



The Contribution of Single Leg Speed Hop and Hanumanasanam Exercises on Mawashi Geri's Kick Results in Male Athletes Dojo KKI Yapim Medan in 2021

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ABSTRACT

This study aims to determine the contribution of single-leg speed hop and hanumanasana exercises to the mawashi Geri kick results for the male athlete of the KKI yapim Medan 2021 dojo. The method used in this research is an experimental method of experimentation. The population in this study amounted to 30 people. The sampling technique used is purposive sampling. The number of samples of athletes used was 14 people. This research was carried out for 8 weeks with a frequency of exercise 5 times every week. The results obtained from hypothesis testing indicate that: (1). The single-leg speed hop exercise contributed 58.3% to Mawashi Geri's Kick Results for the male athlete of the KKI dojo Yapim Medan 2021 (2). Hanumasana training contributed 40.1% to Mawashi Geri's Kick Results (3). There is a jointly significant contribution between Single leg speed hop and hanumanasana exercises on Mawashi Geri's kick results of 59.6%.

Keywords: *Single Leg Hop; Hanumanasana; Mawashi Geri.*

INTRODUCTION

Physical activity is defined as any physical movement produced by skeletal muscles that require energy expenditure. This term covers the full range of all movements of the human body ranging from competitive sports and physical exercise to hobbies or activities carried out in everyday life. Various benefits are obtained from physical activity which among others can reduce the risk of coronary heart disease, stroke, diabetes, hypertension, colon cancer, breast cancer, and depression. In addition, physical activity is the key to energy expenditure which is very important to balance energy and control one's weight.

Physical exercise is an activity that is carried out in a structured and planned manner, for example, walking, jogging, push-ups, stretching, aerobics, cycling, and so on. Judging from the activities, physical exercise is often categorized as sports. Sport is

defined as a structured and planned physical activity by following the applicable rules with the aim not only to make the body fitter but also to gain achievement. Which includes sports such as football, badminton, basketball, swimming, and so on.

Here the author is very interested in conducting a study on the Dojo karate athlete KKI Yapim Medan, who was attracted by Senpai Jodi Lumbantobing (and III) by seeing that the flexibility of Mawashi Geri's kick-off the KKI Yapim Medan karate dojo athlete is still not fast and accurate towards the target, so it is very easy favored by the opponent. This is due to the absence of leg muscle power and also the flexibility of the KKI Yapim Medan dojo athlete when taking Mawashi Geri kicks. Here Karateka has been going on for 9 years and some have been married for 3 years. To get Mawashi Geri quickly and accurately to the target, the athletes are not only emphasized on mastery of technique and tactics but good physical condition is also an important requirement.

Mawashi Geri's quick and accurate kick on target will earn points/points. Following the match (WFK Rules Of Competition), FORKI 2001 administrators stated that Mawashi Geri's kick scored 3 points or IPPON. Finally, the author worked to conduct research at the Dojo KKI Yapim Medan, to find out what factors did not support the implementation of the Mawashi Geri kick. The author sees Mawashi Geri's kick ability as correct. However, flexibility and kicks need to be improved, because the committee is very ready to kick with maximum flexibility so that it is difficult to parry the attacks made and also not to injure the opponent.

METHOD

This research has been carried out by the Dojo KKI Yapim Medan which is located on Jalan Air Bersih, Medan, North Sumatra. for 8 (eight) weeks with 18 (eighteen) meetings, with a frequency of 5 times a week, namely, Monday, Wednesday, Thursday, Friday, and Sunday in the afternoon starting at 16.30-18.30 WIB. The training time is adjusted to the training schedule in Medan. The population in this study were male athletes at the Dojo KKI Yapim Medan who sold 30 people. Sampling in this study was conducted by purposive sampling involving 14 people.

In this study, the instrument used in the initial data collection was using the Sit and Reach Test flexibility instrument and leg muscle power using Vertical Jump. This study uses quantitative research methods. The treatment is given by collecting data using tests and measurements. The data analysis technique procedure in this study is the data

obtained as individual scores, both from the Sit and Reach Test, the Vertical Jump test and the results of the Mawashi Geri kick. Furthermore, the data were processed using statistical procedures using regression calculations, normality tests, and homogeneity tests.

RESULTS AND DISCUSSION

Normality test

Table 1.
Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Leg muscle power	.140	14	.200*	.953	14	.600
Flexibility	.160	14	.200*	.943	14	.458
Kick Speed Mawashi Geri	.188	14	.195	.922	14	.233

The table of normality test data for the vertical jump and Flexibility variables above shows the value of Sig. 0.200. This value is greater than the alpha value ($0.200 > 0.05$). So it can be concluded that the distribution of data on the vertical jump and flexibility variables is normally distributed.

The table of normality test data for Mawashi Geri's kick speed variable above shows the value of Sig. 0.195. This value is greater than the alpha value ($0.195 > 0.05$). So it can be concluded that the data distribution on the variable speed of Mawashi Geri kick speed is normally distributed.

Homogeneity Test

Homogeneity test between Pre-Test data and Post-Test data for Single Leg Speed Hop exercise with Ftable values for = 0.05 and $df = k - 1$ and $df2 = n - (k-1)$ obtained Fcount = 3.89. This means that F-count < F-table ($1.23 < 3.89$). So it can be concluded that the pre-test and post-test data of leg muscle power exercise are homogeneous.

The homogeneity test between the Pre-Test data and the Post-Test data for Hanumanasana practice values F-table for = 0.05 and $df = k - 1$ and $df2 = n - (k-1)$ obtained Fcount = 3.89. This means that F-count < F-table ($1.73 < 3.89$). So it can be concluded that the pre-test and post-test data of the Flexibility exercise are homogeneous.

The homogeneity test between the Pre-Test data and the Post-Test data for Mawashi Geri's exercise values F-table for = 0.05 and $df = k - 1$ and $df2 = n - (k-1)$ obtained Fcount = 3.89. This means that F-count < F-table ($1.73 < 3.89$). So it can be

concluded that the pre-test and post-test data of Mawashi Geri's kick (right) are homogeneous.

Linearity Test

The purpose of the linearity test is to determine the relationship between the independent variable and the dependent variable is linear or not. The results of the linearity test for each variable vertical jump (X1), and flexibility (X2) on the speed of Mawashi Geri kicks (Y) in the sport of karate. The linearity test of the relationship used in this study used a different F test which was analyzed with the help of SPSS computer software, which resulted in an F-count (Deviation from Linearity). F-count is F Deviation from Linearity, which means deviation from linearity, if $p > 0.05$ means not deviating or linear. The results of the linearity test can be seen in the following table.

Table 2.
Linearity Test Results for Variable X1, X2 to Variable Y

No	Functional Relationships	F-count	Sig.	Error Limit (α)	Information
1	Vertical Jump (X1) with the result of a kick Mawashi Geri (Y)	1.03	0.523	0,05	Linear
2	Flexibility (X2) with the result of a kick Mawashi Geri (Y)	1.18	0.442	0,05	Linear

From table (2) above, it can be seen that the significant value obtained is greater than the error limit (α). So it can be concluded that the independent and dependent variables have a linear relationship.

Hypothesis test

There is a significant contribution between Single-Leg Speed Hop (X1) training on Mawashi Geri kick speed (Y) in male dojo athletes KKI Yapim Medan 2021.

Table 3.
Uji Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	581.327	1	581.327	9.707	.009 ^b
	Residual	718.673	12	59.889		
	Total	1300.000	13			

After getting the equation $Y = 581,327 + 0,215 X1$, then proceed with testing whether the equation is meaningful or not. To perform the regression equation, the ANOVA table is used. From the table, the value of $F = 9.707$ and the value of Sig. 0.009. Test the significance of the regression equation can be done with the F test and also Sig.

so that from the calculation results obtained F-count 9.707 and F-table 3.89. Because F-count > F-table (9.707 > 3.89). While the value of Sig < a (0.001 < 0.05), it can be concluded that there is a significant contribution from the single-leg speed hop exercise to the Mawashi Geri kick results in the male athlete of the KKI dojo Yapim Medan 2021. There is a significant contribution between Hanumasana (X2) training on Mawashi Geri kick speed (Y) in male dojo athletes KKI Yapim Medan 2021.

Table 4.
Uji Anova

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	745.573	1	745.573	16.137	.002 ^b
	Residual	554.427	12	46.202		
	Total	1300.000	13			

After getting the equation $Y = 745.573 + (0.189) X_2$, then proceed with testing the equation whether it is meaningful or not. To perform the regression equation, the ANOVA table is used. From the table, the value of F = 16.137 and the value of Sig. 0.02. Test the significance of the regression equation can be done with the F test and also Sig. so that from the calculation results obtained F-count 16.137 and F-table 3.89. Because F-count > F-table (16.137 > 3.89). While the value of Sig < a (0.001 < 0.05), it can be concluded that there is a significant contribution from the single-leg speed hop exercise to the Mawashi Geri kick results in the male athlete of the KKI dojo Yapim Medan 2021.

There is a significant contribution between Single-Leg Speed Hop (X1) and Hanumasana (X2) training on Mawashi Geri kick speed (Y) in male dojo athletes KKI Yapim Medan 2021.

Table 5.
Contribution between Single Leg Speed Hop (X1) and Hanumasana (X2) training on Mawashi Geri kick speed (Y)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	855.904	2	427.952	10.600	.003 ^b
	Residual	444.096	11	40.372		
	Total	1300.000	13			

After getting the equation: $Y = 4.464 + 0.353X_1 + 0.557X_2$, then proceed with testing the equation whether it means or not. To perform the regression equation, the ANOVA table is used. From the table, the value of F = 10,600 and the value of Sig. 0.003. Test the significance of the regression equation can be done with the F test and also Sig. so that from the calculation results obtained F-count 10.600 and F-table 1.894. Because F-count > F-table (10,600 > 1,771). While the value of Sig < a (0.003 < 0.05), it

can be concluded that there is a significant contribution from single-leg speed hop and hanumanasana exercises to the kick speed of Mawashi Geri athletes Putra Dojo KKI Yapim Medan 2021.

CONCLUSIONS AND SUGGESTIONS

Based on the results of hypothesis testing and discussion of research results, the researchers draw the following conclusions: (1) There is a significant contribution from the single-leg speed hop (X1) exercise to the kick speed of Mawashi Geri (Y) for the Putra Dojo KKI Yapim Medan athlete in 2021, (2) There is a significant contribution from the hanumanasana exercise (X2) to the kick speed of Mawashi Geri (Y) for the Putra Dojo KKI Yapim Medan athlete in 2021, and (3) There is a significant contribution from single-leg speed hop (X1) and hanumanasana (X2) exercises to the Mawashi Geri kick speed (Y) for the Putra Dojo KKI Yapim Medan athlete in 2021.

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