



Survey of Leg Muscle Strength and Ability to Kick the Ball in Football Games at SSB Hasanuddin

Achmad Karim^{1*}

¹Physical education, health and recreation, faculty of sports and health sciences, state university of makassar, Indonesia

*Corresponding Author: achmad.karim@unm.ac.id

Authors' contribution: A) Conception and design of the study; B) Acquisition of data; C) Analysis and interpretation of data; D) Manuscript preparation; E) Obtaining funding

ABSTRACT

This research is a descriptive type of research using a "Survey" research design. This study aims to determine; (1) How is the leg muscle strength of SSB Hasanuddin football school students. (1) How is the ability to kick a football game in SSB Hasanuddin football school students. The population is all SSB Hasanuddin football school students. The sample used was 20 people. The sampling technique is saturated sampling. The data analysis technique used is descriptive analysis. The results of the study showed that; 1) The leg muscle strength of SSB Hasanuddin football school students is in the moderate category with a percentage of 40.00%. 2) The ability to kick a football game in SSB Hasanuddin football school students is in the moderate category with a percentage of 45.00%

ARTICLE HISTORY

Received: November, 2024

Accepted: December, 2025

Publish: January, 2025

KEYWORDS

leg muscle strength;
ability to kick the ball;
football

How to Cite : Karim, A. (2025). Survey of Leg Muscle Strength and Ability to Kick the Ball in Football Games at SSB Hasanuddin. *Journal RESPECS (Research Physical Education and Sport*, 7(1), 44-50. <https://doi.org/10.31949/ijsm.v7i1.13172>

INTRODUCTION

Football is a team game, therefore teamwork is a football game requirement that must be met by every team that wants to win. Victory in a football game will only be achieved through teamwork. In the development of football, physical condition is one of the components that needs to be trained, because football requires prime physical condition to face the match for 2 x 45 minutes of normal time. While playing, the players are always moving, such as running at full speed, jumping, colliding with opposing players, and avoiding opposing players.

Physical and technical abilities are interrelated components that cannot be separated in the game of soccer. To play soccer well, players are equipped with good basic techniques. Players who have good basic techniques tend to be able to play well too. Some basic techniques that soccer players need to have are heading, dribbling, stopping, and shooting. However, in relation to this study, it only focuses on one technique, namely the technique of kicking the ball. Kicking the ball is a way to move the ball from one place to another using the feet. Kicking the ball in a soccer game can be done when the ball is still, rolling and the



ball is floating in the air. However, basically kicking the ball in a soccer game requires support from the physical condition of the individual. The physical condition itself is the strength of the leg muscles.

Leg muscle strength is the ability of a muscle or group of muscles to support the resistance of a load in carrying out an activity. Leg muscle strength plays a major role in the ability to kick the ball in a soccer game. Strength is the driving force of every activity or physical activity. The leg muscle strength possessed by each player will have a positive impact on the development of kicking ball technique in a soccer game.

SSB Hasanuddin has not been able to achieve achievements in regional and national championships because SSB Hasanuddin students have not mastered the basic techniques of kicking the ball perfectly, therefore I want to know the role of leg muscle strength in SSB Palangga players and want to know the ability of kicking techniques in football games at SSB Hasanuddin. When kicking the ball, is the body position leaning forward so that when kicking the ball the results obtained are less than optimal. Meanwhile, to utilize the process of kicking the ball in a good or optimal football game, there needs to be support or support from the physical element of leg muscle strength.

From the description above, it is suspected that the leg muscle strength that a person has is closely related to the skill of kicking the ball in football games, just as the ability to kick the ball has a very important role in football games. This is what underlies the author to conduct research with the title: "Survey of leg muscle strength and the ability to kick the ball in football games at SSB Hasanuddin.

MATERIALS AND METHODS

Type of Research

This type of research is descriptive. Descriptive is a method in researching an object to create a description, picture, or painting systematically, factually and accurately regarding the facts, properties and relationships between phenomena being investigated. The method used in this study is a survey method with test and measurement techniques. Research variables are symptoms/objects that are the focus of researchers to observe and the data will be collected.

Time and Place of Research

This research was conducted in February 2025. This research was conducted at the SSB Hasanuddin Field.

Operational Definition of Variables

To avoid broad interpretation of the variables involved in this study, the variables need to be defined as follows:

1. Leg muscle strength

Leg muscle strength referred to here is the ability of the muscles to receive a load during work where this ability is produced by muscle contractions in the legs, this contraction occurs to perform supporting movements. (Harsono, 1988:135) said that one of the elements of physical condition that needs to be trained first is the element of physical strength, because strength plays an important role in protecting athletes from injury and helping to stabilize joints.

From the definition above, it is concluded that the definition of strength is the ability of muscles or a group of muscles to overcome a load or resistance in carrying out training activities. Strength must be absolutely necessary for every athlete for all sports, especially

in soccer. Muscle strength is an important component of the ability to kick the ball. 2. Ability
2. To kick the ball

Kicking the ball can be done with all parts of the foot, but technically, in order for the ball to be kicked well, it can be done with the instep or the ball of the foot, the inside of the foot, the outside of the foot, the inside of the instep, and the outside of the instep (Herwin, 2004: 33).

Research variables

According to Arikunto (1992), he said that: variables are objects of research or what is the focus of a study".

In this study, the single variables involved are the single variables of leg muscle strength and the ability to kick the ball which are the objects of the Hasanuddin SSB players.

Research design

This study is a quantitative descriptive type that intends to determine the description of leg muscle strength and the ability to kick a soccer ball at SSB Hasanuddin. Research design as a plan or description that is used as a reference in conducting

To avoid broad interpretations of the variables involved in this study, these variables need to be defined as follows:

1. Leg muscle strength is to provide information about the strength of a group of muscles that work in sports or other forms of physical activity. To measure leg muscle strength with squat jumps for 1 minute.

2. The ability to kick the ball in a soccer game referred to in this study is the player's ability to kick the ball according to the correct technique aimed at the direction determined by the player or team.

Population and Sample

1. Population

A population is a collection or group of individuals that can be observed by members of the population itself or by other people who are interested in it. According to Sugiono (2000:57), population provides the following definition: Population is a generalization area consisting of objects/subjects that have certain qualities and quantities and characteristics that are determined by researchers to be studied and then conclusions drawn.

Of course, every study always uses objects to be studied or termed as a population. Population is the entirety of individuals who are used as research objects. The population of a study must have the same or almost the same characteristics. Therefore, the population in this study is all SSB students.

Based on the opinion expressed above, the population of this study is all SSB Hasanuddin players. However, the population is limited by the number of players.

2. Sample

According to Sugiyono (2016), a sample is part of the number and characteristics possessed by the population. While the sample according to Suharsimi Arikunto (2006:131) is part or representative of the population being studied. Because the population in this study was relatively large, the researcher limited it by conducting a random selection using the "Simple Random Sampling" technique by drawing lots, so that a sample size of 20 SSB Hasanuddin students was obtained.

Data Analysis Techniques

After all the assessment data has been collected, namely the survey data on leg muscle strength and the ability to kick the ball in a soccer game. The collected data needs to be analyzed descriptively and inferentially for the purposes of testing the assessment hypothesis. The descriptions used in this assessment are as follows:

1. Descriptive data analysis is intended to obtain a general description of the data including the average, standard deviation, minimum value, and maximum value.
2. Inferential analysis is used to test research hypotheses using correlation and regression tests. So, the overall statistical data analysis used generally uses the SPSS program.

RESULTS AND DISCUSSION

Data Description

The description of the data from the research results aims to provide a general description of the distribution of leg muscle strength data and the ability to kick a soccer ball at Hasanuddin soccer school. The prices presented after being processed from raw data using descriptive statistics, namely the average price, standard deviation, mode, median and frequency distribution.

The summary of the results of the descriptive statistics calculations is presented as follows:

Table 1. Summary of research results

Statistics	Leg Muscle Strength	Ability to Kick the Ball
Sampel	20	20
Mean	33.30	8.10
Median	32.00	8.00
Standard Deviation	6.441	0.852
Variance	41.484	0.726
Range	22	3
Minimum	24	6
Maximum	46	9

Leg muscle strength at Pallangga football school

Based on the research data on leg muscle strength at SSB Hasanuddin, the minimum value was 24 times and the maximum value was 46 times with a range of 22 times. The average value of 33.30 times has a median of 32.00 times with a standard deviation of 6.441 times, and a variance of 41.484 times. The raw data on leg muscle strength at SSB Hasanuddin can be arranged in a frequency distribution as follows:

Table 2. Frequency Distribution List of SSB Hasanuddin Leg Muscle Strength Results

No.	Interval Class			Absolute Frequency	Relative Frequency (%)
1	23	-	27	3	15.00
2	28	-	32	9	45.00
3	33	-	37	3	15.00
4	38	-	42	3	15.00
5	43	-	47	2	10.00

Amount	20	100.00
--------	----	--------

Based on table 4.2 above, it is known that 20 people were sampled in the study, where 12 people (60.00%) were in the class below the average results of leg muscle strength, 3 people (15.00%), were in the average class of leg muscle strength results, and 5 people (25.00%), were in the class above the average results of leg muscle strength.

Ability to kick a soccer ball at SSB Hasanuddin

Based on the research data on the ability to kick a soccer ball at SSB Hasanuddin, a minimum value of 6 points and a maximum value of 9 points were obtained with a range of 3 points. The average value of 8.10 points has a median of 8.00 points with a standard deviation of 0.852 points, and a variance of 0.726 points. The raw data on the ability to kick a ball at SSB Hasanuddin can be arranged in a frequency distribution as follows:

Table 3. Frequency Distribution List of SSB Hasanuddin's ball kicking ability results

No.	Value	Absolute Frequency	Relative Frequency (%)
1	Less Than 6	0	0.00
2	Less Than 7	1	5.00
3	Less Than 8	3	15.00
4	Less Than 9	10	50.00
5	Less Than 10	6	30.00
	Amount	20	100.00

Based on table 4.2 above, it is known that 20 people were sampled in the study, where 1 person (5.00%) was in the class below the average for their ball kicking ability, 3 people (15.00%) were in the average class for their ball kicking ability, and 16 people (80.00%) were in the class above the average for their ball kicking ability.

Qualification of the results of leg muscle strength and the ability to kick a soccer ball at SSB Hasanuddin

After describing the data on leg muscle strength and the ability to kick a soccer ball at SSB Hasanuddin, the results of the analysis of leg muscle strength and the ability to kick a soccer ball at SSB Hasanuddin are presented based on the qualification of the results of leg muscle strength and the ability to kick a soccer ball which refers to the assessment of the qualification of leg muscle strength and the ability to kick a soccer ball at SSB Hasanuddin.

a. Leg muscle strength at SSB Hasanuddin

It can be stated that the results of leg muscle strength at SSB Hasanuddin which are converted based on the assessment category, are as follows: It is known that there are 20 research samples, of which 2 people (10.00%) are classified as very good, 3 people (15.00%) are classified as good, 8 people (40.00%) are classified as moderate, and 7 people (30.00%) are classified as less.

b. Ability to kick a soccer ball at SSB Hasanuddin

It can be stated that the results of the ability to kick a soccer ball at SSB Hasanuddin students converted based on the assessment category are as follows:

It is known that 20 people in the research sample, where no classification was found to be very good, 7 people (35.00%) were classified as good, 9 people (45.00%) were classified as moderate, 3 people (15.00%) were classified as less, and 1 person (5.00%) were classified as very less.

From the description of the data and categories that have been presented, it is obtained that the percentage of the ability to kick a soccer ball in the highest soccer school students is in the medium category distribution, then followed by the good category distribution, then the less category and the very less category. Thus, it can be concluded that overall the total percentage of the ability to kick a soccer ball at SSB Hasanuddin is in the medium category.

CONCLUSION

Leg muscle strength at SSB Hasanuddin is in the moderate category, with a percentage of 40.00%. The ability to kick a soccer ball at SSB Hasanuddin is in the moderate category, with a percentage of 45.00%. Based on the conclusions of the research that have been described, the following suggestions can be emphasized. Coaches are expected to be able to provide strengthening and maintain leg muscle strength, so that they can increase leg muscle strength at SSB Hasanuddin. Coaches are expected to be able to provide strengthening of the ability to kick the ball in soccer games by paying attention to the contact of the ball with the foot and the kicking target so that they can improve the ability to kick the ball in soccer games at SSB Hasanuddin.

REFERENCES

- Arjuna, F. (2019). Gambaran Komponen Fisik Predominan (Komponen Fisik Dasar) Pelatih Sso Real Madrid Fik Uny Tahun 2016. *Jurnal Ilmu Keolahragaan*, 2(1), 47-48.
- Arsil. (2008). Pembinaan Kondisi Fisik. Padang: FIK UNP.
- Fauzi, F. (2013). Tingkat Keterampilan Bermain Sepakbola Siswa Ssb Bina Nusantara Kabupaten Klaten. *Jurnal Fakultas Ilmu Keolahragaan Yogyakarta, Universitas Negeri Yogyakarta*.
- Fenanlampir, A. (2020). *Ilmu Kepelatihan Olahraga*. Jakad Media Publishing: Surabaya.
- Hasbunallah, & Hasyim. (2019). *Analisis Komponen Fisik Dan Percaya Diri Terhadap Kemampuan Menggiring Bola Dalam Permainan Sepakbola Murid SD Di Kabupaten Barru*.
- Juita, Ardiah, Ramadi. Saputra, Dedi, W. (2015). Hubungan Kekuatan Otot Tungkai Dan Kecepatan Terhadap Kemampuan Shooting Dalam Permainan Sepakbola Pada Ssb Universitas Riau U-15. *Jurnal Online Mahasiswa (JOM)*, 3(1), 1-13.
- Kekuatan, K., Tungkai, O., Kaki, K. M., Keseimbangan, D. A. N., & Kemampuan, T. (2018). *Bola Pada Permainan Sepakbola Murid Sd Inpres*.
- Maiti, & Bidinger. (1981). *Journal of Chemical Information and Modeling*, 53(9), 1689-1699.
- Maliki, O., Hadi, H., & Royana, I. F. (2017). Analisis Kondisi Fisik Pemain Sepakbola Klub PERSEPU UPGRIS Tahun 2016. *Jurnal Jendela Olahraga*, 2(2), 1-8.
- Maulana, A. (2018). *Menendang Bola*.
- Musrifin, A. Y., & Bausad, A. A. (2020). Analisis Unsur Kondisi Fisik Pemain

- SepakbolaMataram Soccer Akademi Ntb. *Jurnal Ilmiah Mandala Education*, 6(1), 113–119. <https://doi.org/10.36312/jime.v6i1.1116>
- Nasution, A. (2018). Survei Teknik Dasar Bermain Sepakbola Pada Siswa Smkt Somba Opu Kabupaten Gowa. *Ilmu Keolahrgaan*, 1–10.
- Pendidikan, J., & Rekreasi, K. (2021). *Peran Kondisi Fisik dalam Sepakbola*. 7(1), 186–192.
- Pur, M. (2020). Juli 16. *Teknik Menendang Bola*.
- Qomara, Dwi, Y. (2019). Pengembangan Permainan Bola Besar Melalui Modifikasi Permainan Sepakbola Tangan. *Jurnal Pendidikan Jasmani Kesehatan Dan Rekreasi(Penjaskesrek)*, 6, 1–20.
- Sugiyono. 2000. *Statistika untuk Penelitian*. Bandung: Penerbit CV Alfabetha.
- Utama, M. W., Insanistyo, B., & Syafrial, S. (2017). Analisis Kemampuan Teknik Dasar Bermain Sepakbola Pada Pemain Usia 16 Tahun. *Kinestetik*, 1(2), 96–100.
- Vinando, M., Bayu, I & Ari, S. (2017). Analisis Kemampuan Short Pass Permainan Sepakbola Peserta Ekstrakurikuler SMA Negeri Curup Utara. *Jurnal Ilmiah Pendidikan Jasmani*, 1(1). 29-30.
- Widiastuti. 2011. *Tes dan Pengukuran Olahraga*. Jakarta: Pt. Bumi Timur Jaya.
- Yunus. M. 1992. *Olahraga pilihan Bola Voli*. Jakarta: Depdikbud Dirjen Dikti.
- Arikunto Suharsimi, 1992. *Prosedur Penelitian Suatu Pendekatan Praktis*. Jakarta : Rineka Cipta.
- Ismaryati, 2006. *Tes dan Pengukuran Olahraga*. Sebelas Maret University Press: Surakarta, Jawa Tengah.