



## **Model of Volleyball Smash Skills Exercise Model for High School Beginners Athletes**

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### **Abstract**

The purpose of this study is to apply and develop a form of smash training for volleyball, obtain empirical data about the effectiveness and efficiency of the results of the development of volleyball smash exercises, Improve the results of volleyball smash accuracy training results Provide variations in the form of training so athletes do not get bored. Research on the development of volleyball attack exercises uses a qualitative approach and uses the Research & Development (R&D) research method which consists of ten steps, among others. The subjects of this study were beginner volleyball athletes of high school age in the city of Jayapura. Before the data were analyzed, a normality test was carried out on the results of the pretest and posttest smash volleyball using the Lilliefors test at a significant level  $\alpha = 0.05$ . The volleyball smash results between pretest and posttest obtained  $t_{Opretest} = 0.7982$  and  $t_{Oposttest} = 0.843951699$  is greater than  $t_t = 0.114$ , then the null hypothesis is rejected and  $t_O = 0,000$  is smaller than  $t_t = 0.005$  which means that there is a significant difference between pretest and posttest. Based on the results shows that the product of this exercise model is feasible to use, in small or large group trials. The novelty in this study is that the training model developed is a target-based smash training model.

### **How to Cite**

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## INTRODUCTION

Exercise in which there is a systematic process to improve one's physical ability than that aims to improve sports performance. For the method of exercise becomes a very important asset for a coach. A good exercise program will produce an effective workout. According Wibowo & Hidayatullah (2017) stated that "Increased maximum performance can be achieved when the athlete is able to improve the physical condition of all components and developed according to the needs" (Wibowo & Hidayatullah, 2017, 2). Increased physical condition can not be separated from a systematic exercise program. The physical condition is a unified whole of components which can not be separated without the physical condition of the component consists of strength, speed, kelincahan, flexibility, endurance,

A good exercise program is very necessary for all sports including volleyball. Sports volleyball become a popular sport in Indonesia second after football. According to Agus Imam Faisol (2016) states that "The development of volleyball in Indonesia has existed since the Dutch colonial era" (Imam Agus Faisol, 2016, 2). Volleyball sports enthusiasts in Indonesia could practically reach out to the remote area. This can be seen in every township in addition to the football field there must be also a field for volleyball.

Sport volleyball is not a new sport known in the world of education and daily life - today. Sports became one of the sport are much in demand from many quarters even of different ages. Although in daily life - today, exercise is usually just for fun and relieve fatigue after a long day. Unlike the case with volleyball players. Sports volleyball a fixed price for the good name of Indonesia. As reported by the news written Ibn Aziz (2018) "Achievement of Indonesia in the Asian scene in the event Asian Games in Jakarta stalled in the quarter-finals after the defeat of South Korea 3 Set Jump" (Ibn Aziz, 2018, 3). One indisputable fact that Indonesia in volleyball at the Asian level has not been able to carve gold ink.

There are still a lot of homework that needs to be addressed for the sport of volleyball in Indonesia. Sports coaching volleyball for the area needs to be in giatkan again. Make exercise program should be tailored to the existing competition in the area. In a sport of volleyball, there are four techniques that serve, passing, smash and block. According to Gunawan (2018) states that "technique - a technique in volleyball game consists of serve, passing and passing down, up, block and smash" (Gunawan, 2018, 3).

Fourth technique The basis is the basic capital that must be learned and practiced for the no-

vice player if you want to excel. Many novice athletes who ignore these techniques and wants only practice smash, even though the existing techniques are all interrelated and simplest technique is the basic technique of passing through the most difficult technique that is blocking. Smash ability not only how to hit the ball with a strong course, exercise should also include where the ball was re-directed. The ability to read an opponent's weak point as well as an empty space on the opponent to steer the ball batted need an intense workout.

So far the model playing volleyball skills training is often done from the service, passing on, passing down, block and smash. All imply significant changes to the model created exercises. The provision of training programs and exercise appropriate models provide effective results. Related to smash exercise ever conducted by Kris Wibowo (2017) "model is based volleyball game smashes exercise effectively improve the ability smash" (Kristianto Wibowo, 2017, 9). Model exercises that made Kris is a model-based exercise games besides age athletes used is a senior athlete. Researchers themselves make volleyball smash skill training models which of course made for beginners athletes high school age.

This practice models made as attractive and effective as possible for novice athletes. Beginner athlete himself in desperate need of this type of training according to his ability. The coach already provide this type of training will smash but for the beginner athlete's own high-school age often follow this type of training given to senior athletes. Difficult to adjust already become saturated so the initial impact and novice athletes are less interested in doing for the practice smash. Of course it must also be supported by the handling of a good coach and hard working athlete who always uphold discipline in practice. Treatment needs to be done since the beginning, for example by forming a volleyball clubs in the area. Therefore, these clubs will bring the seeds of a reliable volleyball player.

At that stage in the smash hit the ball directly in contact with the hands so that the ball can be determined if trained continuously. Courses opponent into the target area is therefore required accuracy. According to Power (2017) states that "Target is one form of the game that requires precision, high accuracy in obtaining the value" (Power, 2017.3).

Based on field observations found still many smash done by athletes unfocused. There was even a smash that does not lead to an opposing player area. It is very detrimentalown team, because the team could lose points. Therefore the coach needs the right type of training to practice accuracy smash on the athlete. According Putro

Doby (2018) states that:

"All the models of the exercise is essentially to achieve an appearance in the game of volleyball, and even more specifically to acquire the mastery of technique that is good in playing volleyball in order to acquire the automation and efficiency of movement, especially the model of the attack on the game volleyball is extremely diverse and important in the game of volleyball, for which there are a variety of techniques in the attack in order to gain value in the game." (Doby Putro, 2018, 6)

There are still some athletes were less well in the smash, so that the athlete's ability to perform a smash still very varied, there are athletes who are able to do well and there are also athletes who are lacking in mastering the skill smash. Basically athlete can smash just shot largely unfocused and many are out of the field. Supposedly smash hit can be a weapon for any player to get points or deadly opponent. Smash exercise pattern also less attention, exercise is reproduced on physical training and games. According to Kristi August (2017) states that "Smash into a quick blow, directed downward with strong, sharp" (Kristi August, 2017, 3)

At the time of the play, most of the results performed by the athletes smash too wide to the right to the left and backward so that the smash hit that should have resulted in points for yourself, it actually produces more points for the opponent. Based on the observation result that when learning smash athletes make faces look sad and disappointed that when the turn hit a smash, the results tend to be the maximum punch

To win a game player must certainly have the ability to play good. One technique to win the game is a smash. By doing the hard knocks and purposeful opponent will make it difficult to restore the hit. The blow must smash smasher form that is often used in the game of volleyball. Characters from this blow was hard and fast ball speed to the floor of the field. This punch needs a leg muscle strength, shoulder, arm, wrist flexibility, as well as the harmonious coordination of body movements.

The smash blow identical to blow a deadly attack because their end is a game opponent. Smash apart should be done loudly is also done with the right leads to the target difficult to reach the opponent. Following the development of the efforts of coaching should be developed, especially system mechanisms fostering a more systematic and sustainable. To follow up on these things need to be done the right type of training and fun.

Related to this research, first made by Donny Setiawan (2018) has conducted research with the title "The Effect of Shape Accuracy

Level Goal Against Smash volleyball" (Donny Setiawan Wawan Setiawan, 2018, 1). The study describes the influence of target practice to spike a volleyball accuracy to determine the purpose of upgrading the accuracy smash volleyball using the target model of the target shape. The ball is hit is given a score of 1 (one) and are not on target given a score of 0 (zero). The results showed that the ability to smash volleyball accuracy using a model of the target on the student Prodi Health Physical Education and Recreation menagalami increase, namely berkenaan to a spherical shape 18 times, 2 times berkenaan box shape, and the image berkenaan pentagon 6 times. With the level of achievement of the target of 92%.

In a previous study discusses many related experiments and models as for the relations exercise just makes the model exercise smash smash is good and right. Therefore, researchers made a study that is still rarely discussed researchers - researchers associated previous models smash volleyball skills training. Product model created smashnya will not only skill, but also no accuracy or precision drills are effective for novice athletes high school age. Based on the previous experimental studies made by Donny Setiawan (2018) "With the achievement of the target level of 92%." (Donny Setiawan Wawan Setiawan, 2018, 1). Smash skills training models prove very need to be made to improve the skills of volleyball athletes smash. therefore needs to be made models spike a volleyball practice for novice athletes .. The objective of this study is:

1. Applying and developing forms of exercise smash for the sport of volleyball.
2. Obtain empirical data on the effectiveness and efficiency of the development spike a volleyball practice
3. Improving the accuracy of drill results smash volleyball
4. Provide various forms of exercise so that athletes do not get bored.

According to Andri Faithful Richard Magill Ning (2015) states that "based on the precision in movement skills divided into two gross motor skills (gross motors skills) and fine motor skills (fine motors skills)" (Andri Faithful Ning, 2015.3).

The initial model created model is as much as 39 Model Exercise. Models made exercise includes training support smash skills. To produce a good smash skills required exercises that support the smash itself. In the smash itself there are stages of steps that need to be considered. According to Muhammad Riza (2017) states that there are "four stages smash" (Muhammad Riza Praponik, 2017, 32) that: Prefix, repulsion, Hit, and landing. There are still rare coaches pay attention

to this detail to a model training. Thus, the researchers made a model of the stages of the exercise is to prefix smash made 5 models of practice, to repulsion 4 Model Practice, practice models to punch 5.

## METHODS

In this study, researchers used a research subject that is high school age athletes starters from the volleyball club is Youtefa many as 20 people, 14 people and Beam Holohim 16.

Mechanical Data were collected through interviews, questionnaire and Field Test. The steps are adjusted by steps borg and gall below.

Research development of volleyball practice this attack used a qualitative approach and methods Research development Research & Development (R & D) consisting of "ten steps, among others" (Ghofur, 2015, 177).

1. Conducting research and information gathering (literature review, observation of subjects, preparation of reports on the subject).
2. Planning (defining skills, formulation of objectives, determining the order of teaching, and small-scale testing).
3. Develop initial product form (preparation of teaching materials, preparation of handbooks and evaluation equipment).
4. The beginning of the field test (using 6-12 subjects).
5. Revised the main products (in accordance with the advice of the results of the field test beginning).
6. The main field test (with 30-100 subjects).
7. To revise the product (based on the suggestions and the results of field trials primary).
8. Field test with 30-200 subjects.
9. Revision of the final product.
10. A report on the product in the journal, is working with publishers to distribute commercially.

Data analysis technique is performed before the researchers analyzed data normality test done first using the formula lillofers normality. Furthermore, if the data is normal then continued with test effectiveness by calculating the value of T using SPSS16.

## RESULTS AND DISCUSSION

Needs analysis conducted on athletes found that the athletes still need exercise to improve smash models, athletes also bored with the exercise of existing models, the ability to smash has not been measured. While the coach needs

analysis found difficulty application of models and variations, lack of exercise models. Further validation of experts to assess whether the existing model is feasible or not to apply. From the results of the initial validation of experts before a small test found 34 models worthy exercise to be applied. Furthermore, a small test by using 20 subjects of research emanating from the club Youtefa.

Furthermore, after it's done by an expert model improvements early models originally as many as 34 after the revision to 31 models with 3 model is not feasible because the tools are not there. The next big test conducted with 60 subjects. Before the big test in the first download smash pretest value of these athletes to see differences after a given treatment. The next big test taken after the post test score with 60 subjects each. The next test of the effectiveness of using T test to see if there is a difference after a given type of training. T test was performed using SPSS 16.

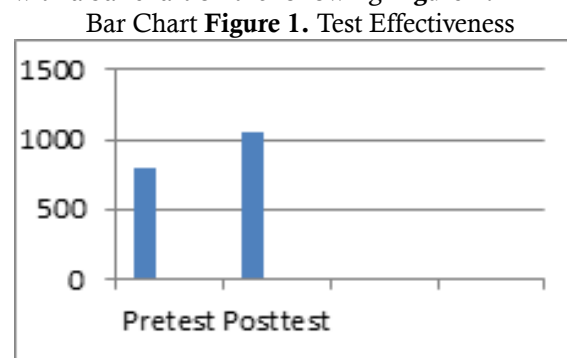
Based on the output results by using SPSS 16 that the average value of the results of spike a volleyball before being given this type of training is 13:28 and after treatment with this type of training given 17.65 means that the average value of an increased smash volleyball

Based on the results ouput table above that the correlation coefficient before and after exercise smash volleyball are 0626 models with 0:00 p-value of <0.05 so significant conclusions

In a test of significance of the difference with SPSS 16 obtained the t-count = 10 144, Df = 59 and p-value = 0.00 <0.05 which means there are significant differences smash exercise students before and after their treatment practice models spike a volleyball.

Based on the information it can be said that models spike a volleyball practice for novice athletes high school age who is developed, can effectively improve the smash volleyball for beginner athletes high school age.

Following the average ratio of the level of smash tests before giving the treatments and after the treatment with models smash volleyball drills with a bar chart on the following **Figure 1**.



The exercise generated product models are:

1. Exercise Model pata pata jump
2. Model Exercise ran to the side
3. Model training run with a triangular circuit
4. Model circuit training kites
5. Models run with hula hoop Exercises
6. Model Exercise jump with rubber tires
7. Isometric Exercise Models jump
8. Exercise leapfrog cardboard models supermi
9. Model Exercise sit and jump cardboard
10. Model Practice hitting balls against the wall
11. Training models hit the ball from behind the line of attack
12. Exercise hit the ball with the goal of a car tire
13. Exercise Model tosser hit a ball held on a table
14. Model open the Exercise hit the ball in the feed toser
15. Model Exercise landed on the top of the table)
16. Exercise landed on the chair
17. Model Exercise landed on top of the box
18. Exercise balls Model open colored paper targets in the line of attack
19. Exercise balls Exercise Model Model open colored paper targets in the last line
20. Exercise balls Exercise Model Model open colored paper targets in the service line
21. Exercise balls Exercise Model Model open colored paper targets in the area next to the line of attack
22. Exercise balls Exercise Model Model open paper targets
23. The colored side lines last area
24. Exercise balls Exercise Model Model open colored paper targets in the line of attack
25. Exercise balls Exercise Model Model open colored paper targets in the area last
26. Exercise balls Exercise Model Model open colored paper targets in the service line
27. Exercise balls Exercise Model Model open
28. colored paper targets in the area next to the line of attack
29. Exercise balls Exercise Model Model open colored paper targets in the area next to the last line
30. Exercise balls Exercise Model Model open colored paper targets in the line of attack
31. Exercise balls Exercise Model Model open colored paper targets in the area last
32. Exercise balls Exercise Model Model open colored paper targets in the service line

33. Exercise balls Exercise Model Model open colored paper targets in the area next to the line of attack
34. Exercise balls Exercise Model Model open colored paper targets in the area next to the last line
35. Exercise balls Exercise Model Model open colored paper targets in the line of attack
36. Exercise balls Exercise Model Model open colored paper targets in the area persist.

## CONCLUSION

Based on data obtained from the results of field testing and discussion of the results of this study concluded that; With the model smash volleyball high school age athletes beginners can practice volleyball smash effectively and efficiently. Model Exercise smash that has researchers developed, high school aged athletes beginners can master quickly and completely smash.

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