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The Effect Of Junggling-Forehand Combination Training On The Accuracy Of Table Tennis Forehand In PTM Central Boyolali Athletes

Agung Jatmiko[1], Pungki Indarto[2].

[1]Pendidikan Olahraga/ Fakultas Keguruan dan Ilmu Pendidikan, Universitas Muhammadiyah Surakarta
Jl. A. Yani, Mendungan, Pabelan, Kartasura, Sukoharjo, Central Java, 061008, Indonesia
A810180096@student.ums.ac.id
[2]Pendidikan Olahraga/ Fakultas Keguruan dan Ilmu Pendidikan, Universitas Muhammadiyah Surakarta
Jl. A. Yani, Mendungan, Pabelan, Kartasura, Sukoharjo, Central Java, 061008, Indonesia
Pi311@ums.ac.id

ABSTRACT
The Whether you can play table tennis or not depends on whether you have basic skills or not. One of the basic techniques that still has many obstacles is the forehand. Forehand skills at PTM Central, the ball often gets caught in the net and his shots are often on target. Several factors that are thought to affect the accuracy of forehand strokes are poor hand-eye coordination. Junggling combined with Forehand precision has never been scientifically measured. Using a quantitative type with One-Grub Pretest-Posttest Research Design Research which took place at PTM Central Boyolali which was carried out for 1 month, from June 17 to July 17. The population itself is 20 athletes and the sample is 15 athletes using purposive sampling. Observations, tests, and documentation used for data collection techniques. For the data analysis section itself using inferential statistical tests and descriptive statistical tests. The results of the pretest and posttest were analyzed using statistical prerequisite tests and hypothesis testing. There is an effect of combined junggling-forehand exercise on the accuracy of the forehand in PTM Central Boyolali athletes. The forehand accuracy in PTM Central Boyolali athletes increased from the average pretest 63.27 and posttest 73.07. There was a significant difference between pretest and posttest with a significance value of 0.000 <0.05.

Keywords: *Junggling, Forehand Accuracy, Table Tennis*

Correspondence author: Agung Jatmiko, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Muhammadiyah Surakarta
Email:a810180096@student.ums.ac.id

INTRODUCTION

Table tennis is a competitive sport that is very popular in the community and is often played in various events at regional, national and international levels. In other words, table tennis is not a very complicated sport to master. Table tennis is a sport that has unique and dynamic movements that involve all members of the body (Sari & Antoni, 2020). But if you dig a little deeper, table

tennis is a very complicated sport. Table tennis is a sport that prioritizes agility, intelligence, reflexes and high reactivity (Lestari et al., 2017). Table tennis is known as ping pong ball in China. Table tennis itself is played in buildings and GOR (sports hall). Table tennis is a sport. One of the most played games by fans from all walks of life and age groups (Susanti et al., 2020).

In table tennis, a player must be able to cross the ball and return it to the opponent's area after bouncing from his own playing area. Points are earned when you die in your own area. A good and correct foundation is needed in addition to support from other elements. Basic table tennis skills can be acquired through training such as juggling. Sports training is a systematic training process that is carried out repeatedly in accordance with the principle of weight gain (Setyawan et al., 2018). Exercise is a systematic sport activity over a long period of time, gradually and individually increased, with the aim of forming human beings who have physiological and psychological functions to meet the demands of the Bompa task (Nur et al., 2021). There are also many benefits of training variations themselves, namely: athletes are more motivated in carrying out training programs because there are more variations in training; (2) athletes are more motivated to get new training variations; (3) athletes get more experience in training variations so that they can help when competing (Risma & Jatra, 2020). In addition, exercise with intensive frequency should also be done with alternate types of weight training and non-weight training. This type of exercise with high frequency increases the risk of orthopedic injury (Anggriawan, 2015). Techniques in table tennis are the main elements in this game. Techniques in table tennis include grip, stance, stroke, and footwork (Almanar, 2017). Playing table tennis certainly requires physical fitness and technique for good results. These physical conditions include strength, endurance, flexibility, agility, explosive power, coordination, balance, speed, accuracy and reaction. Strength can be interpreted as a very important element in sports activities, because strength is the driving force, preventing injury (Kamadi, 2020). Endurance or endurance can be interpreted as the ability to work muscles using a certain duration of time by using a special energy system, the ability of aerobic endurance to utilize energy during exercise or activity (Fajriyudin et al., 2021). Flexibility is one of the elements of physical condition that determines in learning movement skills, preventing injury, developing strength, speed, endurance, agility, and coordination abilities (Fajriyudin et al., 2021). Agility is the ability of the body or body movements to make changes in position as quickly as possible in a short time (Irawan, 2019). The real form of muscle explosiveness is reflected in a person's abilities such as jumping strength or height, or kicking

power, throwing power, and thrust strength (Herman & Karim, 2021). To produce optimal explosive power, it is recommended that exercises be carried out with a combination of elements of strength and speed that are carried out simultaneously such as plyometric exercises (Meirawati & Nurrochmah, 2020). Coordination is a person's ability to assemble several elements of motion into one movement that is in harmony with the goal (Suryanto, 2011). Balance is the ability to maintain the neuromuscular system in an efficient position or attitude while we are moving (Yundarwati, 2019). Speed can be interpreted as the ability to move the whole body continuously with the fastest travel time. Accuracy is a person's ability to direct a motion to a target in accordance with the aim of accuracy or accuracy is a person's ability to direct a motion to a target in accordance with the goal or make a movement without making mistakes (Kenedi, 2018). Reaction is the ability of a person to answer or respond to a signal (stimulus) at a high speed (Armade M, 2019).

Whether you can play table tennis or not depends on whether you have basic skills or not. One of the basic techniques that still has many obstacles is the forehand. The forehand is considered the basis of the stroke because it is easy to learn, “the forehand is usually the most powerful shot because the body doesn't get in the way of the shot, unlike the backhand. In addition, the muscles used are usually more leverage than backhand strokes (Asri & Mukarromah, 2017). Forehand skills at PTM Central, the ball often gets caught in the net and his shots are often on target. Several factors that are thought to affect the accuracy of forehand strokes are poor hand-eye coordination. Eye-hand coordination is an integration between the eye as the main function holder and the hand as the function holder to perform a certain movement (Aprilianto & Husin, 2017). If you look quickly at the movement of the ball, the grip strength of bets and the psychology of the athletes themselves, especially those related to training and motivation to compete, they were competed in the 2017 and 2018 POPDA as well as several provincial-level champions at the 2016 OOSN and 2018 POPDA events as training variations. To be a successful table tennis player, you need skill, accuracy and speed in your forehand strokes. Of course, key techniques such as the forehand often need to be improved or honed. Therefore, PTM Central Boyolali requires a new training model: combination juggling. This is done in practice. with the hope that PTM Central athletes can improve their forehand skills, especially in terms of accuracy.

Combination junggling-forehand exercises have never been measured scientifically, Junggling exercises aim to make players skilled and accustomed to handling the ball (Afandi & Faisal, 2020). The junggling-forehand combination is a combination of junggling and forehand techniques. Based on the explanation above, the researcher is interested in taking a study entitled "The effect of Junggling-forehand combination exercise on the accuracy of the forehand playing table tennis in PTM Central Boyolali athletes".

METHOD

This type of research is a quantitative research with One-Group Pretest-Posttest Research Design Research located at PTM Central Boyolali which was carried out for 1 month, namely on June 17 to July 17. The population itself is 20 athletes and the sample is 15 athletes using purposive sampling. Data collection techniques with observation, tests and documentation. The data analysis section itself uses inferential statistical tests and descriptive statistical tests.

RESULTS AND DISCUSSION

The results of this descriptive analysis are to provide an overview of the "prestest and posttest" accuracy of PTM Central Boyoali athletes, the data can be seen below :

Table. 1. Descriptive pretest and posttest

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pretest	**15**	**55**	**75**	**949**	**63.27**	**5.574**
Posttest	**15**	**61**	**85**	**1096**	**73.07**	**6.453**
Valid N (listwise)	**15**					

According to the results above, there was an increase between pretest and posttest because treatment had been given from an average of 63,27 to 73,07.

Normality test is used as a prerequisite in hypothesis testing, more details can be seen in the picture below :

Table. 2. "Accuracy" Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		15
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.31581806
Most Extreme Differences	Absolute	.180
	Positive	.144
	Negative	-.180
Test Statistic		.180
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Looking at the data, it can be concluded that the data is normally distributed because the probability value (Asymp.Sig) of the data is > from 0.05, it can be described that the data is normally distributed.

To analyze the significance between the pretest and posttest using the paired sample t test, more details can be seen below :

Table. 3. Paired Samples Test Results "Pretest and Posttest" Accuracy

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pretest – Posttest	-9.800	3.858	.996	-11.937	-7.663	-9.838	14	.000

Looking at the data, it can be concluded that there is a significant difference between the pretest and posttest with a value of .000.

First of all, the researcher gave a test that had not been given treatment with a total of 15 athletes, the lowest pretest score was 55 and the highest score was 75. With these results, the researcher can conclude that the accuracy is still lacking. Furthermore, the researchers gave a treatment periodically and then there was an increase with the acquisition of the lowest posttest score of 61 and the highest score of 85. The treatment was carried out completely by applying factors that could affect accuracy such as basic techniques, physical components along with, as well as support for combined junggling-forehand in accordance with existing theory.

Based on the test results with the help of SPSS, it can be described with an average pretest value of 63.27 and an average posttest value of 73.07. The author increasingly believes that the combination junggling-forehand exercise can improve the results of the pretest and posttest accuracy tests supported by getting the results of the hypothesis which shows that H0 is rejected because of the Sig value. (2-tailed) .000 or less than 0.05 so it can be concluded that there is a significant change after the treatment.

This study also considers previous research conducted by Wahyu Aziz Pambudi (2013) entitled "The relationship of eye and hand coordination with the ability to play table tennis extracurricular table tennis participants at SD Negeri Purbasari, Karangjambu district, Purbalingga

district. And for Wahyu Aziz Pambudi's research, no treatment was given, while this researcher used treatment.

CONCLUSION

Based on the results of data analysis, description, testing of research results, and discussion, it can be concluded that: There is an effect of junggling-forehand combination training on forehand accuracy in PTM Central Boyolali athletes. Forehand accuracy in PTM Central Boyolali athletes increased from an average of 63.27 pretest and 73.07 posttest. There is a significant difference between the pretest and posttest with a significance value of 0.000 <0.05.

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