

The Effect of Hitting Ball Practice on the Ability of Jump Service Athletes of Men Excludes of Xaverius 3 Palembang High School

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Abstract: The purpose of this study was to determine the effect of hanging ball hitting practice on the ability to jump service in male athletes at Xaverius 3 Palembang extracurricular high school. The formulation of the problem in this study is whether there is an effect of hanging ball practice on the jump service ability of male athletes at Xaverius 3 Palembang High School. This research was conducted on male extracurricular athletes from Xavier 3 Palembang High School. The research method used is Quasi Experimental Design, namely by using a pretest-posttest design group plan, this research is objective, namely because the athlete sample is 20 people so that it is a sample of the entire population (total sampling). The results of the calculated significance data of 0.000 proved to be less than 0.05, and the results of the t test showed that the t value was 8.335 greater than t table; then the hypothesis is accepted that there is a significant effect of hanging ball hitting practice which can increase the ability to jump service in male athletes at Xaverius 3 Palembang extracurricular high school.

Keywords: Athletes of Men, Hit Hanging Ball, Jump Service

A. Introduction

Volleyball is one of the many sports that is popular in society. It is proven that volleyball is widely played in schools, offices, cities and villages. Volleyball is a game sport that has been known from childhood to adulthood for both men and women. This is in accordance with the opinion of Blume (2004) which states that the game of volleyball is a very interesting team game and belongs to the attack and defense group. At first the basic idea of the game of volleyball was to put the ball into the opponent's area through an obstacle in the form of a rope or net and try to win the game by turning off the ball in the opponent's area (Yunus, 1992). In volleyball, there are several forms of basic techniques that must be mastered. According to Ahmadi (2007) techniques in volleyball games consist of service, under passing, over passing, blocks, and smashes.

To achieve sports achievements, it is necessary to have focused cooperation and pay attention to all aspects that contribute to the achievement of these achievements. Achievements can be achieved if supported by the ability of physical conditions, techniques, strategies, tactics, and mental (Adiatmika, 2016). Syafruddin (2011) states that physical condition is an element or basic ability that every athlete must have to achieve a sporting achievement related generally or specifically. This is supported by the opinion of Blume (2004) which states that the technical and tactical abilities of a volleyball player are determined by the components of strength, endurance, speed, flexibility, and coordination. The same thing was also said by Maidarman (2009) that improving the physical condition of athletes aims to improve physical abilities and is useful for supporting sports activities in order to achieve excellent performance. In addition, the level of a person's skill in playing volleyball is also influenced by other factors including motivation, interest, talent, facilities and infrastructure, and movement training methods (Tawakal, 2020). All of these factors are related to one another. So, for a coach to be able to pay attention to physical conditions in achieving achievements and the accuracy of the basic techniques of playing volleyball such as service, passing, blocks, and smashes.

Volleyball is very well known in society, from the upper classes to the lower classes, who are familiar with the game of volleyball (Muhajir, 2020). Volleyball is a fun game sport because it can adapt to the conditions that arise in it, it can be played with a different number of players, such as beach volleyball with 2 players and games with 6 people which are often used. Volleyball can be played on all types of courts, such as grass, wood, sand or artificial soil, and can be played on buildings (Nuril, 2017), passing from above, baiting, hitting and blocking (Saputra, & Hidayat, 2022). To master these basic techniques, it is necessary to practice basic techniques continuously and repeatedly (Beutelstahl, 2015). The jump serve is a technique in volleyball that can be the initial attack for the serving team. Good jump serve skills will make it difficult for the opponent to receive the serve ball so often get numbers from the jump service (Destriana, 2019).

One of the exercises that can improve the jump service ability of male volleyball athletes (Jaya, 2019). One form of exercise to improve jump service skills is hanging ball exercises by practicing hanging balls repeatedly to gain jump service abilities when hitting the ball (Supriatna, 2023). Trainers should consider this to create more effective and efficient training for reliable jump service skills. With effective and efficient training, we hope he can train volleyball players to get the maximum jump service ability. Based on the description of the background above, the researcher is interested in examining the effect of hanging ball hitting exercises on the jump service ability of male extracurricular athletes at Xaverius 3 Palembang High School.

B. Methods

This research is a quasi-experimental design, which uses a one group pretest-posttest design. The population used in this study was the male extracurricular athletes from Xavier 3 Palembang High School, totaling 20 people. The sample used was male athletes from SMA Xaverius 3 Palembang as many as 20 people. Hypothesis testing uses a t-test to look for differences in each group at a significance level of 0.05 (Sutrisno, 2018). The t-test can be used to find differences between the two unrelated groups. There will be differences between the two variables with the test criteria t-count greater than t table (Sugiyono, 2017).

C. Results and Discussion

1. Before the test

Table 1. Frequency Distribution of Pre-Group Test Data

Interval class	Frequency	Percent	Cumulative frequency
0.5 - 4.2	9	50.00%	9
4.3 - 8.0	6	20.00%	15
8.1 - 11.8	2	15.00%	17
11.9 - 15.6	2	5.00%	19
15.7 - 19.4	1	10.00%	20
Amount	20	100.00%	

2. Publish the test

Table 2. Distribution of Data Frequency by Test Group

Interval class	Frequency	Percent	Cumulative frequency
2.0 - 7.1	6	40.00%	6
7.2 - 12.3	2	15.00%	8
12.4 - 17.5	5	30.00%	13
17.6 - 22.7	4	10.00%	17
22.8 - 27.9	3	5.00%	20
Amount	20	100.00%	

Homogeneity test uses the F test. This test will test the hypothesis that the variances of these variables are the same to accept or reject the hypothesis by comparing the calculated F value (F count) with F from table (F table) at a significance level $\alpha = 0.05$ and degrees of freedom used. The criterion rejects the hypothesis if the price is Count greater than or equal to the F_{table value} at the significance level used, otherwise rejects the hypothesis.

Table 3. Calculation Results of Homogeneity Test

F count	F(0.05)(1.38)	sign _	Conclusion
2013	4,098	0.144	Homogeneous

$F_{calculated}$ value is 2.013, while the F_{table} ($\alpha = 0.05$)(1/38) is 4.098. Because the calculated F_{value} is smaller than the $table F_{value}$, the hypothesis that the variance of the variables is the same is accepted. Another way is to compare the calculated significance value with 0.05, the result of the calculated significance is 0.144 (> 0.05). Thus, it can be concluded that the population variance is homogeneous. Data analysis was carried out using the t-test on the pretest and posttest group data to test the results of the jump service ability test. In this test, the hypothesis will be tested whether there is an effect of hanging ball practice on increasing the athlete's jump service ability in male athletes from Xaverius 3 Palembang High School. Accept or reject the hypothesis by comparing the value of t count with the price of t table. The criterion for accepting the hypothesis is if the calculated t value is smaller than the t-table value with degrees of freedom (dk) = n-1 and an error rate of 0.05.

If you want to know the effect of hitting a hanging ball, practice can improve the jump service abilities of SMA Xaverius 3 Palembang male athletes using the same two sample t-test or paired sample t-test. The t-test results are shown in the following table.

Table 4. Summary of t-test results

Group	Average	t count	t(0.05)(19)	Sig
Before the test	8,231	8,335	1,729	0.000
Publishing tests	12.1667			

The results of the t test yielded a calculated t value of 8.335 and a table value of t dk (0.05)(19) of 1.729 with a significance level of 0.000. Because the calculated t value is greater than t table ($8.335 < 1.729$), it can be concluded that the hanging ball effect can improve the jump service ability of male athletes at SMA Xaverius 3 Palembang. The table above shows that the average pretest score is 8.231, whereas the average post-test score was 12.1667. The magnitude of the increase or effectiveness of the swing ball hitting exercise is as follows:

Table 5. Percentage Increase

Group	Average	Average difference	Percentage increase
before the test	8,231	3.9357	60.58%
test site	12.1667		

Based on the table above, the difference between the average after the test and before the test is 3.9357. From the average difference, it can be seen that the percentage increase was 60.58%. Thus, it can be concluded that there is a significant effect of hanging ball hitting practice on the jump service ability of male athletes at Xaverius 3 Palembang High School. Hanging ball hitting exercises are carried out to improve service jumping abilities. The hanging ball referred to in this sense is a ball suspended from a string attached to the end of a stick rotating on the rope, using a Volleyball at a height relative to the player's reach. Mechanically suspended ball hitting drills can develop ball hitting speed and accuracy. With the initial steps and the accuracy of hitting the ball repeatedly, it can train the response to hitting the ball correctly and can

train it to achieve high ball gains and high jumps. When doing kicking exercises, children indirectly make jumping movements as a *jump service movement*. So, when the *jump service capability test* will increase. The increase reached 60.58%. Good improvement because the child has just done the exercise 15 times. Children will notice an increase in their range of motion when they get as much exercise as possible.

D. Conclusion

The results showed that the arithmetic significance of 0.000 was less than 0.05, and the t-test results obtained a t-count value of 8.335 which was greater than t-table; then the hypothesis is accepted. Based on the research results obtained through analysis and hypothesis testing, it can be concluded that there is a significant effect of hanging ball hitting practice on the jump service ability of male athletes at Xaverius 3 Palembang High School. We are expecting proposals for trainers. For volleyball coaches to be able to equip players with the right material, especially for training modified training techniques supported by other materials to improve the athlete's jump service ability.

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