

**THE INFLUENCE OF PART AND WHOLE METHODS OF TRAINING ON TOP SPIN SERVICE ABILITY IN VOLLEYBALL GAMES IN MALE ATHLETES AGED 14-16 YEARS OLD AT DIVKRA KARANGANYAR VOLLEYBALL CLUB**

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**Abstract**

*The aim of the research was to determine "The Difference in the Effect of Partial and Overall Training on Top Spin Serving Ability in Volleyball Games in Male Athletes Aged 14-16 Years.*

*The research sample was male players with a total of 30 people. Sampling used random techniques. The variables of this research are the results of top spin service ability as the independent variable and part method training with the overall method as the dependent variable. The research design uses a pretest-posttest design.*

*The results of the data analysis obtained: (1) There is a difference in the influence of part and overall training on the ability to serve top spin in volleyball games among male athletes aged 14-16 years. This is proven by the results of the final test calculations for each group, namely  $t_{count} = 0.2913$  which is smaller than  $t_{table} = 2.145$  with a significance level of 5%. (2) The overall method has a better effect than the partial method on top spin serve ability in volleyball games among male athletes aged 14-16 years. Based on the percentage increase in top spin serve ability, it shows that group 1 (group those who received treatment using the part method) were 12.903% < group 2 (the group that received whole method treatment) was 13.174%.*

**Keywords:** Training, Top Spin, Volleyball

## **INTRODUCTION**

Volleyball is a sport that is very popular with the general public in Indonesia. Volleyball is played by two teams, each team consisting of six people. Played on a field 18 meters long and 9 meters wide, it is one of the most popular competitive and recreational sports in the world. In Indonesia, volleyball is a sport that is very popular among people. It is proven that there are many championships held, from inter-village championships, official national championships, and at international level. Based on the International Volleyball Federation (FIVB) in October 2015, Indonesia's volleyball performance is currently ranked 3rd in the Southeast Asia region, below the Philippines and Thailand, while at world level it is ranked 73rd for senior women's volleyball and 52<sup>nd</sup> for senior women's volleyball. men's volleyball. This shows that the achievements of Indonesian men's volleyball in Southeast Asia have become a potential sport at international events.

The serving movement is the dominant movement at the start of the match, a good top serve will definitely make things difficult for your opponent when receiving it. Apart from that, good top spin serve movements are also often used to attack the opponent's passing. The top spin serve movement in volleyball can only be done well if students have the correct technique. Therefore a student must have a strong hand. This is where the question begins to arise, namely the top spin serve in volleyball which has characteristics such as those who have good abilities, so that they are able to trouble the opponent, using volleyball playing techniques, especially the top spin serve. If this problem is questioned, perhaps someone will find it easy to answer that they have good and strong hands, so they are able to perform the top spin serve technique well and correctly. Many volleyball clubs, especially in Karanganyar district, do not teach the top spin serve so that their athletes cannot understand what the top spin serve is and how to train the top spin serve correctly.

According to Muhajir (2004: 34) the aim of playing volleyball is to demonstrate the techniques and tactics of playing the ball on the field to achieve victory in each match. Another opinion according to Damar Puspo Prakoso (2015: 11) Volleyball is a sport game played by two opposing groups, each group having six active players. According to Soedjarwo, Sunardi & Margono (2006: 6-7) that it is important to master basic techniques in playing volleyball, apart from being able to play volleyball well, you also need to remember the following things:

1. Penalties for game violations related to technical errors.
2. Due to the separation of places between one team and another team, so that there is no bodily contact from the opponent's play, the referee's supervision of this technical error is more careful.

3. There are many elements that cause technical errors, including carrying the ball, lifting the ball, and double shots.
4. In the game of volleyball, the timing for playing the ball is so perfect that it will allow for greater technical errors to occur.
5. High mastery of tactics is only possible if mastery of basic techniques is high, which in volleyball is quite perfect.

Seeing the possibilities above, each student tries to improve their mastery of the basic techniques of playing volleyball perfectly. According to Soedjarwo, Sunardi & Margono (2006:7) the basic techniques in playing volleyball that must be mastered by every student are as follows:

- a. Passing:
  - 1) Top pass technique
  - 2) Lower pass technique
  - 3) Set-up/bait
- b. Smash :
  - 1) Normal smash
  - 2) Semi smash
  - 3) Push smash
- c. Services:
  - 1) Lower hand serve
  - 2) Upper hand serve
    - a) Tennis service
    - b) Floating
    - c) Check
    - d) Block/dam
      - Single block
      - Block friends

A top spin ball serve is a serve that results in the ball spinning rapidly forward. The top spin ball serve that is often used is with. Service has the advantage that the ball moves and falls quickly, it is difficult to control the ball. The downside is that the ball flies steadily, is difficult to play, and has a lower level of constancy. Nuril Ahmadi (2007: 22). The world volleyball organization (FIVB) divides the types of service, one of which is the top spin serve. Stages of executing the top spin serve:

1. The center of body weight is on the back foot, the right hand throws the ball with the addition of a rolling movement from the fingers.

2. as in smashing, the ball is thrown forward 1-2 meters, the left foot forms an angle, the preparation approach is to keep the ball in front of the shoulder.
3. This is followed by another precise step, the same as when smashing.
4. With the left foot closed close to the right foot, there is a distance between the feet so that forward momentum and added hip rotation. Moving forward when hitting the ball and turning your hips gives the ball additional speed so that the ball can spin quickly towards the front.
5. Try to always make a straight line with the ball, arms, shoulders, hips and legs.
6. Just before contact with the ball, there is a backward bending position to help increase power so that the ball goes faster.
  - a. Contact with the ball is made by the arm, namely through the right hip.
  - b. Follow the movement forward with one leg forward and try to get ready to do defense.

According to Novri Gazali (2016: 03) the top spin serve has the advantage of the ball moving and falling quickly. Meanwhile, the weakness is that the ball flies stably, it is more difficult to do, the level of consistency is lower. The implementation of the top spin serve is as follows:

1. Contact with the ball is made by the arm, namely through the right hip.
2. Follow the movement forward with one leg forward and try to get ready to do defense.

According to Novri Gazali (2016: 03) the top spin serve has the advantage of the ball moving and falling quickly. Meanwhile, the weakness is that the ball flies stably, it is more difficult to do, the level of consistency is lower. The implementation of the top spin serve is as follows:

1. In the starting position, turn your shoulders slightly towards the side line. Point your front foot towards the net post, throw the ball up slightly behind your shoulder.
2. Hit the ball just behind the center of the ball and at the furthest hand reach. Continue by rolling your wrists as quickly as possible, causing your fingers to roll over the ball.
3. Drop the arm that is throwing the punch to the waist.

According to Emral (2017:1) the principle of training is a process of change for the better. According to KONI (2015: 1) good training is training that is designed systematically by following the various characteristics of the sport. According to Harsono (2017: 50), by practicing systematically and through constant repetition, the organization of our neurophysiological mechanisms will improve, movements that were previously difficult to do will eventually become automatic movements. and reflective. Another opinion according to Rizki A Daulay (2016: 82) Training is a process that is carried out systematically and continuously by increasing the amount

of load to improve the performance of athletes in achieving predetermined targets, which is the basis for improving the functional quality of the body's organs psychologically. According to Harsono (2017:76) quality training is:

1. If the training provided is truly useful and meets the athlete's needs.
2. If constructive corrections are often given.
3. If supervision is carried out by the trainer down to the details of the movement.

## **METHODS**

Research methods are the methods used by researchers in collecting research data Suharsimi Arikunto (2010:160). Methods are needed in carrying out research. The research method provides precise lines and puts forward the correct conditions, meaning ensuring that results are obtained that are appropriate and can be scientifically justified. Determination of research methods is influenced by the research object. So the method used in this research is an experimental method. The research design used in this research is pre-test and post-test group. Suharsimi Arikunto (2010:124) said the pre-test is 30 observations made before the experiment and the post-test is the observation made after the experiment. The pre-test can provide a basis for making comparisons of the performance of the same subject before and after being subjected to treatment. The division of the experimental group was based on the ability of the top spin serve in the initial test. After the initial test results are ranked, then samples with equal abilities are paired into group 1 (K1) and group 2 (K2). Thus, the two groups before being given treatment were balanced groups. If in the end there is a difference, then this is due to the influence of the treatment given. The groups in this study were divided using ordinal pairing.

## **FINDINGS AND DISCUSSION**

### **Findings**

#### **1. Differences in The Effect of Part Methods on Top Service Ability Spin**

The t value between the initial test and the final test in group 1 = 3.1741, while ttable = 2.145. It turns out that t obtained > in the table, which means the null hypothesis is rejected. Thus it can be concluded that there is a significant difference between the results of the initial test and the final test in group 1. This means that group 1 has an increase in top spin service ability caused by the method given, namely the section method. In this method, players study a game until it is mastered and then combine it with other parts, then learn or practice together until it is truly mastered, thereby increasing the ability to serve top spin for the better.

## **2. Differences in The Effect of Overall Methods on Service Ability Top Spin**

The t value between the initial test and the final test in group 2 = 3.4503, while t table = 2.145. It turns out that t obtained > t in the table, which means the null hypothesis is rejected. Thus it can be concluded that there is a significant difference between the results of the initial test and the final test in group 2. This means that group 2 has an increase in top spin service ability, the difference is caused by the method given, the overall method. In this method, the player learns the elements of movement well, so that the result can be a good increase in the ability of the top spin serve.

From the results of the difference test carried out on the final test in groups 1 and 2, a t value of 0.2913 was obtained. Meanwhile ttable = 2.145. It turns out that t obtained > t in the table, which means the null hypothesis is rejected. Thus, it can be concluded that after being given treatment for 6 weeks, there was a significant difference between the results of the initial test and the final test in group 1 and group 2. Because before being given treatment, both groups started from the same starting point, so this difference was due to the influence of given method.

In implementing training methods, the influence of the method used is specific, so that differences in method characteristics can produce different effects. Therefore, group those treated with the part method and the overall method have different influences on the results of increasing the serviceability of the top spin. Thus, the hypothesis which states that there is a difference in the effect after treatment between the part method and the overall method on increasing the ability of the top spin serve in volleyball, can be accepted as true.

## **3. The Overall Method is Better in Its Effect on Improvement Top Spin Serving Ability**

Group 1 has a percentage value of increasing Top Spin Serving Ability of 14,981%, while group 2 has increased Top Spin Serving Ability by 15,103%. Thus it can be concluded that group 2 had a greater percentage increase in normal smash learning outcomes than group 1. Group 2 (the group that received treatment with the overall method), apparently had a greater increase in Top Spin Serve Ability than group 1 (the group that received treatment using the part method).

The method with the section method reconciles the gap between physical condition, strength and coordination which is a more precise method. In this method, players learn a part until it is mastered and then combine it with other games, then learn or practice it together until it is truly mastered. This is the main factor in the success of learning to increase learning outcomes for more optimal top spin serves. Meanwhile, the overall method emphasizes that each part is mastered well first and then continues to master the next part so that students who are just learning will be more perfect and better in their movements, thus allowing for increased top spin serve ability, while the repetition of combining movements will be integrated between parts very poorly,

even though the technique The combination of playing greatly influences the results that will be achieved.

### **Discussion**

Based on the results of hypothesis testing by testing the difference in t values between the initial test and the final test in group 1 (the group that received the part method) = 3.1741, while t table = 2.145. It turns out that t obtained > t table, which means the null hypothesis is rejected. This shows that there is a significant difference between the results of the initial test and the final test in group 1. Group 1 has an increase in top spin serviceability caused by the method provided, namely the section method.

In the analysis of the data obtained between the initial test and the final test in group 2 (the group that received the overall method = 3.4503, while t table = 2.145. It turns out that the t obtained > t table, which means the null hypothesis is rejected. Thus it can be concluded that there is a significant difference between the results of the initial test and the final test in group 2. This means that group 2 has increase in top spin service ability caused by the given method, namely the overall method.

In other data analysis, namely the results of the difference test carried out on the final test in groups 1 and 2, a t value of 0.2913 was obtained, while t table = 2.145. It turns out that t obtained < t table, which means the null hypothesis is rejected. This shows that after being given treatment for 6 weeks, there was a significant difference between the results of the initial test and the final test in group 1 and group 2. Group 1 and group 2 were given treatment with different training methods.

Different methods given during the training process will get different responses from the subjects, so they can have different influences on the formation of learning outcomes for research subjects. Therefore, groups treated with the part method and the overall method have different influences on increasing the serviceability of top spin. If there is a significant difference between group 1 and group 2, the value of the difference in the increase in top spin serve ability in percent between group 1 and group 2 is calculated. Group 1 has a percentage value of top spin service ability of 14.981%, while group 2 has a percentage value of increase in top spin service ability of 15.103%.

This shows that group 2 has increased. The top spin service ability is better than group 1, because the overall method is very effective for increasing top spin service ability. In this method, players study a part until it is mastered and then combine it with other parts, then study or practice together until they are truly mastered, thereby increasing the ability to serve top spin to become more optimal. This is the main factor in increasing the ability of the top spin serve. By increasing

the ability to serve a good top spin, it will support the increase in the ability to serve a more optimal top spin.

From one side of the overall method, the player learns the movement elements that have been studied more and trains them first so that they become a mastered movement response, then assembles the movements they have previously had, and more so in combining or coordinating the movement elements. Furthermore, it can lead to an increase in top spin service ability. From the results of the difference test analysis, the main things as a result of this research can be described, namely:

1. Part method and overall method have different effects on improving the serviceability of top spin.
2. The overall method has a better effect than the part method on increasing top spin service ability.

## **CONCLUSION**

Based on the research results and the results of the data analysis that has been carried out, the following conclusions can be obtained:

1. There is an influence of training using the section method on the ability to serve top spin in volleyball in male athletes aged 14-16 years at the Divkra Karanganyar Volleyball Club in 2020. This is proven by the results of calculating the final test for group 1, namely  $t_{count} = 0.2913$ .
2. There is an influence of training with the overall method on ability top spin serve in volleyball games for male athletes aged 14-16 years at the Divkra Karanganyar Volleyball Club in 2020. This is proven by the calculation results of the final group 2 test, namely  $t_{table} = 2.145$  with a significance level of 5%.
3. The overall method has a better effect than the partial method on top spin serve ability in volleyball games in male athletes aged 14-16 years at the Divkra Karanganyar Volleyball Club in 2020. Based on the percentage increase in top spin serve ability, it shows that group 1 (the group with received treatment with the part method) was 14.981% > group 2 (the group that received treatment with the whole method) was 15.103%.



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