstacles has a great impact on This long jump ability is seen based on the test results above.

It can be concluded that plyometric training is very beneficial for improving long jump performance because it can increase muscle power in limbs. due to one of the elements of physical condition in the long jump number namely Explosion power or powers.

D. Conclusion

Focused mainly on the results of data analysis, the effect of jumping with a ball obstacle on the long jump of the squat style can be explained as follows: 1) The Effect of Jumping Training with a Ball Obstacle on the Ability to Long Jump in the Squat Style of Class XI Students SMA/SMK In Banyuasin it can be concluded that the hypothesis is accepted. Ha1 it; X1 significantly affects because the t count > t table is 13.33 > 1.729. By Vlue average pre-test experiment is 2. and the results average for the prof e test control group is 2.27m. While the average yield of the post-test mean of the experimental group is as big as 2.90m And the results average post-test of the Control group was 2.30m.

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