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The Influence Of Training Methods *Single Leg Hop* And *Double Leg Hop* Against The Explosive Power Of The Leg Muscles Of PJKR STKIP Yapis Dompu Students

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Abstract

This study uses a "randomized group pretest and posttest design." The population in this study consists of 70 male students from the PJKR Program at STKIP YAPIS DOMPU, class of 2023. The sampling technique used was random sampling with a sample size of 30 people, divided into 3 groups: the Single Leg Hop group, the Double Leg Hop group, and finally, the control group. The type of this research is a quasi-experiment, with a quantitative approach. Data were collected using measurement techniques with the Vertical Jump tool to measure the Explosive Power of the Leg Muscles. Data were analyzed using the MANOVA technique, with an α of 0.05. The research results show that the effect of Single Leg Hop on the improvement of leg muscle explosiveness has a p-value of 0.085, while the effect of Double Leg Hop on the improvement of leg muscle explosiveness has a p-value of 0.030. From both exercises, it turns out that Single Leg Hop is better than Double Leg Hop in improving the explosive power of the leg muscles.

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1. INTRODUCTION

Construction physical exercise in Indonesia generally is chase Healthy or freshness many and spiritual, besides activities physical exercise Also Can made hobby for example playing football in groups to earn a sweat, but in certain areas sport is a person's individual need to achieve achievements, there are also those who use sport as a way to earn a living. National and international sporting events are very prestigious, for example the World Cup soccer game which is held every four years. Even though the football world cup is held every four years, this activity is very prestigious. Sport is part of human daily activities as an effort to achieve physical and spiritual health. Every human being who frequently does sports activities will have better spiritual and physical health than people who rarely or never do sports activities (Halipah & Febriyanto, 2022: 12). Basically, the game of football requires coordination and speed. lots of strength and energy to be able to play fully and well. The higher the intensity of exercise, the higher the level of work done, which corresponds to higher energy expenditure (Mirfa'ani & Nurrochmah, 2020: 82). Apart from that, accuracy is also needed in reading the direction of the opponent's movement when carrying the ball so that the game runs smoothly and it is easy to pass the ball well. The sport of soccer also requires body flexibility from the arms, shoulders, thighs, to the hips, apart from movement Hands and feet must also be agile because they play a very important role in this game.

It is very important for coaches and athletes themselves to understand the form of training that is programmed so that the results obtained can improve the biometer components of the muscles to be trained and the results obtained can be improved. Because if athletes choose the wrong form of training, the results will not be as expected. Therefore, an athlete must be very clever in choosing the form of training that suits the biometer component whose performance ability he wants to improve. Apart from that, in an effort to improve performance, it is best to use an appropriate training program that is correct in principle and theory. When creating an exercise program, you should pay attention to training principles such as the principles of specificity, overload, individualization, progressiveness, variety, etc. (Bompa, 2015).

Exercise to improve the quality of physical condition, there are various forms of exercise to improve the quality of physical condition, one of which is single leg hop and double leg hop exercises. According to Bompa and Buzzichelli (2015) training is a systematically programmed process in preparing athletes for the highest level of performance which is carried out repeatedly with increasing training loads. Good and systematic physical exercise will provide benefits to the human body's organ systems, namely: providing benefits to aspects of the central nervous system, increasing nerve impulse conduction, improving muscle fiber function, increasing protein synthesis for muscle development, increasing muscle mass (Haritsa & Trisnowiyanto, 2016: 52). We often see this form of application when athletes who are going to take part in a competition are required to take part in continuous and programmed training in order to achieve the expected targets in taking part in the competition. It can be concluded that training is a systematic process of training in the form of increasing load and physique over a certain period of time to improve a person's performance as best as possible and increase their training load. Physical training aims to achieve biological achievements so that they can be displayed optimally in carrying out specific tasks given.

Single leg hop training is a one-legged jumping exercise aimed at changing the running movement into a low hop along a track, while maintaining horizontal speed as far as possible (Sugarwanto & Okilanda, 2020: 86). This exercise develops speed and power for the leg and hip muscles, especially the gluteal, hamstring, quadriceps and gastrocnemius muscles at high speed and full of power. This exercise is useful for developing speed and explosive power. Meanwhile, the Double leg hop exercise is training that is carried out by standing in a half-squatting position, feet shoulder-width apart, then jumping forward quickly until the feet are under the buttocks and then landing on both feet. This double leg speed hop training involves the gluteal muscles, hamstrings, quadriceps and gastrocnemius (Utamayasa, 2020: 122).

2. RESEARCH METHOD

This research is quantitative research in terms of the methods used. This includes quasi-experimental research *(like an experiment)*, The treatment group was measured by providing training methods in the form of *Single leg hop* And *Double leg hop against* Increased leg muscle explosive power. The population in this study were 100 Physical Education, Health and Recreation students, then remove samples using the technique *random sampling* a total of 30 people, instrument in this research, measuring instruments were used *vertical jump* to determine the magnitude of the tester's leg muscle explosive power and then to answer the research hypothesis with data *paired t test*.

3. RESEARCH RESULTS AND DISCUSSION

3.1.Research result

Strength measurement test data results with sample n=30 that was done before and after the training treatment *Single leg hop* And *Double leg*. Description of average data results and standard deviation (SD) can be seen in table as follows:

Table 1 Description of Speed test results (Seconds)

Variable	Mean ± SD (Seconds)		
	Single leg hop	*Double leg*	Control
Pretest	25,47± 5,31	18,65 ± 2,62	10,13 ± 4,07
Post test	34,92± 7,33	26,81± 4,52	10,93 ± 3,23

Description of agility measurement data results on table shows the pretest results in the group *Single leg hop* amounting to 25.47 ± 5,31 Sec, group *Double leg* of 18.65 ± 2.62 seconds and the Control group was 10.13 ± 4.07 seconds. Then after the treatment (exercise) is carried out *post*test and obtained increased results in the group *Single leg hop* of 34.92 ± 7.33 seconds, group *Double leg* of 26.81 ± 4.52 seconds and the Control group was 10.93 ± 3.23 seconds. For more details, the description *variable* Explosive power is presented in the following figure.

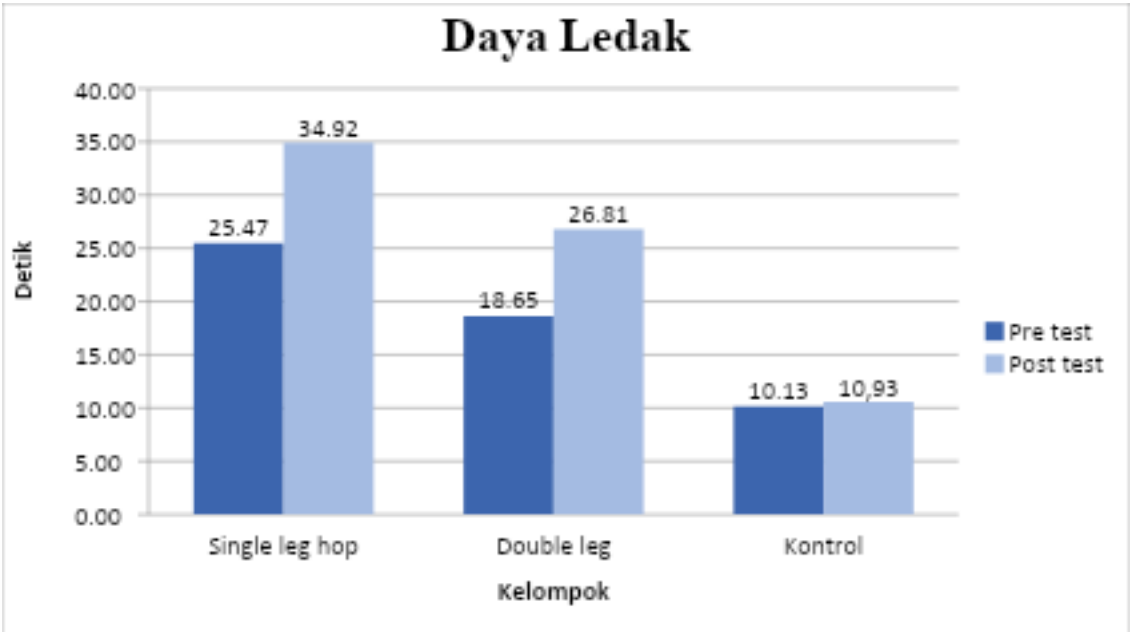

Figure 1: Average explosive power before and after treatment in the groups *Single leg hop*, *Double leg hop* and Control.

3.2.Discussion

After carrying out the MANOVA test, a post hoc test was then carried out using the test *LSD* on *variable* speed. Test results *post hoc test* Can seen on table following.

Table 3 Results *uji after this variable test* Explosive Power of Leg Muscles.

Dependent *Variable*	**(I) Group**	**(J) Group**	**Say.**
Explosive Power of Leg Muscles	*Single leg hop*	**Q1**	0,000
		K2	0,000
	Double leg hop	**K3**	0,003

P<0.05 there is a significant difference

LSD test results on *variable* Strength shows that there are significant differences between groups *Single leg hop* with the group *Double leg hop* (p=0.000), group *Single leg hop* with the Control group (p=0.000), group *Double leg hop* with the Control group (p=0.000).

Next, the LSD test results are on *variable* explosive power shows that there are significant differences between groups *Single leg hop* with the group *Double leg hop* (p=0.000), group *Single leg hop* with the Control group (p=0.003), group *Double leg hop* with the Control group (p=0.000). Based on the results analysis research data conducted shows that there is a significant influence *Single leg hop* And *Double leg hop for* increases explosive power. more effective training in increase explosive power is *Single leg hop* compared to *Double leg hop*.

4. CONCLUSION

From the theoretical study and results of analysis of the data that has been obtained as well as the presentation of opinions regarding the research results, it can lead us to a conclusion that the method *Single leg hop* And *Double leg hop* is a variation of exercise to improve physical abilities, especially speed. Overall, you can Withdraw the conclusion that there is a difference in the influence of the exercise.

Based on the discussion above, it shows that there is a significant influence between the two forms *Single leg hop* And *Double leg hop* towards increasing the explosive power of leg muscles, but there is a difference in the exercise that is more effective and efficient in increasing explosive power by using *Single leg hop*.

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