Part Whole Part and Whole Part Whole Affect Volley Normal Smash Ability

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Abstract

The purpose of this research is to examine the different impact of part whole part and whole part whole practice method, examine the different normal smash skill toward leg muscle power and examine interaction impact of practice method and leg muscle power toward normal smash skill to volleyball achievement development student. This research is experimental research that means to compare two different treatments on research subject. Thirty two samples use probability sampling. Independent variable is part whole part and whole part whole practice method. Attributive variable is high leg muscle power and low leg muscle power. Dependent variable is volleyball smash skill. Data collection technique in this research use pretest and posttest. Treatment undergoes through 18 meeting. Data analysis technique that used is Varian analysis (AVANA). The result of this result shows that in student group that given whole part whole practice method has better result than student group that given part whole part treatment (104,37 > 81,75) toward volleyball smash result. In student group that having high leg muscle power has better result compared with student group that having low leg muscle power (112,31> 70,87) toward volleyball smash result. There is interaction between practice method and leg muscle power toward volleyball smash result.

How to Cite

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INTRODUCTION

According to Suhadi (2004: 7) volleyball game is volleying ball using all parts of body and crossing it pass the net to opponent field. Volleyball game is played using big ball by two teams. Each team can only volley three times and each player does not do touch twice in a row, except while do blocking. Based on Roesdiyanto (1992) "Volleyball basic technique is a basic body process to activate physical and best skill mastery in volleyball game, also can finish the game well." Volleyball can be made as competitive sport and also recreation one. In volleyball game, to reach maximal achievement not only technique and tactic component only should be trained, but also physical component including, endurance, power, speed, flexibility, and coordination.

Ahmadi (2007: 20) explains techniques in volleyball game involve service, underarm pass, overhand pass, block, and smash. From those basic skills, smash is a technique that always used to attack and produce score also reaches the victory. Because volleyball game is a fast game so attack technique more dominant compared with defend technique. Smash in volleyball game principally means to attack defend opponent. Through smash, it is expected that team that do it getting point and move the ball from the opponent . Vieradan Ferguson (1996 : 72) state "Hard spike is prime weapon for attack in volleyball. Most of the team gets most of the point through spike that executed well." That statement shows that smash is the most interesting part in volleyball game. Meanwhile smash is very difficult to do because not all of volleyball player can smash hard and sharply, the systematic and continue practice should be done. Smash is important volleyball technique in volleyball game. That is why, each volleyball player should master variation of volleyball smash.

Based on Giriwijoyo, dkk (2005: 43) practice is a process of systematically practice that done repeatedly, and as the day goes by the number of practice is getting greater in quantities. Technique is a move process and evidence in practical to solve the task in part of sport (Suharno , 1992). Technique skill is important part in achievement attainment.

With good technique skill, an athlete may show good game or style in sport. That is why technique skill practice should get prime priority proportionally in practice program arrangement. The main purpose of practice is to help athlete improving his skill and achievement maximally.

Volleyball normal smash practice using part whole part method is done with experiencing each part of move, then do the whole sequence of normal smash move, then do volleyball normal smash per part again. While for volleyball normal smash practice using whole part whole method is doing volleyball normal smash by experiencing whole sequence of volleyball normal smash, then doing each movement, then doing whole sequence of movement again.

The core of sport activity is human movement to jump, hop, run, kick, and dribble. Based on Suharno (1993: 59), "Power is athlete muscle ability to overcome the weight with maximal power and speed in an infinite movement". A player with good power is not only able to do a skill perfectly, but also do new skill to her easily and fast. In volleyball game, leg muscle power give big role and contribution to jump result to reach ball while doing smash.

METHODS

Sugiyono (2011: 215) states that methodology is a scientific way to get data with purpose and certainty. Method that used in this research is experiment method. According to Surakhmad (2003: 149) experiment is doing a trial activity to see a result. This research is experimental research that means to compare two different treatments in research subject. Research data is arranged in research design framework with following factorial 2x2 framework:

Table 1. Research Design Framework

V. Manipulatif	Part Whole Part Practice Method (b1)	Whole Part Whole Practice Method (b2)
V. Atributif		
Leg muscle power (high) (a1)	a1b1	a1b2
Leg muscle power (low) (a2)	a2b1	a2b2

Sugiyono (2011: 84) states that population is generalization area covers: object/subject that having certain quality and characteristic that set by the researcher to be learnt and then drawn the conclusion. Population in this research is student in UNS volleyball achievement development program. Sugiyono (2012: 92) explains that probability sampling is sample collection technique that giving the same opportunity for each element or member of population to be chosen as samp-

le member. Sample in this research is student in UNS volleyball achievement development activity that having 32 students.

Based on Sugiyono (2011: 38) independent variable is one who affecting or becoming reason of a change, while dependent variable is variable that is affected or becoming result because of independent variable. Manipulative independent variable in this research is part whole part and whole part whole practice method. The attributive variable is high and low leg muscle power. While for dependent variable in this research is volleyball smash skill.

Data collection technique in this research is by doing pretest and posttest. Data collection technique in this research can be explained as following: determine group of high leg muscle power and low one, determine practice method group, do volleyball smash skill test. Data analysis in this research that used is statistical analysis. Data analysis technique used in this research is using SPSS 20 that is Analysis Varian (ANAVA) two paths in significance level $\square = 0,05$.

RESULTS AND DISCUSSION

a. Treatment group Part whole part and whole part whole method

In this group, there are two groups, those are part whole part and whole part whole. In part whole part, it can be seen that the total score in this group in pretest is 8149 and 9457 in posttest means that there is score improvement as many as 1308. Average in this group in pretest is 509,31 and 591,06 in posttest means that there is score improvement as many as 81,75. While in whole part whole, it can be seen that the score total in this group in pretest is 8416 and 10086 in posttest means that there is score improvement as many as 1670. Average in this group in pretest is 526 and 630,37 in posttest means there is score improvement as many as 104,37.

Table 2. Volleyball smash pretest and posttest data result description

Practice Method (b)		Total	
		Pre-test	Posttest
Part Whole Part (b1)	Total	8149	9457
	Average	509.31	591.06
Whole Part Whole (b2)	Total	8416	10086
	Average	526	630.37

b. Leg muscle power treatment group

In this group there are two groups, those are high leg muscle power and low leg muscle power. In high leg muscle power, it can be seen that total score in this research in pretest is 8320 and 10117 in posttest that means there is score improvement as many as 1797. Average in this group in pretest is 520 and 632,31 in posttest that means there is score improvement as many as 112,31.

While in low leg muscle power, it can be seen that total score in this group in pretest is 8245 and 9374 in posttest means that there is score improvement as many as 11129. Average in this group in pretest is 515 and 585,87 in posttest that means there is score improvement as many as 70,87. As shown in the following **Table 3**:

Table 3. Volleyball smash pretest and posttest data result description

Leg muscle power (a)		Total	
		Pre-test	Posttest
a1 (high)	Total	8320	10117
	Average	520	632.31
a2 (low)	Total	8245	9374
	Average	515	585.87

c. High leg muscle power with part whole part method treatment group

With deviation standard as many as 73,85, improvement happened in leg muscle power treatment power with part whole part method (a1b1) that can be seen in the following **Table 4**.

Table 4. Volleyball smash improvement result after treatment given

Sample group	Volleyball smash improvement result after treatment given	
	Improvement total	Average
a1b1	834	104,25

It can be seen from the **Table 4** above the improvement average is happened at a1b1. Averagely this group has high improvement as many as 834 with average improvement as many as 104,25

d. Leg muscle power with whole part whole treatment group

With deviation standard as many as 96,4, improvement is occurred in high leg muscle power with whole part whole method treatment group (a1b2) that can be seen in following **Table 5**.

Table 5. Volleyball smash improvement result after treatment given

Sample group	Volleyball smash improvement result after treatment given	
	Improvement total	Average
a1b2	963	120,375

It can be seen from **Table 5** above improvement average is happened in a1b2. Averagely this group average has highest improvement than other group, that is 963 with average improvement as many as 120,375.

e. Low leg muscle power part whole part method treatment group

With deviation standard as many as 65,3 improvement is happened in low leg muscle power part whole part method treatment group (a2b1) can be seen from the following **Table 6.**

Table 6. Volleyball smash improvement result after treatment given

Sample group	Volleyball smash improvement result after treatment given	
	Improvement total	Average
a2b1	474	59,25

It can be seen from the **Table 6** above, average improvement is happened in a2b1. Averagely this group has lowest improvement than the other groups, that is 474 with improvement score as many as 59,25.

f. Low leg muscle power whole part whole method treatment group

With deviation standard as many as 81,45,improvement is happened in low leg muscle power whole part whole method treatment group (a2b2) can be seen from the following **Table 7.**

Table 7. Volleyball smash improvement result after treatment given

Sample group	Volleyball smash improvement result after treatment given	
	Improvement total	Average
a2b2	655	81,875

It can be seen from the **Table 7** above, average improvement is happened in a2b2. Averagely this group has improvement that is not so high, that is 655 with improvement score as many as 81,875.

CONCLUSION

There is different affect between volleyball smash practice using part whole part and whole part whole practice method toward volleyball normal smash result. The result of volleyball normal smash in sample group that using whole part whole is better than part whole part practice method sample group (104,37> 81,75).

There is different affect between sample group with high leg muscle power and leg one toward volleyball normal smash result. The result of volleyball normal smash in sample group with high leg muscle is better than low one (112,31> 70,87).

There is interaction between leg muscle power and practice method toward volleyball normal smash result.

The conclusion of this result can give a broad idea if it studied about the implication that is concluded, that is students that have high leg muscle power will be better if given whole part whole method, because give better effect in volleyball normal smash result. Whole part whole practice method is very effective given to students that have good physical condition where this practice method is done continually with limited intensity. This method is very effective because movement pola will be reached faster and the execution in practice is done continually so that the automatic movement formation will be faster. The improvement of volleyball normal smash result in game can be gotten through whole part whole, for both students with high leg power and low one.

REFERENCES

Ahmadi, N. 2007. Panduan Olahraga Bolavoli. Surakarta: Era Pustaka Utama

Giriwijoyo, S. Dkk. 2005. Manusia dan Olahraga . Bandung: ITB

Roesdiyanto, 1992. Pengajaran Teknik dan Taktik Bermain Bolavoli. Malang: IKIP Malang

Sugiyono. 2005. Memahami Penelitian Kualitatif. Bandung: Alfabeta

Suhadi. 2004. Pengaruh Pembelajaran Bolavoli. Depdikbud.

Suharno, H.P. 1974. Dasar – dasar Permainan Bolavoli. Yogyakarta: Percetakan Kaliwangi

Viera, & Verguson. 2000. Bolavoli Tingkat Pemula. Jakarta: Raja Grafindo Persada