KING : Knowledge Integrated Networking for Global Sport and Health
https://jurnal.sainsglobal.com/index.php/king
Volume 1, Nomor 1 Maret 2025
e-ISSN: 2762-1436
DOI.10.35458

ANALYSIS OF PHYSICAL COMPONENTS ON THE ABILITY TO DRIVE THE BALL IN FOOTBALL GAMES

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Abstract

This research is a descriptive research type that uses a "correlational" research design. The population is all students of SDN Mannuruki Makassar. The sample used is 30 people. The sampling technique is by random selection (simple random sampling). The data analysis technique used is descriptive analysis, Pearson product moment correlation coefficient analysis (r), and the results of multiple correlation analysis (R) at a significant level of α = 0.05. The results of the study show that; (1) There is a significant contribution between leg strength and the ability to dribble the ball in soccer games for students of SDN Mannuruki Makassar, with an r value of 0.713 (ρvalue < α 0.05); (2) There is a significant contribution between eye-foot coordination and the ability to dribble the ball in soccer games for students of SDN Mannuruki Makassar, with an r value of 0.711 (ρvalue < α 0.05); (3) There is a significant contribution between agility and the ability to dribble the ball in football games for students at SDN Mannuruki Makassar, with an r value of 0.717 (ρvalue < α 0.05); (4) There is a significant contribution between leg strength, ankle coordination and agility together to the ability to dribble the ball in football games for students at SDN Mannuruki Makassar. with an R count value of 0.877 (ρvalue < α 0.05); and an F count value (F) of 28.948.

Keywords: Leg strength, foot-eye coordination, agility, dribbling

INTRODUCTION

The development of sports in indonesia is directed toward achieving the nation's ideals, namely the formation of a well-rounded indonesian individual who is physically and mentally healthy, skilled, and able to excel in sports to elevate the dignity and status of the nation. this aligns with the nation's efforts to create individuals who are not only outstanding academically but also in sports. sports, aside from being a means to achieve excellence, also play a crucial role in maintaining health and fitness. therefore, sports in indonesia must continue to develop and be directed in such a way that they can create a generation that is of high quality both physically and mentally.

One of the most popular sports in indonesian society is football. football is not just a sport but also part of a culture that unites people around the world, including indonesia. football can be played by anyone, from children to adults, in both open fields and spaces that do not require special facilities. the advantage of football as a sport is that it is easily accessible to anyone without needing high costs, making it a highly favored sport in both rural and urban areas in indonesia.

Football is a team sport played by two teams of 11 players each. every player has different duties and responsibilities, but their main goal is to score a goal against the opposing team. one of the basic skills in football that is very important is the ability to dribble the ball, often referred to as *dribbling*. dribbling is a technique used to control the ball while running, with the goal of avoiding opponents and controlling the ball to move to a more strategic area.

To be able to perform dribbling effectively, there are several physical components that need to be considered and trained. one of them is leg strength, which plays a crucial role in providing power and control when dribbling the ball. additionally, eye-foot coordination is also very important so that players can control the ball effectively and avoid disruptions from opponents. agility, or quickness, is also a significant factor in dribbling since players need to move quickly, change direction suddenly, and maintain balance while dribbling the ball.

leg strength refers to the ability of the muscles in the legs to generate force to move the body or resist obstacles. in the context of dribbling in football, leg strength is very important in providing the necessary power to dribble the ball and maintain control over it. stronger legs also affect the player's ability to defend, kick the ball, and perform throughout the game. the stronger the leg muscles, the better the player can control the ball and resist pressure from opponents.

Training leg strength can be done in various ways, such as through weightlifting exercises or exercises that focus on strengthening the leg muscles. plyometric exercises, such as long jumps or high jumps, can also help improve leg strength and endurance.

Eye-foot coordination refers to the ability to control the ball with the feet while simultaneously watching the ball and the movements of the opponent. this skill is critical in football, especially when performing dribbling, because the player must be able to see the ball's direction, anticipate the opponent's movement, and avoid traps that may be set by the opponent. good coordination between the eyes and feet allows players to dribble smoothly and efficiently.

Training that can improve eye-foot coordination includes basic dribbling drills, such as dribbling between small cones or following specific patterns that require precise foot movement and observation of the ball. through consistent practice, eye-foot coordination can be enhanced, allowing players to control the ball more effectively.

Agility is the ability to move quickly and change direction abruptly with good control. in football, agility is essential for helping players move swiftly, avoid tackles from opponents, and exploit gaps to dribble the ball to more strategic areas. without good agility, players will have difficulty avoiding opponents and maintaining control of the ball while moving at high speeds.

Agility training can be done in various ways, such as through zigzag running drills, obstacle avoidance training, and agility exercises using cones or small posts. this training aims to improve the player's quickness, reaction time, and ability to change direction without losing balance.

At sdn mannuruki makassar, although many students have a passion for football, the school has not achieved any significant accomplishments in the sport. this indicates a lack of development in the students' sports skills, particularly in basic techniques such as dribbling. while there are many students who enjoy playing football, the absence of structured and systematic training in sports has led to low performance in football at this school.

Therefore, a more in-depth study is needed to understand the factors influencing the students' ability to dribble the ball, especially physical factors such as leg strength, ankle coordination, and agility. by understanding these factors, more effective training programs can be developed to improve students' dribbling skills and, consequently, the school's football achievements.

The research conducted under the title "contribution of leg strength, ankle coordination, and agility to dribbling ability in football among sdn mannuruki makassar students" aims to examine the effects of these three physical factors on the students' ability to dribble the ball. this study is expected to provide a deeper understanding of the physical components that affect dribbling skills and offer recommendations for improving football training programs at the school.

The research method used is a quantitative approach with a correlational design. data will be collected through physical tests measuring the students' leg strength, ankle coordination, and agility. this data will then be analyzed to determine the relationship between these physical factors and dribbling ability.

The results of this study are expected to provide a clearer picture of the importance of physical development in football, particularly in mastering fundamental techniques like dribbling. additionally, this research is expected to contribute to improving the football training programs at sdn mannuruki makassar and serve as a reference for developing football training programs at other schools in indonesia.

METHODS

to influence these variables so that there is no manipulation of variables. This study aims to determine the contribution of leg muscle strength, ankle coordination, agility and dribbling ability.

1. Research Place

This research was conducted in the field of SDN Mannuruki Makassar

2. Research Variables

The research variables used in this study include:

a. Independent variables

1) leg muscle strength

2) ankle coordination

3) agility

b. Dependent variables:

1) Dribbling the ball

3. Population and Sample

•Population

A population is a generalized area consisting of objects or subjects that have a certain quantity and characteristics that have been determined by researchers to be studied and then conclusions drawn. Population is not only people, but also objects and other natural objects. The population in this study were all students of SDN Mannuruki Makassar.

•Sample

A sample is part of the number of characteristics possessed by a population. If the population is large and it is impossible for researchers to study everything in the population (Sugiono, 2018:118). A sample is part of the population taken using certain techniques needed to determine the number of samples using random sampling techniques or randomly. The number of samples in this study was 30 students of SDN Mannuruki Makassar.

4. Data Analysis Techniques

After all the research data has been collected, the next step is to analyze the data. This allows researchers to draw conclusions about the data through analysis. Computer-assisted statistics using the SPSS version 21 program to determine whether there is a relationship between the independent variables and the dependent variables. The results of dribbling the ball and three independent variables: leg muscle strength, ankle coordination, agility and dribbling ability.

RESULT AND DISCUSSION

Based on the results of research conducted on football players of SDN Mannuruki Makassar students. The results of statistical analysis related to the scores of leg muscle strength, foot-eye coordination, agility and dribbling ability in football games are presented in the following table:

Table 1 Summary of descriptive data analysis results Statistics of leg muscle strength (X1) ankle-foot coordination (X2) agility (X3) dribbling (Y)

Statistik	leg muscle strength (X1)	ankle-foot coordination (X2)	agility (X3)	dribbling (Y)
N	30	30	30	30
Mean	30	30	30	30
Median	15	13	11.28	14.10
Std. Deviation	25	24	16.35	22.28
Variance	10	11	5.07	8.18
Range	19.73	18.83	13.8193	18.5853
Minimum	20.00	19.00	13.7500	18.6550
Maximum	2.864	2.972	1.36103	2.24255
Sum	8.202	8.833	1.852	5.029

Data Normality Test

1. In the normality test of leg muscle strength data, the KS-Z value was obtained = 0.076 (P = 0.200 > α 0.05). Thus, the leg muscle strength data obtained were normally distributed.
2. In the normality test of foot-eye coordination data, the KS-Z value was obtained = 0.094 (P = 0.200 > α 0.05). Thus, the foot-eye coordination data obtained were normally distributed.
3. In the normality test of agility data, the KS-Z value was obtained = 0.090 (P = 0.200 > α 0.05). Thus, the agility data obtained were normally distributed.
4. In the normality test of dribbling ability data, the KS-Z value was obtained = 0.071 (P = 0.200 > α 0.05). Thus, the dribbling ability data obtained were normally distributed.

Correlation Analysis

After conducting a data normality test on the hypothesis to be tested, a hypothesis test is carried out to prove its truth.

Table 2 The first hypothesis is the strength of the leg muscles on the ability to dribble the ball.

Correlation	N	r	P_{value}	Description
X_1. Y	30	0,713	0,000	Significant

From the results of the correlation coefficient significance test calculation, it is known that

Fcount = 28.924 is greater than Ftable = 4.17 at α = 0.05. Based on these results, it can be concluded that the correlation coefficient between leg strength and the ability to dribble the ball in soccer games (ry2) of 0.713 is significant. Thus, the first hypothesis which states that there is a contribution of leg strength to the ability to dribble the ball in the soccer game of SDN Mannuruki students is accepted. Or in other words, the stronger the leg strength, the better the ability to dribble the ball in soccer games.

Table 3 Second hypothesis, eye-foot coordination on dribbling ability

Correlation	N	r	P_{value}	Description
X_2. Y	30	0,711	0,000	Significant

From the results of the correlation coefficient significance test calculation, it is known that Fcount = 28.597 is greater than Ftable = 4.17 at α = 0.05. This result means that the correlation coefficient between foot-eye coordination and dribbling ability in soccer games of Elementary School Students in Gowa Regency (ry2) of 0.711 is significant. This means that the hypothesis stating that there is a contribution between foot-eye coordination and dribbling ability in soccer games of Elementary School Students in Mannuruki is accepted. Or in other words, the better the foot-eye coordination, the better the dribbling ability in soccer games.

Table 4 The third hypothesis is the relationship between leg length and passing stopping ability

Correlation	N	r	P_{value}	Description
X_3. Y	30	0,717	0,000	Significant

From the results of the correlation coefficient significance test calculation, it is known that Fcount = 29.573 is greater than Ftable = 4.17 at α = 0.05. This result means that the correlation coefficient between agility and dribbling ability in the football game of SDN Mannuruki Makassar Students (ry3) of 0.711 is significant. This means that the hypothesis stating that there is a contribution of agility to the ability to dribble the ball in the football game of SDN Mannuruki Makassar Students is accepted. Or in other words, the better the agility, the better the ability to dribble the ball in the game of football.

Table 5 The fourth hypothesis is the relationship between leg muscle strength, ankle-foot coordination, and agility and the ability to dribble the ball.

Correlation	N	R	R^2	P_{value}	Description
$X_1.X_2$. X_3. Y	30	0,877	0,770	0,000	Significant

The Fcount value obtained is 28.984 and the Ftable value at α = 0.05 is 4.17. The Fcount value > Ftable so it can be concluded that the correlation coefficient between leg strength, ankle coordination and agility together with the ability to dribble the ball in the football game of SDN Mannuruki Makassar students who have a correlation coefficient (Rx.1.2.3.y) = 0.877 is significant. With this correlation coefficient, the determination coefficient can be known from R Square = 0.770 (77%). This means that the contribution of the ability to dribble the ball in the football game of SDN Mannuruki Makassar students can be explained by leg strength, ankle coordination and agility, by 77%.

DISCUSSION

1. Contribution of Leg Strength to the Ability to Dribbling the Ball in Football

From the results of the first hypothesis test, it was found that leg strength contributed to the ability to dribble the ball in football games of SDN Mannuruki Makassar Students. Based on the calculation results, a correlation coefficient value of 0.713 was obtained which was explained through the regression equation $\hat{Y} = 29.600 + -0.558$ X1. This finding means that the stronger the leg strength, the better the ability to dribble the ball in football games of SDN Mannuruki Makassar Students. conversely, the weaker the leg strength, the worse the ability to dribble the ball in football games of SDN Mannuruki Makassar Students.

2. Contribution of foot-eye coordination to the ability to dribble the ball in football games

From the results of the second hypothesis test, it was found that foot-eye coordination has a significant contribution to the ability to dribble the ball in football games of SDN Mannuruki students. Based on the calculation results, a correlation coefficient value of 0.711 was obtained which was explained through the regression equation $\hat{Y} = 28.686 + -0.536$ X2. This finding means that the better the foot-eye coordination, the better the ability to dribble the ball in football games of SDN Mannuruki Students, Gowa Regency, conversely, the less foot-eye coordination, the less optimal the ability to dribble the ball.

3. Contribution of agility to the ability to dribble the ball in football

From the results of the third hypothesis test, it was found that agility has a strong and significant contribution to the ability to dribble the ball in football games of SDN Mannuruki Makassar students. Based on the calculation results, a correlation coefficient value of 0.717 was obtained which was explained through the regression equation $\hat{Y} = 2.266 + 1.181$ X3. This finding means that the better the agility, the better the ability to dribble the ball in football games, conversely the lower the agility, the worse the ability to dribble the ball in football games.

4. Contribution of leg strength, ankle coordination and agility to the ability to dribble the ball in football

From the results of the fourth hypothesis test which shows a simultaneous contribution between leg strength, ankle coordination and agility with the ability to dribble the ball in football games of SDN Mannuruki Makassar students. Based on the calculation results, a correlation coefficient value of 0.877 was obtained which was explained through the regression equation $\hat{Y} = 18.395 + 0.289$ X1 + -0.209 X2 + 0.711 X3. These results further strengthen the results of the first, second and third hypothesis tests. Thus, leg strength, ankle coordination and agility can be good predictors of the ability to dribble the ball in football games. This means that if leg strength, ankle coordination and agility are categorized as good, then it is certain that the ability to dribble the ball in football games will be better.

CONCLUSSION

1. There is a significant contribution of leg strength to the ability to dribble the ball in soccer games

2. There is a significant contribution of foot-ankle coordination to the ability to dribble the ball in soccer games

3. There is a significant contribution of agility to the ability to dribble the ball in soccer games

4. There is a significant contribution together of leg strength, foot-ankle coordination and agility to the ability to dribble the ball in soccer games

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