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Football Dribbling Speed Reviewed From Running Speed

Arga [1] *, Muhammad Arkanul Arba' [2], Wahyu Rahmatullah [3], Siti Nurhalizah Mutia Aulria [4], Charmila Tandi Rerung [5]

[12345] Universitas Pejuang Republik Indonesia, Indonesia.

* Coressponding Author. E-mail: arga.arga.mpd@gmail.com

Abstract

This study aims to analyze the relationship between running speed and dribbling speed in football players. The method used is a quantitative approach with an experimental design, where data is collected from 30 player samples through a series of speed tests. The results showed that there was a significant positive correlation between running speed and dribbling speed, with an R-squared value of 22.4%. Linear regression tests show that each increase in running speed time by 1 second contributes to an increase in dribbling speed time by 0.987 seconds. In conclusion, running speed has a significant influence on dribbling speed, which indicates the importance of developing running speed in improving the dribbling performance of football players.

Keywords: Dribbling Soccer, Running speed.

INTRODUCTION

Football is a sport that requires various basic technical skills, including dribbling which is one of the crucial elements in the game (Mappaompo et al., 2024; Sudirman et al., 2022). Good dribbling ability allows players to control the ball while moving quickly, changing direction, and passing opponents (Aprianova & Hariadi, 2016). In the development of modern football, dribbling speed has become increasingly important because of the increasing intensity of the game and the faster tempo of the match (Muhammad Ihsan Shabih et al., 2021). Although there have been many studies examining dribbling techniques in football, there is still a gap in understanding the specific relationship between running speed and dribbling effectiveness. This research was conducted to fill in the gap and provide a deeper understanding of how running speed can affect the dribbling quality of football players (Ikhsan & Umar, 2018).

Running speed is an individual's ability to move quickly over a certain distance, which is usually measured in units of time, such as seconds or minutes. This speed is affected by a variety of factors, including muscle strength, endurance, running technique, and overall physical condition. In the context of sports, running speed is very important, especially in sports such as athletics, football, and other team sports, where speed can determine success in competitions (Pradana et al., 2019).

Dribbling in football is a technique for moving the ball while running, aiming to avoid opponents and create opportunities (Herman & Hasbillah, 2022). The dribbling ability allows players to control the ball well, so they can perform effective maneuvers on the field. Speed dribbling in football refers to a player's ability to control the ball while moving quickly on the field. This includes not only physical speed in running, but also technical skills in handling the ball during the process. Players who are able to dribble quickly can pass opponents and create chances, which is crucial in game strategy (AF et al., 2021).

The speed of dribbling has a great effect on the player's ability to pass opponents and create space for themselves or teammates. Players who are proficient in dribbling can use a variety of techniques, such as feints and change of direction, to outwit opponents (Hartati et al., 2020). Several previous studies have shown a correlation between physical ability and technical skills in football. According to research by Saputra et al. (2023), there is a significant relationship between speed and dribbling ability in young players. In line with that, Widodo (2022) found that programmed speed training can improve dribbling ability by 23.5% in football athletes aged 15-17 years. The main purpose of this study is to analyze the relationship between running speed and dribbling ability in football players, with a special focus on aspects such as measuring the correlation between 30-meter running speed and dribbling speed. Identifying the factors that affect the effectiveness of dribbling is reviewed from the aspect of speed. Formulate training program recommendations that can optimize these two components (Aprianova & Hariadi, 2016).

The hypothesis of this study is that there is a significant positive relationship between running speed and dribbling ability in football players. The independent variable in this study was a running speed of 30 meters, while the dependent variable was dribbling speed. The research used a quantitative method with a correlational approach, involving 30 football players aged 18-21 years. The main expected findings of this study are the identification of the degree of correlation between running speed and dribbling ability. Analysis of factors that affect the effectiveness of dribbling from the aspect of speed. Recommendations for an integrated training program to improve speed and dribbling ability.

The results of this study are expected to make a significant contribution to the development of football training methods, especially in the aspect of increasing dribbling speed. This finding can also be a reference for coaches in designing more effective and efficient training programs to improve player performance. The urgency of this research is even more relevant considering the demands of modern football which increasingly emphasizes the importance of speed and agility in playing. A better understanding of the relationship between running speed and dribbling ability will aid in the development of more comprehensive and scientifically evidence-based player coaching programs.

METHODS

This study uses a quantitative approach with an experimental research design. This method was chosen to measure and analyze the relationship between two variables, namely running speed and dribbling speed in football players. In this study, data was obtained through hands-on testing involving measuring the running speed and dribbling speed of players under controlled conditions. The population in this study is active football players in the UPRI Makassar Football Club which totals 75 players. Sampling was carried out using a purposive sampling technique with inclusion criteria including age 18-21 years, Minimum 2 years of experience practicing football, Not in the recovery period from injury, Willing to be a research subject. Based on these criteria, a sample of 30 qualified players was obtained.

The instrumentation of this study uses several test measurement instruments: 1) Running speed of 30 meters. The 30-meter sprint uses electronic timing gates. Validity of the tool: r = 0.95. Reliability: r = 0.92. 2) Dribbling Speed Test: Using 6 cones with a distance of 3 meters between cones, Time measurement using digital stopwatch, Test validity: r=0.88. Reliability: r = 0.90. The research was carried out in a period of 2 weeks with the following stages:

Week 1: Explanation of procedures and filling out informed consent. Anthropometric measurements. 30-meter running speed test (2 measurements). Week 2: Dribbling speed test (2 measurements). Data analysis uses: Descriptive statistics to describe the characteristics of the sample. Data normality test using Shapiro-Wilk. Pearson correlation test to determine the relationship between variables. Simple linear regression analysis to predict the effect of running speed on dribbling speed. The significance level was set at $p < 0.05$

RESULT AND DISCUSSION

In this study, we analyzed the relationship between running speed and dribbling speed in soccer players, with the aim of identifying the extent to which physical performance in running can affect

dribbling ability. Using quantitative methods and experimental designs, data were collected from a sample of 30 players who underwent a series of speed tests. The results showed a significant correlation between the two variables.

Table 1. Descriptive Analysis

Descriptive Statistics

Variable	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
Running Speed	30	1.10	3.60	4.70	125.10	4.1700	.23947	.057
Dribbling Speed	30	1.80	4.50	6.30	162.70	5.4233	.49875	.249

Measurements of 30 football players, running speed data was obtained with the following characteristics: Range of values of 1.10 seconds, Minimum value of 3.60 seconds, Maximum value of 4.70 seconds, Total value (sum) of 125.10 seconds, Average (mean) of running speed is 4.1700 seconds, Standard deviation of 0.23947, Variance value of 0.057. Measurements of dribbling speed on 30 players produced the following data: Range of values of 1.80 seconds, Minimum value of 4.50 seconds, Maximum value of 6.30 seconds, Total value (sum) of 162.70 seconds, Average (mean) dribbling speed of 5.4233 seconds, Standard deviation of 0.49875, Variance value of 0.249.

Table 2. Normality Test

Tests of Normality

Variable	Shapiro-Wilk		
	Statistic	df	Mr.
Running Speed	.980	30	.826
Dribbling Speed	.974	30	.666

Running Speed: Shapiro-Wilk stat value: 0.980, Degree of freedom (df): 30, Significance value (Sig.): 0.826. The results of the normality test for the running speed variable showed a significance value of 0.826 ($p > 0.05$). Because the significance value is greater than 0.05, it can be concluded that the running speed data is normally distributed.

Dribbling speed: Shapiro-Wilk statistical value: 0.974, Degree of freedom (df): 30, Significance value (Sig.): 0.666. The results of the normality test for the dribbling speed variable showed a significance value of 0.666 ($p > 0.05$). Since the significance value is greater than 0.05, it can be concluded that the dribbling speed data is also normally distributed.

Furthermore, after being tested for normability, it will be continued with a hypothesis test with a simple linear regression test between running speed and dribbling speed.

Tabel 3. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.474a	.224	.197	.44699

Based on the table above, there is a positive relationship with moderate power between running speed and dribbling speed (R = 0.474). This model can account for 22.4% variation in dribbling speed, which shows that running speed has a significant influence on dribbling speed and there are still other factors affecting dribbling speed that are not covered by this model. A relatively small standard error (0.44699) indicates that the model has a fairly good level of prediction accuracy

Tabel 4. Model Anova

ANOVA

Model		Sum of Squares	df	Mean Square	F	Mr.
1	Regression	1.619	1	1.619	8.105	.008b
	Residual	5.594	28	.200		
	Total	7.214	29			

Based on the table above, the resulting regression model is valid and statistically significant (F = 8.105, 0.008 < 0.05). There is a significant linear relationship between running speed and dribbling speed. These results support the research hypothesis that running speed has an influence on dribbling speed in football

Tabel 5. Model Coofficients

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Mr.
1	(Constant)	1.308	1.448		.904	.374
	Running Speed	.987	.347	.474	2.847	.008

a. Dependent Variable: Dribbling Speed

Based on the table above, the model shows a significant positive relationship between running speed and dribbling speed. Each 1-second increase in running speed time will result in an increase in dribbling speed time by 0.987 seconds. This model is statistically significant and can be used to predict dribbling speed based on running speed. Although the constant is not significant, the model remains valid because the coefficient of the independent variable is significant.

CONCLUSSION

There is a significant positive relationship between running speed and dribbling speed in football players. The descriptive analysis showed that the running speed and dribbling data were normally distributed, which supported the validity of the further analysis. A simple linear regression test showed that running speed had a significant influence on dribbling speed, with an R-squared of 22.4%, which means that running speed may explain some variation in dribbling speed. In addition, the results of ANOVA show that the resulting regression model is statistically significant (0.008 < 0.05). Each 1-second increase in running speed time contributes to a 0.987-second increase in dribbling speed time. These findings underscore the importance of running speed development in improving dribbling ability, as well as opening up opportunities for further research on other factors that affect dribbling performance in football.

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