



The Effect of Multiball and Shadow Training Methods on Forehand Push Accuracy in Table Tennis Extracurriculars

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Abstrak

This study aims to determine the accuracy of forehand push in extracurricular table tennis at SDN Cibatu Nagrak. The method used in this research uses quantitative methods with Nonequivalent control group design. The research population of table tennis extracurricular members at SDN Cibatu Nagrak, totaling 12 people. Samples taken 12 people with saturated sampling techniques, namely techniques where all members of the population are sampled. The instruments used are (1) training program, (2) forehand push accuracy test. Based on the results of data analysis conducted, that in this study has a significant effect, seen from the paired sample t test obtained multiball significance value of 0.000 with a significance level <0.05 , and obtained from shadow significance with a significance level <0.05 , it can be concluded in this study that there is an effect of training using multiball and shadow on the accuracy of forehand push on extracurricular table tennis at SDN Cibatu Nagrak, and multiball training is better than shadow because the percentage increase of multiball is 15.56% while shadow is 12.79%.

Keywords: Multiball Training, Shadow Training, Accuracy Of Forehand Push, Table Tennis

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Artikel Info:

Submitted: 01/03/2023

Revised: 24/10/2023

Accepted: 04/11/2023

Published: 17/11/2023

How to Cite: Aulia, S, N., Bachtiar., Maulana, F. (2023). The Effect of Multiball and Shadow Training Methods on Forehand Push Accuracy in Table Tennis Extracurriculars. *Journal Coaching Education Sports*, 4(2), 331-342. <https://doi.org/10.31599/jces.v4i2.2093>

Author's Contribution: a) Research Design; b) Data Collection; c) Statistical Analysis; d) Manuscript Preparation; e) Fundraising



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A. Introduction

Sport is one of the important pillars of activities that are a necessity for daily life because exercising can support fitness and health physically and mentally. According to (Bangun, 2016) Sports are physical activities, namely physical activities to enrich and improve physical abilities and basic movement skills and movement skills, one of which is sports.

In addition, according to (Pane, 2015) Exercise is a body movement that has an effect on the body as a whole and can help stimulate muscles and other body parts to move. In this case exercise is very important for the body so that there are many ways that a person does in exercising, exercise can also be used as a hobby that can never be separated from human life. Especially in Indonesia has a variety of sports such as big ball games, net games, small ball games. There are many kinds of small ball games such as softball, golf, dynasty and table tennis.

According to (Asri et al., 2017) Table tennis is a sport that knows no age limit, starting from children, adolescents, and adults and even parents can play and do table tennis. Table tennis has the benefits of maintaining fitness, health and recreation (As, 2020). This sport is in great demand by various groups, so it is not only for athletes whose goal is to excel but from

the general public and students can be used for different purposes in a room that is not too large (Tomoliyus, 2017). According to (Rachman et al., 2017) Table tennis or ping pong is one of the sports played by two pairs (doubles) or two people (singles) who are opposite, the tool used in this game is a racket commonly referred to as a bet, the racket in the table tennis game is made of wooden boards covered with rubber, and the table tennis game field is rectangular.

According to (Asri et al., 2017) Indonesia only recognized the game of table tennis in 1930, after a few years precisely in 1939, the table tennis figures were able to establish the All Indonesian Ping Pong Association (PPSI), over time in its congress PPPSI in Surakarta changed its name to the All Indonesian Table Tennis Association (PTMSI) in 1958, this body is responsible for the development and achievement of table tennis sports in the country.

Table tennis has many techniques ranging from service, chop, drive, hit, block, loop, smash, flick, spin, push (Lestari et al., 2019). Of all the techniques in table tennis, which greatly affects all other hitting techniques, namely the push technique because this technique has the most basic strokes of all the strokes in table tennis (Pratama, 2021). It can be concluded that the push technique is a technique that

can improve the ability of other techniques because the push technique is very important for table tennis participants, especially in forehand push shots, because in table tennis games the technique that is often trained first is the forehand push technique. Although schools rarely have table tennis extracurriculars, there are several in the Sukabumi district that include table tennis in extracurriculars for students who have a hobby of table tennis.

Extracurricular is a learning activity that is held outside of class hours so that participants have basic supporting abilities, usually this activity is carried out openly and requires more initiative besides that extracurricular activities have full freedom in choosing and sorting out forms of activities that are in accordance with the potential and talents that exist in themselves and in line with the educational ideals they are pursuing (Meria, 2018). Participation in extracurricular activities is an effort to improve achievement in the field of sports/non-academic.

In order to achieve increased sports achievement in schools, a continuous training pattern is needed. In addition, the main complementary factors to improve sports performance include; mental development, tactical development, technical development and physical development as a whole unit from all

components of physical fitness.

Factors that affect achievement in table tennis include accuracy and arm strength, because the most important thing in a table tennis game requires arm power or arm strength and accuracy in placing the direction of the ball into the opponent's area (Budi & Arwandi, 2020). The purpose of arm strength is so that the hand does not shake and can hit the ball to the opponent's area so that the ball does not leave the table, while the accuracy is to be able to direct the ball to the opponent's area, so that when competing does not always rely on power but directs a difficult ball to the opponent's area (Teguh, 2017).

According to (Burhanuddin Kharis, 2021) Table tennis sports can run optimally when trained from an early age, so there are opportunities to do more training, if you want to become a good table tennis athlete, you must be able to master all the techniques of table tennis games, to get good techniques a coaching is needed. According to (Rahmatulloh et al., 2019) There are many factors needed in the coaching process, a good table tennis coaching process is if it is supported by adequate equipment and infrastructure, training methods and effective training programs.

Based on several school observations that researchers observed, among others:

Penabur Christian Agency School, MTSS Jamiyyatul Muta'alimin and SDN Cibatu Nagrak. The results of the researcher's observations, that SDN Cibatu Nagrak is more visible the problem is because when doing the forehand push accuracy movement the ball is not right on target, many are off the table or about the net so that researchers are interested in researching at SDN Cibatu Nagrak.

Based on the results of interviews with Mr. Henhen Suhendi as a table tennis extracurricular coach at SDN Cibatu Nagrak, table tennis extracurricular participants in carrying out an activity naturally and instinctively, so that the exercise does not pay attention to accuracy or accuracy. The ability of students in this table tennis extracurricular to technically be able to do it but only natural talent appears. According to Mr. Henhen Suhendi, the training program used looks at the habits of practicing in the past with monotonous or unvaried training activities, indeed the training program has changes but these changes are not too significant for the techniques of participants who take part in table tennis extracurricular activities.

In an effort to improve table tennis skills for students in practicing, the researchers conducted various approaches to facilitate training, with exercises that

use various methods in order to produce exercises that can influence and avoid fear. According to (Burhanuddin Kharis*, 2021) A method is a method used in the training or teaching process that has been determined beforehand and serves as a bridge connecting the training or teaching material with the objectives to be achieved. According to (Burhanuddin Kharis, 2021) Training methods in table tennis include practicing with other players, practicing with a coach, practicing alone, machines and also multiball.

Therefore, the multiball and shadow training methods for participants who take part in extracurricular table tennis at SDN Cibatu Nagrak, varied exercises are useful for training on the accuracy of forehand push, the goal is to provide a fun table tennis game and motivate participants not to feel boredom when doing training, especially practicing the accuracy of forehand push. The table tennis forehand stroke technique is one of the most important basic techniques that must be mastered in table tennis games, provided that other techniques are not forgotten (Tyan, 2021). The forehand stroke technique is considered to be the basic stroke because it is an easy stroke to understand and this stroke is one of the strongest strokes because when hitting the body is not an obstacle (Firmansyah et al.,

2021). According to (Yulianto et al., 2016) table tennis forehand shot technique there are several stages, namely: (1) Preparation stage, (2) Movement stage, (3) End of movement. Basically, participants in learning / practicing in the game of table tennis, the main thing that must be mastered is the accuracy of the forehand push technique in the game of table tennis.

Relevant research has been conducted by (Waluya et al., 2019) with the title "The Effect of Multiball and Paired Training on the Accuracy of Forehand Drive in Table Tennis Extracurricular at Smp Negeri 14 Jakarta School." The study found that multiball training can affect the accuracy of forehand drive in extracurricular table tennis at SMP Negeri 14 Jakarta school. Other research was also conducted by (Pratama, 2021) with the title "Impact of Shadow Training on the Ability of Push Forward Punch Techniques in Table Tennis". This study shows the results that there is an effect of shadow training on improving forehand push punch techniques in table tennis games at the Pandusiwi club in 2014.

The similarity between this research and the previous study is the application of multiball and shadow training methods to improve forehand push accuracy. However, the difference in this study lies in the location of the research which was

conducted at SDN Cibatu Nagrak. Therefore, the purpose of this study is to conduct a test related to the multiball and shadow training methods on the accuracy of forehand push at DN Cibatu Nagrak.

B. Methods

This research method uses an experimental quantitative research type method, because the research data is in the form of numbers and analysis using statistics. This research design uses Nonequivalent control group design. This experimental method has a pretest, before being given treatment, thus the results of the treatment can be known more accurately, because it can compare with the situation before being given treatment (Sugiyono, 2019).

The population in the study amounted to 12 students who were male in extracurricular table tennis at SDN Cibatu Nagrak. The sample taken was 12, the sample technique used was a saturated sample. The sample that has been determined is given a pretest so that the initial ability of table tennis can be known in doing forehand push accuracy. Then divided into two groups, namely the multiball group and the shadow group, the division of groups using ordinal pairing. The instrument that will be implemented is the forehand push accuracy ability test.

In the experimental method, there are factors that are tested, in this study the tested factors are independent variables (X), namely multiball training (X) and shadow training, while the dependent variable (Y) is the accuracy of the forehand push in extracurricular table tennis at SDN Cibatu Nagrak.

The test data were analyzed using descriptive statistics used to test normality, homogeneity, research hypotheses using the t test (paired sample test) with the help

of SPSS 26 software.

C. Result and Discussion

After collecting initial test data (pretest) then given treatment (treatment) for 14 meetings conducted 3 times a week from each treatment (treatment) and then collecting data from the posttest. In testing the results of the study, the data normality test was carried out. The following research results obtained can be seen in table 1 below:

Table 1. Pretest And Posttest Normality Test Results

<i>Tests of Normality</i>				
		<i>Shapiro-Wilk</i>		
	Kelas	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>
Result	<i>Pretest Multiball</i>	,180	6	,505
	<i>Posttest Multiball</i>	,205	6	,830
	<i>Pretest Shadow</i>	,208	6	,425
	<i>Posttest Shadow</i>	,237	6	,554

a. Lilliefors Significance Correction

Table 2: Multiball Homogeneity Test Results

<i>Test of Homogeneity of Variance</i>			
Levene Statistic	df1	df2	Sig.
,043	1	10	,839

Table 3. Shadow Homogeneity Test Results

<i>Test of Homogeneity of Variance</i>			
Levene Statistic	df1	df2	Sig.
,206	1	10	,660

Based on table 2 and table 3, it is known that the significant value (Sig) obtained is 0.83 and 0.66 from these results exceeds the significance level value of 0.05. So it can be concluded that the variance of the

multiball and shadow group data is the same (homogeneous).

Table 4. Results of T-test Data Analysis of Multiball and Shadow Groups

		<i>Paired Samples Test</i>							
		<i>Paired Differences</i>					<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>
		<i>95% Confidence interval of the Difference</i>							
		<i>Mean</i>	<i>Std. Deviation</i>	<i>Std Error Mean</i>	<i>Lower</i>	<i>Upper</i>			
<i>Pair 1</i>	<i>Pretest Multiball- Post Test Multiball</i>	-7,333	1,033	,422	-8,417	-6,249	-17,393	5	,000
<i>Pair 2</i>	<i>Pretest Shadow- Post Test Shadow</i>	-5,000	1,414	,577	-6,484	-3,516	-8,660	5	,000

Based on the results of the multiball group analysis, the significance (2-tailed) value obtained is 0.000, which is smaller than the predetermined significance level of 0.05. Thus H0 is rejected and H1 is accepted. It can be concluded that there is a significant effect of training using the multiball method on the accuracy of forehand push on extracurricular table tennis at SDN Cibatu Nagrak.

While the results of the shadow group show that the significance (2-tailed) value obtained is 0.000 which is smaller than the predetermined significance level of 0.05. Thus H0 is rejected and H1 is accepted. It can be concluded that there is a significant effect of training using the Shadow method on the accuracy of forehand push on extracurricular table tennis at SDN Cibatu Nagrak.

Discussion

In the implementation of this treatment research, collaboration between researchers and extracurricular activities at

Cibatu Nagrak State Elementary School was carried out with its members. Exercises were held in the library given the limited facilities and infrastructure at the school. The exercise consisted of 14 meetings, where the exercises were carried out 3 times a week based on the program prepared by the researcher.

Previous research related to the use of the multiball training method has shown that this approach is effective in improving technical skills in sports. On the other hand, research regarding the shadow training method has also highlighted its benefits in improving motor awareness and movement accuracy in various sports, including table tennis.

This study showed that participants were not fully accustomed to multiball training at the beginning of the meeting, but gradually they began to show progress in controlling the ball and the direction of their strokes. This is consistent with the findings of previous studies which show that participants often experience initial

difficulties in adjusting to this type of exercise before eventually showing significant improvement.

In this study, the multiball group showed an improvement of 15.56% in forehand push accuracy. This result is in line with previous studies which have shown that multiball training can consistently improve stroke accuracy in table tennis. However, it should be noted that its effectiveness still depends on the earnestness of the participants in undergoing the established exercise program.

In the implementation of this treatment research, researchers collaborated with extracurricular activities at Cibatungrak State Elementary School. The limited facilities at the school forced the implementation of the exercises to be carried out in the library. The training program was conducted for 14 meetings with a frequency of 3 times a week, in line with the previously prepared program.

Previous research has shown that the use of the shadow training method in sports training can provide significant improvements in the accuracy of technical movements. The results showed that this method is effective in improving the accuracy of forehand shots in table tennis. In addition, research related to the implementation of the shadow training

method in other sports has also shown similar improvements in motor aspects and movement consistency.

In this study, participants initially experienced difficulties in adjusting to shadow training, but as the meetings progressed, participants began to show progress in controlling their movement and shot direction. This progression is consistent with the findings of previous studies which show that participants often need time to adapt to this type of training before showing significant improvement.

The results showed that the group that participated in the shadow training method experienced a 12.79% improvement in forehand push accuracy. This is in line with the findings of previous studies that emphasized the benefits of shadow training in improving accuracy and movement stability in the sport of table tennis. However, its effectiveness still depends on the level of involvement and perseverance of participants in undergoing the established training program.

Based on the research data that has been presented, both groups showed comparable results, with each group experiencing a significant increase. However, when viewed from the percentage increase in the average pretest and posttest, the group undergoing multiball training experienced an increase

of 15.56%, while the group undergoing shadow training experienced an increase of 12.79%. Therefore, the conclusion of this problem formulation is that both the multiball and shadow training methods have a significant effect. Nonetheless, in terms of the average increase in pretest and posttest, the multiball training method provided better results.

Several previous studies related to the use of the multiball training method have shown that this method is effective in improving accuracy and precision in sports. On the other hand, research related to the use of shadow training methods in sports has also highlighted its benefits in improving motor awareness and movement accuracy. The results from this study provide further understanding of how both methods can contribute to skill development in the sport of table tennis, with multiball training showing superiority in terms of significantly improving outcomes.

D. Conclusion

Based on the results of research and data analysis that has been carried out by researchers, it can be concluded. (1) The results showed that training using the multiball method had a significant impact on increasing the accuracy of forehand

push in men's table tennis extracurricular activities at SDN Cibatu Nagrak. (2) The application of the shadow method also has a significant effect on increasing the accuracy of forehand push in men's table tennis extracurricular activities at SDN Cibatu Nagrak. (3) Both the multiball and shadow training methods have a significant impact, although from the percentage increase in the mean pretest and posttest, the multiball training method shows superior results.

E. Acknowledgments

Thank you to the PJKR UMMI lecturers who have provided assistance both material and spirit, so that this research is carried out well.

F. Conflict of Interest

There is no conflict of interest in this research

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