

## **The Influence of Hop Scotch and Single Leg Hop through Icky Shuffle And Double Leg Hops for Both Agility And Speed**

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**Abstract:** This research proposed to analyze; (1) the influence of Hop Scotch and Single Leg Hops on improving agility and speed; (2) the effect of Icky Shuffle and Double Leg Hops exercise on increasing agility and speed; (3) the difference effect between Hop Scotch and Single Leg Hops through Icky Shuffle and Double Leg Hops regard to increasing agility and speed. The subject for this research are the extracurricular students of MTs NU Durung Bedug Candi Sidoarjo with total sample of 33 students. This research is quantitative by quasi-experimental method and Matching-Only Design, and data analysis using one way ANOVA. The data retrieval process is done with T-test for agility and 30 meter Sprint Test for speed at pretest and posttest. Furthermore, the research data is analyzed by using SPSS 21 series. The result showed: (1) Sig value. of 0.000 is smaller than 0.05 ( $p < 0.05$ ). In other words there is a significant effect of the practice of Hop Scotch and Single Leg Hops on increasing agility and speed; (2) Sig value. of 0.000 is smaller than 0.05 ( $p < 0.05$ ). In other words there is a significant effect of Icky Shuffle and Double Leg Hops practice on increasing agility and speed; (3) Sig value. 0.000 is smaller than 0.05 ( $p < 0.05$ ). In other words there is a difference in the effect of exercise between Hop Scotch and Single Leg Hops with Icky Shuffle and Double Leg Hops on increasing agility and speed.

**Keywords :** Hop Scotch, Single Leg Hops, Icky Shuffle, Double Leg Hops, Agility and Speed.

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### **I. Introduction**

Sport plays an important role in everyday life. through sport/exercise, the organs in our body will actively work and move so that it can make our bodies become physically and mentally healthy. Therefore, sport is a necessity for every individual, because by exercising properly and correctly can improve physical fitness. Physical fitness is required of every individual to perform daily activities because. Dealing with this, Nurhasan (2011:12) argued "physical fitness is the ability of a person's body to perform activities or daily work tasks, without significant fatigue". In addition, sport also can improve skill. Hence it could be the way to increase the achievement in sports field.

Sports goals according to Law No. 3 Year 2005 on National Sport System is to maintain and improve both health and fitness, achievement, human quality, instilling moral values and noble character, sportsmanship, discipline, strengthening and fostering the unity and unity of the nation, strengthening national resilience, and raising the dignity, dignity and honor of the nation.

Regard to the sport goals as stated by Law No. 3 year 2005, The development of the sports world as well as the demands of athlete quality improvement are part of the sporting world that is very important for sportsmen. The quality of sport is enhanced to catch up with science as well as sporting achievements. Sport is the most effective vehicle for strengthening the nation unity. Sport as physical activity is a game that contains struggles against elements of nature, other people, or self and has the complexity of organization (Coles & Jones in the maksum, 2012: 170).

Roesdiyanto and Budiwanto (2008: 17) revealed that the exercise (sport) is a process of consuming the quality of athletes consciously to achieve maximum performance with physical and mental burden regularly, directed, gradual, increasing and repeatedly.

Exercise is a process that is organized and planned in various stages and implemented in a sustainable manner as an effort to improve physical quality. In other word exercise is a process to improve both skills and abilities possessed by an athlete which its goals is to achieve a change to a better direction so that athletes can perform well in any sports activities including at the time of the game.

Based on some statements above, it can be concluded that the exercise is an organized and planned process in order to improve the athlete's physical quality in which contains material theory and practice, methods and rules of implementation in accordance with the goals and objectives to be achieved both for achievement and for fitness.

According to Sporis, et al (2010; 679) agility is one's ability to maintain and control body position when changing direction quickly. This is also similar to what is expressed by Sucharitha et al (2014: 755) agility is the ability to maintain or control body position when changing direction during a series of movements. So that agility is very important for sports that require high adaptability to changes in the situation in the game. Furthermore, Dhanaraj (2014: 17) stated ladder training will improve our speed, coordination, timing and balance and also it will set our calves on fire. While, according to Dawes and Roozen (2012: 65) Trainers generally use ladder drills to help athletes develop agility, body control, and awareness in moving, and improve basic skills in moving. Most ladder drills are made of plastic which is attached to the nylon rope to form a box. Typically, boxes are specified around 12 to 18 inches (30-46 cm).

Physical condition is very crucial to be considered in every sport since physical is one of the most important element for the maximal achievement. The main objective of preparing the physical exercise is to increase the functional potential of athletes and develop biomotor skills to the highest standards. The development of physical exercises in each exercise program is done through general physical stages, special physical preparation and building a high level of biomotor ability (Bompa, 2009: 61).

In other word, Kusnanik et al (2011: 9) states that plyometric is an immediate contraction of eccentric followed by concentric concentration. Acceleration will make the muscle experience the phase of concentric or shortening. Then the desillation will make the muscle to contract accretely to zero speed. The muscles will contract isometrically and accelerate again after changing the direction, and so on. If seen then the cycle phase such as stretch shortening cycle is very important. The state of the muscle when a person performs a sudden movement that is divided into concentric, isometric and eccentric then continues to rotate as a cycle.

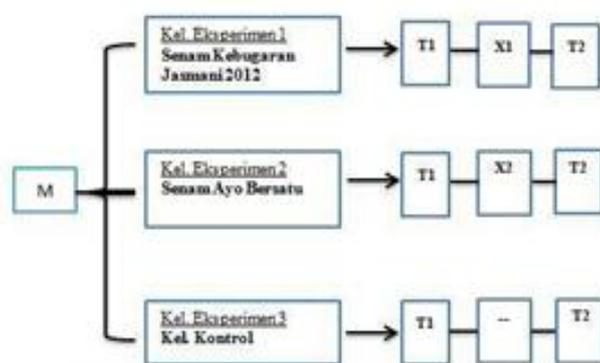
Plyometric exercise has quite a lot and diverse. However, this study used only two forms of exercise that are Double Leg Hops and Single Leg Hops. The two exercises forms were choosed due to it was quite popular, easy to do, not boring and can increase the speed.

Whereas, Ladder Drill Exercise has many forms. However, this study used only two forms of exercise that are Hop Scotch and Icky Shuffle. Both of these exercises are quite popular and not difficult to do, so many trainers or teachers use this form of exercise. In this study I also used the practice of Scotch and Icky Shuffle Hop to improve the speed and speed in MTs NU Durung Bedug Candi.

Based on the overall background description, researchers want to give alternative exercises to improve the physical condition specifically in improve agility and speed on students of MTs NU Durung Bedug Temple. So that researchers interested in conducting research entitled " The Influence Of Hop Scotch And Single Leg Hops Through Icky Shuffle And Double Leg Hops For Both Agility And Speed.

## II. Research Design

This research used a quantitative research approach. In this type of quantitative approach is characterized by testing the theory / hypothesis that outline using the method. This research done trough quasi experimental methodsince the researcher can not control variable. to answer questions about the research questions formulated (Maksum, 2012: 100) the researcher committed through Matching-Only Design



(Sumber: Maksum, 2012, p. 100)  
Desain Penelitian  
Gambar 3.1

**Figure 1**

### Statements:

M : Matching

T1: Pre-test

T2: Posttest

X1: Treatment SKJ 2012

X2: Treatmentgymnastics “ayo bersatu”

**2.1 Population**

Population is a general area consisting of: objects or subjects with certain qualities and characteristics set by the researcher to be studied and then drawn conclusions (Sugiyono, 2015: 135). Then according to Maksum (2012: 53) the population is the entire individual or object in question to be examined, which will be subject to generalization. Characteristics of population in this research are:

1. Registered as MTs NU Durung studentsBedug Temple.
2. Male sex.
3. Has an age of 13-15 years.
4. Following extracurricular activities in school.

**2.2 Data Collection Technique**

Data collecting in this research revealed through test and measurement. (Maksum, 2012: 107). The test used for agility uses Agility T-test, while test used for speed using the 30 meter Sprint Test.

**1. Test Requirements Analysis**

**a. Normality test**

kolmogorov Smirnov method used for the normality data test (Maksum, 2012: 161). To determine whether the distribution data is normal or not is through the comparisonof the calculation data significance and the significance level of 5% or 0.05. If the level of significance in the statistical test is greater than 0.05 then the data is declared to be normally distributed.

**b. Homegency Test**

The homogeneity test of variance is done to disclose whether or not homogenous data is collected. In this study used levene's test. What if the levene's statistical value is greater than 0.05 data has a homogeneous variant. (Maksum, 2012:162).

**2. Hypothesis Statistics Test**

Firstly, To know the difference of treatment effect on the dependent variable before and after treatment each group of research used paired t-test (t test), with hypothesis rejection rate at  $\alpha = 0,05$ . The formula used for the t-test of two paired samples (Paired sample t-test).

Second, To know the magnitude of the effect of treatment on the increase of dependent variable before and after the treatment between groups was used Multivariate Analysis of Variance(MANOVA) statistical analysis, with the rejection of hypothesis at  $\alpha = 0,05$ .

Third, To know which independent variable has more influence to increase dependent variable is used One Way Anova statistic analysis with LSD (Least Significant Different) in SPSS program series 21, with level of rejection of hypothesis at  $\alpha = 0,05$  . (Sethu, 2014: 285).

**III. Finding**

**1. Normality test**

One-Sample Kolmogorov-Smirnov Test													
	KC	KCK1	KL	KLK1	KC	KCK2	KL	KLK2	KC	KCK3	KL	KLK3	
	K1	POST	K1	POST	K2	POST	K2	POST	K3	POST	K3	POST	
	PRE		PRE		PRE		PRE		PRE		PRE		
N	11	11	11	11	11	11	11	11	11	11	11	11	
Normal	Mean	5.28	6.186	14.3	13.97	5.34	5.489	14.2	12.7155	5.67	5.701	13.9	13.89
	Std.	.91	.4	.573	.00	.82	.1	.982		.73	.8	.791	.82
Parameters <sup>a,b</sup>	Std.	.544	.5619	1.30	1.115	.564	.5561	1.34	1.49065	.653	.6488	1.44	1.399
	Deviation	.03	.1	.950	.18	.27	.6	.325		.47	.7	.054	.42
Most Extreme Differences	Absolute	.133	.117	.195	.195	.156	.205	.175	.160	.207	.138	.210	.167
	Positive	.129	.103	.114	.138	.156	.205	.175	.160	.207	.138	.210	.167
	Negative	-.133	-.117	-.195	-.195	-.156	-.205	-.175	-.160	-.207	-.138	-.210	-.167
Kolmogorov-Smirnov Z	.442	.390	.645	.647	.516	.680	.582	.531	.688	.458	.698	.554	
Asymp. Sig. (2-tailed)	.990	.998	.799	.797	.953	.744	.887	.941	.732	.985	.715	.918	

a. Test distribution is Normal.

**Table1**

Based on the table 1 shows that the data acquisition of the two dependent variables, namely agility and speed reveals the meaning that the data is normally distributed. This is because the significance (p) of each group shows (p) or sig > 0.05 which results in H0 being accepted. So it can be concluded that the data taken from the population that is normally distributed.

2. Test homogeneity

Test of Homogeneity of Variances				
	Levene	df1	df2	Sig.
	Statistic			
KECEPATAN	.291	2	30	.750
KELINCAHAN	.860	2	30	.433

Table 2

Based on table 2 above the results of homogeneity test calculations show homogeneous data. Because according to the test criteria that the value of sig > 0,05 then H0 accepted. So it can be concluded all the pretest and posttest data of both groups namely speed and agility have the same variant (homogeneous).

3. Different Test Results of Intergroup Dependent Variables

Dependent Variable	(I) KELOMPOK	(J) KELOMPOK	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
						KECPOST	KELOMPOK 1
	KELOMPOK 1	KELOMPOK KONTROL	.48455	.25446	.067	-.0351	1.0042
	KELOMPOK 2	KELOMPOK 1	-.74545*	.25446	.006	-1.2651	-.2258
	KELOMPOK 2	KELOMPOK KONTROL	-.26091	.25446	.313	-.7806	.2588
	KELOMPOK KONTROL	KELOMPOK 1	-.48455	.25446	.067	-1.0042	.0351
	KELOMPOK KONTROL	KELOMPOK 2	.26091	.25446	.313	-.2588	.7806
KELPOST	KELOMPOK 1	KELOMPOK 2	1.25455*	.57335	.037	.0836	2.4255
	KELOMPOK 1	KELOMPOK KONTROL	.07182	.57335	.901	-1.0991	1.2428
	KELOMPOK 2	KELOMPOK 1	-1.25455*	.57335	.037	-2.4255	-.0836
	KELOMPOK 2	KELOMPOK KONTROL	-1.18273*	.57335	.048	-2.3537	-.0118
	KELOMPOK KONTROL	KELOMPOK 1	-.07182	.57335	.901	-1.2428	1.0991
	KELOMPOK KONTROL	KELOMPOK 2	1.18273*	.57335	.048	.0118	2.3537

\*. The mean difference is significant at the 0.05 level.

Table 3

It can be concluded that there is a significant effect of the practice of Hop Scotch and Single Leg Hops with Icky Shuffle and Double Leg Hops against increased agility and speed. Scotch and Single Leg Hops exercise is more effective than Icky Shuffle and Double Leg Hops and control groups for increased agility and speed.

IV. Discussion

A. I Hop Scotch And Single Leg Hops Exercise For Exeperiment Group

From the mean calculation it was found that the average agility and speed after receiving the giving of the Scotch and Single Leg Hops exercise increased. After the significance test, it can be said that giving Scotch and Single Leg Hops exercise really has a positive effect on the increase of agility and speed. Hop Scotch foot pattern with Single Leg Hops will provide a relatively higher output and hip style compared to Icky Shuffle and Double Leg Hops. Hop Scotch and Single Leg Hops practice movements will cause heavier loads than Icky Shuffle and Double Leg Hops exercises even though they are done using their own body so that the practice of Scotch Hop and Single Leg Hops is more difficult or difficult because it is done with two legs and one foot.

These results provide concrete evidence that the practice of Hop Scotch and Single Leg Hops is one exercise with a focus on increasing agility and speed can turn out to have a greater effect on MTs extracurricular son. NU Durung Bedug Sidoarjo Temple. The results of the practice of Hop Scotch and Single Leg Hops have a positive impact on agility and speed where both components have an influence on extracurricular students in MTs. NU Durung Bedug Sidoarjo Temple.

### **B. Icky Shuffle And Double Leg Hops Exercise For Experiment Group**

From the mean calculation it was found that the average agility and speed after receiving Icky Shuffle and Double Leg Hops training were increased. After the significance test turned out the result is significant, it can be said that giving training Icky Shuffle and Double Leg Hops really have a positive effect on the increase of agility and speed. These results provide concrete evidence that the practice of Icky Shuffle and Double Leg Hops is one exercise with a focus on increasing agility and speed can turn out to have a greater impact on MTs extracurricular child students. NU Durung Bedug Sidoarjo Temple.

The results of Icky Shuffle and Double Leg Hops exercise have a positive impact on agility and speed, where both components have an influence on the students of extracurricular children in MTs. NU Durung Bedug Sidoarjo Temple.

## **V. Conclusion**

The overall finding and discussion, it can be put forward the following research conclusions:

1. There is significant effect of the Scotch and Single Leg Hops exercise toward agility because of the T-test results indicate that T-arithmetic is 2,234 with sig (2-tailed) 0.049.
2. There is a significant effect of the practice of Scotch Hop and Single Leg Hops toward speed because of the T-test results indicate that T-arithmetic is 6.816 with a sig (2-tailed) 0.000.
3. There is a significant effect of Icky Shuffle and Double Leg Hops exercise toward agility because of the T-test results indicate that T-arithmetic is 10.849 with a sig (2-tailed) 0.000.
4. There is a significant effect of Icky Shuffle and Double Leg Hops exercise toward speed because of T-test results indicate that T-arithmetic is 2.927 with sig (2-tailed) 0.015.
5. There is significant difference effect between the hop Scotch and Single Leg Hops exercise and Icky Shuffle and Double Leg Hops toward agility and speed improvement. The effect of the Scotch Hop practice and Single Leg Hops is more effective in improving agility as well as speed when compared to Icky Shuffle practice and Double Leg Hops.

## **VI. Suggestion**

1. Regard To agility and speed improvement for the students especially those who follow extracurricular is not only done with conventional exercise, but can be done by continuous training method with the form of Training Programs of Scotch and Single Leg Hops as well as Icky Shuffle and Double Leg Hops.
2. Models of the Hop Scotch and Single Leg Hops training programs as well as Icky Shuffle and Double Leg Hops can be recommended and applied for training programs in order to improve the agility and speed of the students following extracurricular.

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