



Original Article

The Lower Extremities and Their Relationship to Speed Strength and Some Basic Skills in Futsal for Female Students

Dr. Rasool Mohi Shamkhi Alfartosy^{1*} and Dr. Marwa Abduljabbar Aboob²

¹Department of Physical Education and Sports Sciences, University of Ahl al-Bayt, Iraq

²Directorate of Education, Ministry of Education, Karbala Iraq

Corresponding Author: *Dr. Rasool Mohi Shamkhi Alfartosy

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Abstract	Manuscript Information
<p>The game of football is a game of changing playing situations because it is a team game and it is very popular across countries. The player practicing this game must be a skilled player and have a very high physical ability in order to be able to practice it because it has a very strong physical and skill nature compared to other games. The researchers noticed that there was a defect in some of the basic skills of futsal football due to their weak speed or lack of interest in this ability on the part of the coaches of the futsal team for female students at the University of Karbala. The aim of the current research is to know the relationship between the lower extremities and quick strength and also to know the relationship between quick power and some soccer skills in futsal for the Karbala University team, as well as to identify the relationship between the lower extremities and quick power for some basic skills in futsal for female students. The researchers used the descriptive approach to suit the nature of the research problem at hand. The tests presented were conducted on a sample of female students of the University of Karbala football team in the futsal of the student activities season prepared by the Ministry of Higher Education and Scientific Research—student activities for the year 2024—who numbered nine female students.</p>	<ul style="list-style-type: none"> ▪ ISSN No: 2583-7397 ▪ Received: 24-02-2023 ▪ Accepted: 13-03-2023 ▪ Published: 21-03-2024 ▪ IJCRM: 3(2);2024:69-72 ▪ ©2024, All Rights Reserved ▪ Plagiarism Checked: Yes ▪ Peer Review Process: Yes <p>How to Cite this Manuscript</p> <p>Dr. Rasool Mohi Shamkhi Alfartosy, Dr. Marwa Abduljabbar Aboob. The Lower Extremities and Their Relationship to Speed Strength and Some Basic Skills in Futsal for Female Students. International Journal of Contemporary Research in Multidisciplinary.2024; 3(2): 69-72.</p>

Keyword: Lower extremities speed and futsal

1. Introduction

The most important thing that characterizes our current era is the progress and high practical development that have occurred in all areas of life and the emergence of the production of modern scientific and practical inventions and patents that have brought about very big changes in our lives and have entered into all areas of our lives, including the sports field. The game of football is a game of changing playing situations because it is a team game and it is very popular across countries. The player practicing this game must be a skilled player and have a very high physical

ability in order to be able to practice it because it has a very strong physical and skill nature compared to other games. The other. As the lower extremities are very important for the majority of sports skills, especially some basic skills in football, futsal for female students, where quick strength, which is one of the physical abilities, is of very great importance and is what the football player, especially the football player, needs, and it is considered crucial and very important to achieve success. There are futsal for female students in football. By possessing this ability, the female student can hit the ball to score, as well as

jump and handle, in addition to speed in changing direction for female students.¹ The importance of the current research lies in designing exercises to find the relationship between quick strength and the lower extremities for some basic football skills. Futsal for the University of Karbala team.

2. Research Problem

The researchers noted that the researchers have scientific titles with a precise specialization in football training tests and physiology and teaching in Iraqi universities, where the football player must be skilled and have a very high physical aptitude in order to be able to practice it because it has a very strong physical and skill nature compared to games. The researchers noted that there is A defect in some of the basic skills of futsal football due to their weak speed or lack of interest in this ability on the part of the coaches of the futsal team for female students at the University of Karbala.

3. Research Objectives

1. Knowing the relationship between the lower extremities and speed force.
2. Knowing the relationship between speed and some football skills for the Karbala University team
3. Identifying the relationship between the lower extremities and speed strength for some basic skills in cod ball, futsal for female students.

Research Hypotheses

There is a statistically significant relationship between the lower extremities and quick strength and its relationship to performing the basic skills of futsal football.

Research field

Human field: Karbala University female futsal team.

Period: from 12/15/2023 until 3/5/2024.

Spatial field: Al-Hakim Hall - Holy Karbala

4. Research Methodology

What is meant by “approach” is “the path that an individual takes until he reaches a specific goal”.² the researchers used the descriptive approach to suit the nature of the research problem.

The research community and its sample

The researchers identified as their research population the female students of the Karbala University football team, futsal for the sports activities season prepared by the Ministry of Higher Education and Scientific Research - student activities for the year (2024), who numbered 9 female students.

The methods, devices and tools used by the researchers in their research

The researchers used many methods to collect data and information in their current research and produce research results.

- Arab and foreign sources
- Testing and measurement

- Personal interview
- Four (4) footballs for five-footers
- 2 whistles
- Adhesive tapes
- Measuring tape
- HP computer
- Jafra for jumping

Field research procedures

After the researchers surveyed many scientific sources and scientific tests, in addition to the modest experience of the researchers from a practical and scientific perspective, the researchers identified a number of tests of an important nature in their research work, which are:

1. Bend and extend the knees test as quickly as possible for 15 seconds from a standing position.
2. Kick the ball as far as possible.
3. Handling test.

Description of tests

1. First: Bend and extend the knees test as quickly as possible for 15 seconds from a standing position

Purpose of the test: To measure the rapid strength of the leg muscles

Tools used: electronic stopwatch - whistle

Description of the test: The experimenter stands with her legs open wide (chest-width apart), and upon hearing the whistle signal, the experimenter bends and extends the knees completely as quickly as possible and in the shortest possible period of time. Each experimenter is given two attempts after he gives an appropriate intermittent rest.³

2. Second: Kick the ball as far as possible⁴

Purpose of the test: Measuring the rapid strength of the lower limb muscles of female students.

Tools used in the test: Football (3), measuring tape.

Field for performing the test: A circle with a radius of (1 m) and a distance of (3 m), from the center of the circle, a line is drawn to start

Test description: The ball is placed in the center of the circle, and the experimental student runs to hit the ball with her favorite foot and any part of it, except the front of the foot, for the furthest horizontal distance.

Number of attempts at the test: The student performs 3 attempts and the best one is counted

Test measurement: Record the distance from the center of the circle to the point where the ball falls in meters.

3. Third: Handling test^[5]

Purpose of the test: Measure the accuracy of handling towards a target painted on the wall

Tools needed for the test: Legal footballs (2).

Test procedures: Draw four overlapping concentric rectangles whose dimensions are as follows:

- Rectangle No. 1 has dimensions of (2 by 6) feet
- Rectangle No. 2 has dimensions of (4 by 12) feet

- Rectangle No. 3 has dimensions of (6 by 18) feet
- Rectangle No. 4 has dimensions of (8 by 24) feet

A line is drawn using red adhesive tape on the ground, parallel to the wall and only 15 feet away. The experimental student stands with the ball behind the starting line, i.e. the line that was marked with red adhesive tape, and when the start signal is given, the experimental student kicks the ball with the sole of her foot with one foot towards the wall to try to aim it at the small target as many times as possible because it carries the highest score during the time scheduled for the test, which is 15 seconds.

Test instructions

- It is allowed to kick the ball in any way with either foot.
- The experimental student does not kick the ball toward the goal until she returns to the starting line
- In high rebound balls, the student is allowed to stop the ball and take the position that suits her to kick it again
- When the ball goes away from the testing area, the player has the right to quickly use one of the spare balls
- Each student is given two consecutive attempts with a time interval for appropriate rest.

How to calculate test scores: Points are calculated for each correct ball as follows:

- (5) Points if the ball touches rectangle No. 1
- (4) Points if the ball touches rectangle No. 2
- (3) Two points if the ball touches rectangle number 3
- One point if the ball touches rectangle number 4
- (Zero) if the ball goes away from rectangle number 4
- If the ball falls on one of the common lines between two rectangles, the higher score is counted.
- The student’s tested score is the sum of the points she obtains in both attempts.

Exploratory experiment

The researchers conducted the exploratory experiment on a sample outside their research sample, which consisted of 2 female experimental students, on Tuesday, 12/18/2023, in order to:

1. In order to ensure the validity of devices, tools and tests and the possibility of their application.
2. Know the time that each research test takes.
3. In order to identify the mistakes, obstacles and positives and evaluate them, conduct a small exploratory experiment.

Main experience

After most of the things became clear to them by conducting the exploratory experiment and examining the results they obtained, the researchers conducted their main experiment on Saturday, 12/16/2023, on a sample they studied, which consisted of the Karbala University football team, futsal for female students.

5. Results

Display and analyze the results in terms of their arithmetic mean and standard deviation for the research variables

Table 1: Show mean and standard deviation values for research variables

Variables	mean	STD
Kick the ball as far as possible	7.3	0.77
Handling	8.2	0.03
Bend and extend the knees as quickly as possible for 15 seconds from a standing position	9.2	0.97

From Table (1), it appears that the arithmetic mean for kicking the ball to the maximum distance is that its arithmetic mean is (7.3) and its standard deviation is (0.77). Table (1) shows that the arithmetic mean for handling is (8.2) and its standard deviation is (0.03). As for bending and extending the knees as quickly as it is possible for a period of 15 seconds from a standing position, where the arithmetic mean is (9.2) and a standard deviation is (0.97). From the above, there are slight differences in these tests, which indicates that the performance was relatively close. Presentation and analysis of the values of the correlation coefficient, the level of error, and the significance of the tests for quick strength and their relationship to the basic skills in futsal for female students.

Table 2. Show values of the correlation coefficient, error level, and statistical significance of quick power and its relationship to the basic skills of futsal for female students

Quick power skills	Correlation coefficient	Error level	Statistical significance
Kick the ball as far as possible	0.90	0.002	Sig.
Handling	0.85	0.005	Sig.

Through Table (2), we notice that the skill of kicking the ball to the maximum distance, where the correlation coefficient reached (0.90), and that this value is less than the value of (F) in the table and at the level of (0.05) and is estimated at (0.002), meaning that this indicates the existence of a significant correlation relationship with it. As for handling, its correlation coefficient reached (0.85), and this value from the tabulated (F) value, at the level of (0.05), is estimated at (0.005), which indicates the existence of a moral correlation relationship for it.

6. Discussion

One of the reasons is that there is a high correlation between the quick strength of the legs and the skill tests for female indoor soccer players, because this physical ability has a high and effective role for female indoor soccer players, as the development of this physical ability is linked to the development of the basic skills of the game of soccer, as it Preparing a football player: “His performance must be characterized by accuracy, and this requires comprehensive and good preparation for the various aspects of the game. A player who cannot be prepared comprehensively will have weak physical and skill performance and slow movements”, [6] as “working with the opposing player and repeating the performance of the skill for several repetitions is By applying resistance as an intensity, which does not reach a high level with the presence of the ball, which contains exercises to develop and strengthen the muscles for all parts of the player’s body, and these exercises are good and useful in moving the player’s body, male or female, and making movements in

different places, which gives him the ability and strength to take the appropriate positions to perform. The technical and tactical skills of the player “⁷ Which had an effective impact on the level of female players, which was built primarily according to sound scientific foundations, as quick strength is one of the most important physical abilities that indoor soccer players need when handling, dribbling, and scoring. Rapid strength “appears in the extent to which the player’s body muscles are able to push his body or parts of his body.” His body in forward, upward, and backward pushing movements”^{,8} and this is what (Muhammad Reda and others) indicate that “training in continuous and intense repetition of exercises helps improve the compatibility between the movement of the arms and legs and helps achieve rapid strength of the leg muscles”.^[9]

Football players must be prepared their performance must be characterized by accuracy. This requires total preparation for all aspects of the game. An athlete who cannot be well prepared will perform poorly, physically, skillfully, and his execution of skills are very weak.”^[10]

7. Conclusions

Speed strength is an important physical ability for some basic skills in futsal. There is a very strong relationship between physical ability (speed strength) and the lower extremities and some basic skills in indoor football.

8. Recommendations

1. Paying attention to the physical fitness of female students and emphasizing physical abilities, especially speed.
2. Different training methods and methods must be relied upon in order to develop the rapid strength of the lower limbs of female students.
3. Conduct similar studies and research on other samples.

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