



The Effect of Circuit Training on Dollyo Chagi Kick Speed in Taekwondo Martial Arts The Rakean Taekwondo Club Extracurricular at SMAN I Pagaden

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Abstract

This research was conducted at SMA Negeri 1 Pagaden. Based on the existing problems, the dollyo chagi kick technique is the technique most often used in matches. Therefore the author intends to maximize the ability of dollyo chagi kicks for students at the Extracurricular Rakean Taekwondo Club at SMAN I Pagaden. Because this kick is the kick that is most relied on in kyourugi (sparring) matches in Taekwondo. The purpose of this study was to increase dollyo chagi kick speed for Rakean Taekwondo Club extracurricular students at SMAN I Pagaden. This research is a pretest and posttest experimental research. In this study, the researcher wanted to increase the dollyo chagi kick speed of Rakean Taekwondo Club extracurricular students at SMAN I Pagaden. Each sample was collected before and after doing circuit training. The population in this study were 20 Taekwondo extracurricular students at SMA Negeri 1 Pagaden with a sample of 100% of the population. The instrument used in this study was to test the speed of dollyo chagi kicks 5 times and the time was calculated as done by Jati (2016) which was tested for validity and reliability by the author with the result of 5 dollyo chagi kicks of 0.750. In this study, the hypothesis was tested using the formula T tes twith a result of $0.000 < 0.05$, with these results there is a significant difference in the results of the circuit training on the dollyo chagi kick of the Rakean Taekwondon Club extracurricular students at SMAN I Pagaden.

Keywords: The effect of circuit training on dollyo chagi speed, Taekwondo

Introduction

In Korean, hanja for Tae means “to kick or smash with foot”; Kwon means “fist”; and Do means “way” or “art”. So, Taekwondo got loosely translated as “the art of the hands and feet” or “the way” or “the way of the feet and fist”. The popularity of taekwondo has caused this art to take many forms. Like many other martial arts, taekwondo is a combination of fighting techniques, self-defense, sports, exercise, entertainment, and philosophy.



Yoyok (2002: 15) explains that: Three categories in martial arts Taekwondo is a style in Taekwondo (Poomsae), a technique for breaking hard objects (Kyunpa), and Combat in taekwondo (Kyorugi). 1) Kick in martial arts Taekwondo (Poomsae) is a series of basic movement techniques for attack and self-defense, which carried out against an imaginary opponent, by following a certain diagram. 2) The technique of solving hard objects (Kyunpa) is technical training using targets/objects inanimate objects, to measure the ability and accuracy of his technique. The usual target object used include wooden boards, bricks, tiles, and others. This technique is carried out by kicks, punches, slashes, even finger pricks. 3) Fighting in taekwondo martial arts (Kyorugi) is an exercise that applies basic movement techniques or poomsae, where two people who fight each other practice attack techniques and self-defense techniques.

According to (Awaludin, 2014), Kyorugi is a fight between two taekwondo people where they will attack each other and defend in order to take down the opponent and Protect yourself from attacks by using kick and punch techniques taught in taekwondo. Kyorugi required physical endurance, speed of action-reaction, flexibility, variations of kicks, attacks-defense and also a strong mentality. so in short, kyorugi is a manifestation of physical, mental and also all the basic movements of taekwondo. Kickdollyo chagi is the basic kick technique that was introduced in beginners in this martial art and are often used by athletes because it is easier to get point and more effective when competing, this statement is known from research results Rachma Hani (2017; 49-52) with the title of research on the effectiveness of checking kicksyeupchagi, dollyo chagi, and iddan dollyo chagi in opening attacks in taekwondo matches kyourugi senior class at the UPI Challenge National Taekwondo Championship in 2016.

Dollyo chagi is one of the kicks most often used in Taekwondo competition in kyourugi, using dollyo chagi kicks of the athletes can generate points more easily. Based on experience during practice when doing kicks especially dollyo chagi students tend to be slow in pace, for the most part large experienced a decrease in quality when kicking (slower than the previous kick). To deal with this problem, the trainer uses the circuit training method.

Circuit training is a training system that can develop simultaneously overall fitness of the body, namely the elements of endurance, flexibility, strength, power, power muscular endurance, agility, speed and other physical conditions. Because it's a form of exercise in circuit training is usually a combination of all or some of these physical elements. (Harsono 2018).

Methods

In this research we need a method, the use of methods in research adapted to the problem and research objectives. This means that the research method has a very important position in the implementation of data analysis collection. Creawell (2012) states that the notion of experimental research methods is used when the researcher wants to know the causal effect between the independent and dependent variables. This means that researchers must be able to control all variables that will influence outcome except the independent variable (treatments) has been established. The method that the authors use in this study is the experimental method.



The experimental method with an unseparated sample means that the research has only one group (sample), which is measured twice, the first measurement is carried out before the subject is given treatment (pretest). The design used in this research is the one group pretest post test design or the absence of a control group (Sukardi, 2009: 18).

Participant

The place of this research is in the Sports Field of SMAN I Pagaden. This research was conducted in 16 meetings, and was carried out 3 times in one week from 03 August to 29 October 2021. Treatment held three times per week, namely Wednesday, Friday and Saturday with 60 minutes of face-to-face time. Within 60 minutes divided into several stages of practice for 14 meetings (five weeks) plus 2 meetings used for pretest and posttest. This is in accordance with the opinion of Maglisco (2003) cited by Purnomo (2009, p. 53) that practice will show significant changes after 5-7 weeks of practice.

Population & Sample

According to (Fraenkel, et al. 2011) population is a group that attracts researchers, where. The group is used by the researcher as an object to generalize the research results. Based on the explanation above, it can be concluded and observed that the population is the entire collection of objects that will be studied in a research activity that is given treatment and seeing the impact of the results of the treatment can be seen clearly in giving training. In this study, the total population of extracurricular Rakean Taekwondo Club students at SMAN I Pagaden was 20 people, each of which was 14 girls and 6 boys.

Instruments

This study used a research instrument to measure dollyo chagi's kick speed before and after giving lying leg raises, squats, lunges, plank jump in, high jump and cone hops exercises. (Sugiyono, 2016) research instrument is a tool used to measure observed natural and social phenomena. This study was to collect data using the research instrument dollyo chagi kick speed test 5 times and the time was calculated. In previous research that has been done, research instruments have been tested. Trials were carried out to obtain a truly valid and reliable instrument. The test was carried out on Indonesian taekwondo students at GOR Sleman involving all 5 students who were taken randomly (Jati, 2016).

Procedure

The research procedure was carried out in the following order: (1) Determine the population, namely students who take part in extracurricular Taekwondo, (2) determine the sample, namely all students who take part in extracurricular taekwondo (total sampling). (3) Purpose: Measure dollyo chagi kick speed using a stopwatch measuring device. (4) Equipment/facilities: The subject stands



behind the boundary line as far as each student's reach from the target. On the signal "ready", students get ready to start, on the signal "yes" students kick dolyo chagi 5 times and the time is counted with a stopwatch, if there is a subject whose kick technique is wrong or does not sound then the kick does not get a point (5) Score : The time is recorded when the subject has done dollyo chagi kicks 5 times.

Data Analysis

Before doing the analysis, it is necessary to do a prerequisite test. Prerequisite tests include normality tests and data homogeneity tests. Testing the measurement results data related to the research results aims to help the analysis to be better.

Results

Based on the results of the dolyo chagi kick speed pretest, Taekwondo extracurricular students at SMAN I Pagaden showed an average score of 5.17; the median is 5.17; mode of 5.15; standard deviation of .96; Range of 3.11; minimum score of 3.45; maximum score of 6.56; and the total value is 103.55.

Table 1. Descriptive Statistical Pretest Data

N	20
Means	5.17
Median	5.17
Mode	5.15
std. Deviation	.96
Range	3.11
Minimum	3.45
Maximum	6.56
sum	103.55



Table 2. Posttest Data Descriptive Statistics

N	20
Means	4,569
Median	4.54
Mode	4.54
std. Deviation	. 91
Range	2.84
Minimum	3.28
Maximum	6.12
sum	91.38

Based on the results of the dolyo chagi kick speed posttest for Taekwondo extracurricular students SMAN I Pagaden showed an average score of 51.73; the median is 54.22; mode of 27.3; standard deviation of 8.90; Range of 31.85; minimum score of 27.39; maximum score of 59.24; and the total value is 879.53.

Table 3. Normality test

Data	Sig.	Information
<i>Pretest</i>	0.666	Normal
<i>Posttest</i>	0.729	Normal

From the results of the normality test it can be seen that the data from all variables has a value (Sig.) > 0.05, this means that the data is normally distributed.

Table 3. Homogeneity Test

Data	Sig.	Information
<i>Pretest- Posttest</i>	0.243	Homogeneous

From these results can be seen from the table Test of Homogeneity of Variancesvalue (Sig.) > 0.05 so that the data is homogeneous.



Table 4. Paired Sample T-Test

Data	Sig.	Information
<i>Pretest-Posttest</i>	0.000	Influential

From the results paired sample t-test can be seen from the sig value (0.000) < 0.05, this result indicates that there is a significant effect of circuit training.

Discussion

Taekwondo kyorougi is a martial sport that uses a lot of legs besides organs mainly. In carrying out its activities, taekwondo performs many kicks, punches, counter and evasion. Kicks are movements that are focused on the position of the feet, knees, waist, your toes and upper body before executing a kick, raise your knees as high as possible maybe to protect ourselves. Dollyo is one of the kicks taught in taekwondo martial arts, this kick is defined as a circular kick towards the front, with direction stomach target or it could also be head direction, the technique used in dollyo kicks is by utilizing 50 rotations of the waist so that it can generate power / kick power the greater one Doing the dollyo kick requires speed. Speed in branches taekwondo sport an athlete is needed both in kick attacks and defensive kick, as explained Yoyok (2002:32) that: "To perform techniques kicks require speed, strength and especially excellent balance. Besides that it is also necessary to master the distance and the timing and direction of the kick to be effective. Speed in kicking is very influential when in a match for get points or points, because the kicks of athletes who carry out attacks or defend if have a good kick speed then points can be obtained easily. From the results *paired sample t-test* can be seen from the sig value (0.000) < 0.05, this result indicates that there is significant effect of circuit training on Dollyo Chagi kicks.

Conclusion

Based on the research results that have been obtained, it can be concluded that there is the influence of circuit training on dollyo chagi kick speed in extracurriculars. Taekwondo SMAN 1 Pagaden, this can be seen from the increase in the standard deviation value of the pre-test results of .96 and a post-test of 8.90. The normality test results obtained Asymp value. Sig pre-test and post-test greater than 0.05; which means the hypothesis is accepted. In the homogeneity test results were obtained. significant count of 0.243 greater than 0.05; which means the hypothesis is accepted. T-test results the value of t count sig (0.000) is less than 0.05; then the hypothesis is accepted.

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