



The Influence of Leg Muscle Exercises on the Taekwondo Kick Speed Technique of Dollyo Chagi at the Pontianak City NTC Club

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ABSTRACT

The purpose of the study. (1) this study aims to determine the effect of leg muscle training on the speed of the kick taekwondo dollyo chagi in NTC Club Pontianak city; (2) this study aims to determine the increase in the speed of the kick taekwondo dollyo chagi in NTC Club Pontianak city after given leg muscle training.

Materials and methods. The type used in this study is the type of quantitative research. This study is a way to measure the effect of leg muscle training using a test drill on the speed of the taekwondo dollyo chagi kick at the NTC Club Pontianak city, with a population of 8 male athletes in the junior class category. Samples used that have characteristics of male sex aged 15-17 years who are still actively training at the NTC Club Pontianak city with total sampling technique. Data collection techniques in the form of measurements and using a tool in the form of a Taekwondo Kick speed test dollyo chagi. The study was conducted for two months.

Results. Based on the hypothesis of the effect of leg muscle training on the speed of taekwondo dollyo chagi kicks obtained a significant value of $0.2127 > 0.05$ then H_0 is accepted.

Conclusions. (1) There is an effect of leg muscle strength training through drill exercises for each athlete on the speed of the dollyo chagi taekwondo kick at the NTC Club, Pontianak City; (2) There is an effect of muscle strength through drill exercises on each athlete on the speed of kicking taekwondo dollyo chagi at the NTC Club, Pontianak City.

Keywords: *leg muscles; Taekwondo Kick dollyo chagi.*

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INTRODUCTION

Train the body to stay healthy physically and spiritually of course by exercising. By exercising, a lot of movement or activity of the body is produced so that it can increase the body's immunity well, improve mood, lose weight and reduce the risk of disease. Speaking of sports here are many types, such as water sports, sports that use tools, without using tools and there are also sports in the form of body contact. In some

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types of Sports, Of course, have different basic techniques. All can be occupied if from ourselves we have a strong belief in learning the sport we are interested in.

Taekwondo is one of the modern martial arts sports or by means of body contact originating from Korea. In this sport, more use of the technique of bare feet and hands. In addition to being a fighting Sport, Taekwondo is also included in the official achievement sports competed in the National Sports Week (PON XI) 1985, Olympic Games 1992, Asian Games, SEA Games, and the 2000 Sydney Olympics (Suryadi, 2002). For in the City Of Pontianak including many enthusiasts in taekwondo. One of them is the Pontianak city NTC club that houses taekwondo Sports has junior athletes who are active in pursuing this martial arts sport. The selection of athletes ' seeds can be started early, in taekwondo in each championship into three groups, namely Pre junior (age group under 13 years old) junior (age group 13-18 years old), and senior (age group over 18 years old). Junior athletes usually have the characteristics of puberty, easily falter, and easily leave the sport to other fields (Nurjaya, 2009).

Taekwondo has four basic kicks: dollyo chagi, ap chagi, dwi chagi, and yop chagi (Dawn, M. 2018). One of the basic techniques that are often used in junior category matches is the dollyo chagi technique. In performing the dollyo Chagi technique, several components are needed above, one of which is the speed component. Speed is the ability to perform similar movements successively in a short time (Fajar, Siahaan, David, 2020).

Speed strategy in kicking is very important for athletes so that the target in the goal can be done precisely and quickly. The speed of the kick in taekwondo depends on the training process given by the coach because with speed training can improve physiological abilities. The speed of movement is defined as the ability of a person to move his limbs or body parts to perform a certain motion (Ari, revelation.W, 2013).

Taekwondo athletes who netted at the NTC Pontianak city club often follow the Taekwondo Championship both at the regional and national levels. In participating in several championships held, NTC club athletes often experience defeat in getting dollyo Chagi kick points. This indicates the lack of variety of speed exercises given by the coach. As stated (Wardhani, 2022) so that the physical condition is well maintained,



it is necessary to give a form of exercise so that the strength of the arm and leg muscles can increase. From the information above, researchers are interested in researching in providing speed training variations to improve the performance of athletes in the NTC Club Pontianak city. Variations of the exercises given in the dollyo Chagi kick speed training using drill exercises in the hope that athletes get dollyo Chagi kick points quickly so that athletes are able to increase self-achievement.

MATERIALS AND METHODS

Study participants

The research here measured the effect of leg muscle training using a test drill on the speed of dollyo chagi taekwondo kicks at the NTC pontianak city club with a population of 8 junior category male athletes with an average age of 15-17 years who are still active.

Study Organization

The type used in this study is quantitative research in the form of experiments using Pre-test Post-test Group Design. (Mahmud, 2011) states the experimental method is the only research method considered the most appropriate for testing hypotheses regarding causal relationships. (Emzir, 2015) control groups are needed for comparison purposes to see if the new treatment is more effective than the usual or traditional treatment or to see if one approach is more effective than another. Therefore, for the variable of bounding the speed of the dollyo chagi taekwondo kick, the variable of free leg muscle training.

RESULTS

This study used a normality test with one-way variance analysis or one-way ANOVA with a significant level of 0.05. It is said that the results are normally distributed if the value of the research results is significantly greater than 0.05. The group who were examined were given treatment with leg muscle strength training using a drill and using a tool in the form of a dollyo chagi taekwondo kick speed test for 60 seconds. After being given the drill treatment, a significant value was obtained based on one-way ANOVA calculations. This is distributed in the table below:



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Table 1. Summary Results of Descriptive Statistical Analysis of ANOVA One Way Leg Muscle Strength Against Speed of Dollyo Chagi Taekwondo Kick.

Groups	Count	Sum	Average	Variance
1	2	119	59,5	4,5
2	2	113	56,5	4,5
3	2	117	58,5	4,5
4	2	137	68,5	4,5
5	2	116	58	8
6	2	110	55	2
7	2	133	66,5	4,5
8	2	124	62	8

Table 2. ANOVA One Way Leg Muscle Strength Against Taekwondo Kick Speed Dollyo Chagi.

Source of Variation	SS	df	MS	F	P-value	F crit
Drill	319,4375	7	45,63393	9,014109	0,002973	3,500464
Error	40,5	8	5,0625			
Total	359,9375	15				

The results of the one-way ANOVA calculation obtained Fcount of 9.01 greater than Ftable of 3.50 with a significant level of 0.05 or it can be seen from the comparison of the P-value value of 0.003 smaller than the significant value of the level of 0.05. It can be concluded that leg muscle training using a treatment drill for 60 seconds affects the speed of the dollyo chagi taekwondo kick.

DISCUSSION

Taekwondo requires speed in making movements, of course, in the kick section. The kick speed can be increased by a good training process. Automation treatment will look good if the results of the exercises are carried out repeatedly, this is in accordance with the law of exercises (Nur and Tomoliyus, 2015). Increasing the speed of dollyo chagi taekwondo kicks in taekwondo athletes at the NTC club in Pontianak City is given with the right form of training. The exercises provided are two foot forwards drills, two foot side away drills, drill speed leaders in and out. In making a kick, one of the big influencing factors is speed. Speed not only moves the entire body as fast as possible, but only on certain parts of the limbs that want to be moved quickly in a short time. Doing speed requires motion techniques that can affect that speed so that the reaction and frequency of motion are wider. (Apta and Febi, 2015) say the motion technique that requires the speed element to be done correctly, the way is to shorten the leverage distance (the load point with the fulcrum point) and the correct position of the gravity point. After analyzing the data from the research results with a scientific approach and



strengthened by theory according to the steps and systematically correctly, it can be said that the results of this research are acceptable. Data analysis was carried out in this study using a one-way ANOVA against the hypothesis of the results of the dollyo chagi taekwondo kick speed test at the NTC club in Pontianak City, so as to obtain the results of Fcount of 9.01 greater than Ftable of 3.50 with a significant level of 0.05, then leg muscle strength training greatly affects the speed of dollyo chagi taekwondo kicks.

(Tri, 2015) states that the treatment of the training method (drill) of students or athletes will automatically perform the movements that have been given by a trainer because in the training method (drill) given to students carried out repeatedly will become accustomed to doing it again. Athlete taekwondo often does dollyo chagi kicks and even does it many times during training and when competing and it takes speed in doing dollyo chagi kicks. According to (Kharis, 2022) Ladder drill can also contribute to increase agility if the training programs have been applied based on training principles and adapted to the athlete's need.

CONCLUSION

Based on the results and data analysis obtained, it can be concluded as follows: (1) The speed of taekwondo dollyo chagi club NTC Pontianak City kicks before being given leg muscle training treatment is categorized as sufficient, as evidenced by the results of taking the average score in athletes obtained at 22.28, (2) The speed of taekwondo dollyo chagi club NTC Pontianak City kicks after being given leg muscle training treatment was categorized as good, as evidenced by the results of taking an average score in athletes obtained of 23.55. (3) There is a significant influence of leg muscle training on the speed of the dollyo chagi taekwondo kick at the NTC club in Pontianak City.

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