

## Effects of Dribbling and Leg Length Exercise on Dribbling Ability in the Sports of SSB Porma Kudus

Welly Elmando<sup>1✉</sup>, Nasuka<sup>2</sup> & Sulaiman<sup>2</sup>

<sup>1</sup> SSB Porma Kudus, Jawa Tengah, Indonesia

<sup>2</sup> Pascasarjana, Universitas Negeri Semarang, Indonesia

### Article Info

History Articles  
Received: 6 January  
2020  
Accepted: 11 March  
2020  
Published :15 April  
2020

Keywords:  
dribbling,  
slalom drill,  
t-drill

### Abstract

This study aims to analyze the basic techniques of dribbling, and leg length in the early childhood development program of SSB Porma in Kudus Regency. This research uses a quantitative approach with the two-way ANOVA model. The subjects in this study were SSB Porma Kudus athletes in Kudus Regency. The results of this study are the results of the calculation of leg length variables are obtained  $t_{\text{value}} = 0.000 < t_{\text{table}} = 0.050$ , the results of the calculation of the type of exercise variable are obtained  $t_{\text{value}} = 0.019 < t_{\text{table}} = 0.050$ , in the type of exercise variable, the length of the leg are obtained  $t_{\text{value}} = 0.940 > t_{\text{table}} = 0.050$ . The conclusion of this research is there is a difference in the level of dribbling speed between respondents with the slalom drill dribbling training method and respondents who are given the t-drill dribbling training method, and there is a difference in the level of dribbling speed between respondents with long limbs and respondents with low limbs, there is no interaction between dribbling training methods with leg length categories in influencing dribbling speed. Research suggestions are players should increase in dribbling slalom drill practice rather than dribbling t-drill, the trainer should provide various forms of dribbling exercises, it is better to have complete facilities and infrastructure with the aim of supporting the training.

✉ Correspondence address:  
Mejobo, Mlati Norowito, Mlati Lor, Kudus, Jawa Tengah, 59319  
E-mail: wellyelmando09@gmail.com

## INTRODUCTION

Sports is one of the physical activities carried out to encourage, foster, and develop physical, spiritual, and social potential. Sport is a series of regular and planned physical exercises to maintain life, improve the quality of life, and achieve a level of physical ability that suits the purpose.

Football is one of the most popular sports and is loved by the public, especially men, ranging from children, adolescents, and adults. This is evident from the fact in society that most of them like football better than other sports, both in urban and rural communities.

Football school is an institution that provides knowledge, coaching about the basic techniques of football, as well as skills in playing football in a way, and mastery of soccer techniques properly, and correctly. It has the function of developing the potential of athletes. The school of football aims to accommodate and provide opportunities for students to develop talents, attitudes, personalities, and ethical behavior, as well as providing a solid foundation for playing soccer correctly and adequately.

The problem of early childhood development Soedjono (2008) says that a good, solid foundation is the root of an achievement. To improve the quality of coaching at the SSB level, one of them is the existence of an evaluation tool that can be used as a measurement tool to assess the progress that has been made after the coaching program is running. Leg length is one aspect that is very influential in all sports. Sometimes a long leg has a good effect on competition and sometimes has a bad influence on a game. In the sport of football, leg length is very influential on the performance of players, especially in the skills of dribbling the ball.

One of them is SSB in Kudus Regency, which has achievements in Central Java, SSB Porma Kudus. SSB Porma Kudus was established since 2001, in the time SSB Porma Kudus has published quality seeds, and selection can be taken to join Persiku Kudus from Age 15 years, Age 16 years, and Age 17 years, Age 18 years, Age 19 years, and 21 years old, because

SSB was established to accommodate talent and channel early childhood talent in Kudus. This SSB has students of approximately 150 active students and the Age group of 10 years, U13 years, U15 years, U18 years.

Ball dribbling in football has the function of making it possible to defend the ball while running across an opponent or advancing to open space. Dribbling can use various parts of the foot (inside, outside, instep, sole) to control the ball while continuing to dribbling the ball.

Yeni Yulistina (2019) said that the length of the legs is measured from the end of the spinal column to the floor, and may also be measured with a trochanter major to the floor. From the analysis of the limbs, it can be said that the length of the limbs is the basis of body structure because the limbs can withstand the above weight (body) or western body weight. The principle of training is the things that must be obeyed, done or avoided so that the training objectives can be achieved as expected, the principle of practice has an essential role in the physiological and psychological aspects of athletes (Sukadiyanto, and Muluk, 2011).

Dribble slalom is a form of dribble training by installing six cones with a distance of 2 yards each bypassing the cones that are attached with zig-zags, past the last cone, then turning direction, and dribble back to the starting position (Luxbacher, 2011). Every soccer player has speed and good agility will certainly be able to support the player's movements such as chasing or avoiding opponents and reacting to the movement of the ball drill is also a form of dribbling practice, with the aim to develop agility, coordination, flexibility (Brown, 2005).

## METHODS

This research is quantitative research. This research uses a quasi-experimental method that aims to analyze the dribbling ability program in SSB Porma Kudus, Central Java Province. The location of the study was at SSB Porma Kudus, Mejobo Street, Mlatinorowito Village, Kota District, Kudus Regency, Central Java Province. This study uses a sample of SSB Porma Kudus

players with an age range of 10-13 years with a total of 40 players. Also, the research variables used in this study are:

1. Independent variable

A manipulative variable is a training method that consists of two levels, namely dribbling slalom drill and dribbling t-drill exercises. Attributive independent variables (controlled) in this study are long limbs and short limbs.

2. Dependent variable

The dependent variable of this study is the ability of ball dribbling.

Data collection techniques used in this study were observation, pre-test & post-test, and documentation. Data analysis in quantitative research, namely testing prerequisite analysis, normality test, and hypothesis testing.

**RESULTS AND DISCUSSION**

Based on the results of research by observation, pre-test, post-test, and documentation of data that has been collected and carried out in this study can be seen in the table below.

**Description of Dribbling Speed**

Description of dribbling speed in terms of dribbling training methods and leg length can be seen in table 1.

**Table 1.** Description of Dribbling Speeds

Leg length	Type of exercise	Mean	Std. deviation	N
Short	Dribbling slalom drill	18.3590	1.71995	10
	Dribbling t-drill	19.6580	2.10484	10
	Total	19.0085	1.98593	20
Long	Dribbling slalom drill	21.0460	1.87006	10
	Dribbling t-drill	22.4280	.96681	10
	Total	21.7370	1.61305	20
Total	Dribbling slalom drill	19.7025	2.22661	20
	Dribbling t-drill	21.0430	2.13554	20
	Total	20.3728	2.25785	40

Based on the table above, the average dribbling speed obtained for respondents given the slalom drill dribbling method is 19.7, while the average dribbling speed for respondents given the t-drill dribbling method is 21.04. Judging from the category of limb length, the average speed of dribbling for respondents in the group of short limbs is 19.009, while those in the type of leg length are 21.74.

**Normality Test Calculation Results**

Before analyzing the data, a normality test is needed. The normality test data of this study used the Kolmogorov Smirnov normality test with the help of SPSS 24. Normality test calculation is done to find out whether the research results are normally distributed or not. Normality test criteria if the significance value > 0.05, then the data can be declared normal, then the sample comes from populations that are normally distributed, whereas conversely, if the significance < 0.05, then the data are stated not normally distributed. Normally as calculation results can be seen in table 2.

**Table 2.** Calculation of the Pre-test Data Normality Test

		Dribble speed
N		40
Normal parametersa	Mean	20.3728
	Std. deviation	2.25785
	Most extreme Absolute differences	.102
	Positive	.065
	Negative	-.102
Kolmogorov-Smirnov Z		.642
Asymp. sig. (2-tailed)		.804

a. Test distribution is Normal.

Based on table 2, obtained information  $t_{value} = 0.804 > t_{table} = 0.05$  so the dribble speed data is normally distributed.

**Homogeneity Test Calculation Results**

Homogeneity test calculation is done to find out whether the research data on each assessment indicator, and each sample has the same variance (homogeneous) or not. Homogeneity testing was performed using a homogeneity test of variance with SPSS 16 software. The hypothesis used in the homogeneity test is as follows.

H<sub>0</sub> = homogeneous research sample data.

H<sub>1</sub> = research sample data is not homogeneous.

Criteria for concluding.

H<sub>0</sub> is accepted if the sig value > 5%.

H<sub>1</sub> is accepted if the sig value < 5%.

The homogeneity test results of each assessment indicator can be displayed in table 3.

**Table 3.** Summary of Homogeneity Test Calculation Results

F	df <sub>1</sub>	df <sub>2</sub>	Sig.
1.408	3	36	.256

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Design: Intercept + PT + JL + PT \* JL

Based on table 3 obtained information from all test indicators  $t_{value} < t_{table} = 0.256 \geq 5\%$ , so H<sub>0</sub> is thus accepted homogeneous research data.

**GLM test (Two Way ANOVA) Variable Speed Dribbling**

Anova two-way test dribbling speed variable in the study was conducted to determine whether the dribbling speed was the same whether or not the length of the leg length and dribbling training method.

**Table 4.** GLM test results

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected model	92.434a	3	30.811	10.426	.000
Intercept	16601.958	1	16601.958	5.618E3	.000
PT	74.447	1	74.447	25.193	.000
JL	17.969	1	17.969	6.081	.019
PT * JL	.017	1	.017	.006	.940
Error	106.384	36	2.955		
Total	16800.776	40			
Corrected total	198.818	39			

a. R Squared = .465 (Adjusted R Squared = .420)

Based on the results of calculations on the leg length variable obtained  $t_{value} = 0.000 < t_{table} = 0.050$ , this shows that there are differences in the speed of dribbling between respondents with long limbs, and short limbs.

Based on the results of calculations on the type of exercise variable obtained  $t_{value} = 0.019 < t_{table} = 0.050$ , this shows that there are differences in the speed of dribble between respondents with the method of dribbling slalom drill training, and

respondents who were given dribbling t-drill training.

In the variable type of leg length training obtained  $t_{value} = 0.940 < t_{table} = 0.050$ , this shows that there is no interaction between leg length with the type of weight training in influencing the speed of dribbling.

**Effect of Slalom Dribbling and t-drill Dribbling Exercises on Dribbling Speed**

Following the results of the first research hypothesis testing, it is evident that there is a significant difference in effect between Slalom dribbling and t-drill dribbling exercises on dribbling speed in Porma Kudus football school students. In principle, both of these methods provide the same goal to improve the ability of speed inward dribbling in the Porma Kudus football school students. Nevertheless, the results of differences in the final results obtained information the average dribbling speed of respondents given the method of slalom drill dribbling training is 17.51, while the average dribbling speed of respondents given the technique of dribbling t-drill training is 14.81. Players who are given slalom drill dribbling training methods and t-drill dribbling training methods have a significant effect on the results of dribbling speed in soccer.

#### **The Influence between Long and Short Limbs On Dribbling**

Based on the results of testing, the second research hypothesis proved that the leg length variable obtained  $t_{\text{value}} = 0.255 > t_{\text{table}} = 0.050$ . This shows that there is no difference in the dribbling speed between respondents with long limb categories and respondents with short limb categories. From the analysis of the limbs, it can be said that the length of the limbs is the basis of body structure because the limbs can withstand the high weight (body) or western body weight. Therefore, the extended role of limbs in dribbling is vital in increasing achievement. So, in carrying out the basic techniques of dribbling, need to be supported by the ideal length of the limb, so that the movement skills performed can be displayed efficiently, and broader movements. So, it can be concluded that there is no influence of leg length in contributing dribbling to the game of football.

#### **Interaction between Groups Using Slalom Drill Dribbling Training Methods and T-Drill Dribbling Exercises, and Leg Length to Dribbling Speed in Soccer**

The results of the third hypothesis testing show that the variable type of dribbling exercise

is obtained  $t_{\text{value}} = 0.500 > t_{\text{table}} = 0.050$ . This indicates that there is no interaction between leg length and dribbling training methods in influencing dribbling speed. Many factors cause no interaction between dribbling training methods and leg length to dribbling speed in soccer. There are several things in the effort to increase the speed of dribbling, so there is no interaction between dribbling training methods, and leg length to dribbling speed in football games such as leg movement techniques, body proportions such as leg length, and motivation in training.

#### **CONCLUSION**

The conclusion of this research is there is a difference in the level of dribbling speed between respondents with the method of slalom drill dribbling training with respondents who are given the method of dribbling t-drill training. There is a difference in the level of dribbling speed between respondents with long and low limbs. There is no interaction between the dribbling training method and the leg length category in affecting the speed of dribbling. Research suggestions are that players should improve their dribbling slalom drill rather than t-drill dribbling, the trainer should be able to provide variations of dribbling exercises, it is better to have complete facilities and infrastructure with the aim to support the training

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