



## Some Physical and Motor Abilities and Their Contribution to The Scoring Skill of Futsal Players

Thaer Dawood Salman <sup>1\*</sup>, Assad Lazem Ali <sup>2</sup>, Nidaa Yasir Farhood <sup>3</sup>

<sup>1-3</sup> University of Baghdad, Irak

Email : [thaer@cope.uobaghdad.edu.iq](mailto:thaer@cope.uobaghdad.edu.iq) <sup>1\*</sup>, [Asaad.Ali@cope.uobaghdad.edu.iq](mailto:Asaad.Ali@cope.uobaghdad.edu.iq) <sup>2</sup>,

[Nedaa.Forhood@cope.uobaghdad.edu.iq](mailto:Nedaa.Forhood@cope.uobaghdad.edu.iq) <sup>3</sup>

**Abstract,** *The game of futsal requires physical and motor abilities in order to perform it, as these abilities play a fundamental role in making the player have a wonderful physical level and be able to implement the skill aspect of futsal football, especially the scoring skill, which is the subject of the study. The importance of the research lies in arriving at knowledge of the percentage The contribution of some physical and motor abilities to the performance of the scoring skill in indoor soccer, in order to reach final scientific results that serve researchers, coaches, and players alike. The research aims to identify the most important physical and motor abilities of young players in futsal football, and to identify the percentage of contribution of some physical and motor abilities in terms of the performance of the scoring skill in futsal football for young players. Tests were conducted on (260) players from the youth and sports forums in Baghdad Governorate for the sports season. 2023-2024 AD. Four tests were used to measure explosive power, speed of response, agility and flexibility, in addition to the scoring skill in futsal. After processing the data, it was concluded that there is a contribution percentage for the test (vertical jump from stability) as one of the indicators of physical and motor abilities along with the scoring skill. In futsal, there was a percentage of contribution to the tests (vertical jump from stability and Nelson for transitional motor response) as one of the indicators of physical and motor abilities with the skill of scoring in futsal, by (2.3%), and there was a percentage of contribution to the tests (vertical jump from... Stability and Nelson for the transitional motor response and Semo for agility) as one of the indicators of physical and motor abilities, with scoring skill in futsal amounting to (9.3%) , and a contribution percentage for the two tests (vertical jump from stability and Nelson for the transitional motor response and Semo for agility, sitting and arm extension) as one of the ability indicators. Physical and motor skills with scoring skills in futsal reached (9.4%).*

**Keywords:** *Physical Abilities, Motor Abilities, Scoring in Football*

### 1. INTRODUCTION:

Futsal is one of the team games with a highly competitive nature and great public passion for it due to the excitement, suspense, and joy of the goals that are scored, as well as the joy and beauty of the goals that are scored. Due to the small area of the field, it requires from its practitioners physical and motor abilities that are characterized by speed and accuracy while playing. Implementing the scoring skill in futsal football Physical abilities And movement is like The foundation upon which skill development is built Futsal, that game soccer For halls you need To physical abilities And kinetics For its performance while playing These capabilities Role Basic In making the player He has a wonderful physical level and can implement the skill aspect of futsal football, especially the scoring skill that is the subject of the study, since the player cannot To implement the scoring skill Without having physical abilities And good movement, which he must have trained and developed his ability From this aspect to reach the required level.

The importance lies research in Reaching knowledge of the contribution rate of some physical and motor abilities in terms of performance Skill Futsal scoring,

forreachtoreultsfinalScientific research that serves researchers, coaches and playersallBoth .As for the research problem, it becomes clear that there is nostudyScientifichave taken upResearching and interpreting the special physical and motor capabilities of futsal playersAnd try to know the percentage of its contribution toSkillful performance of a skillSkillFutsal scoringSo I thinkYesAl-BahThonthatThey deal with research andStudy as a topicWhateverIt sparked his interestTo know the contribution rate of each of some physical and motor abilities in terms of performanceSkillScoring in futsal. The research aims to identify the most important physical and motor abilities of young players in futsal, and to identify the contribution rate of some physical and motor abilities in terms of performance.SkillFutsal scoringFor the playerAmong the youth, the tests were conducted for the period from 10/2/2023 until 12/10/2023 AD.

## **2 -RESEARCH METHODOLOGY AND FIELD PROCEDURES**

### **Research Methodology:**

Research method means “the method followed by the researchernoShe answered the questionandThe specific aspects raised by the topic of his research (Khattab and Abdel Zahar, 2005, p. 9), AndMethodology is important in scientific research The value of research and its results are linkededaClosely linked to the method followed by the researcher, Souse researcherthat**Descriptive approach using the survey method to suit the objectives of the study.**

### **The research community and its sample:**

The research community consists of(16) youth and sports forums in Baghdad Governorate for the 2023-2024 sports season, which includes (307) young futsal players, with (8) forums in Rusafa and (8) forums in Karkh, and (37) have been excluded. Players either due to injury or absence, and (10) players were excluded from the main work sample because they were a reconnaissance sample, and thus the main research sample was represented by (260) players.

### **Means, devices and tools used:**

It was completed Use of means, devices and toolsnext:(Personal interviews,Scientific sources and references, Tests and measurement, International Information Network (Internet),Manual type scientific calculator(Canon),Computer(Pentium – 5),Stopwatch number (3)Type (Diamond),Balls Provide halls Legal number(5), tambourine Provide hallslegal,Expert opinion poll questionnaire on identifying the most important The physical and motor abilities of futsal players,Expert opinion poll questionnaire on identifying the most importantTests for the

physical and motor abilities of futsal players, Expert opinion poll questionnaire on identifying the most important Tests to measure scoring skill in futsal).

**Field research procedures:**

A questionnaire was presented to the opinion of experts in the field will be sought soccer And tests and measurement to determine the most important Capabilities Physical The number of (15) experts in futsal and motor skills was excluded. The physical and motor capabilities of futsal were excluded. that I got it I have a percentage of less than (25%) **“A specific percentage can be determined, less or greater than 25%, chosen by the researcher according to a specific point of view.”** (Majid and Salman, 1992, p. 19) Thus, the work focused on physical and motor abilities: (explosive strength, speed of motor response, agility, and flexibility). As in the table(1).

**Tabel 1 Percentage of capabilities Physical And mobility**

excluded	percentage	Total marks	Physical and motor abilities	T
×	20%	3	Muscular strength	1
×	13.33%	2	Power distinguished by speed	2
	100%	15	Explosive force	3
×	20%	3	The table	4
×	13.33%	2	Speed table	5
×	20%	3	the speed	6
×	20%	3	Transitional speed	7
	100%	15	Motor response	8
×	13.33%	2	Reaction speed	9
	100%	15	Agility	10
	86.66%	13	Flexibility	11
×	6.66%	1	Compatibility	12
×	6.66%	1	Balance	13
×	13.33	2	Precision	14

Then the researchers presented a questionnaire no Expert opinion will be sought to determine the most important Appropriate tests to measure the Capabilities Physical And movement in futsal and the most important tests that measure scoring skill in futsal. After

presenting them to the 15 experts, the tests were excluded.thatI got itI have a percentage of less than (25%)As in Table (2).

**Table 2 The ratio Centenary of physical, motor and scoring tests in futsal**

excluded	The ratio %	Repetition	the exams	Physical, motor and skill abilities	T
	93.33%	14	1. Vertical jump test from stability.	Explosive force	1
×	6.66%	1	2. Stability broad jump test.		
×	0%	0	3. One-foot hop test.		
	100%	15	1. Nelson motor selection response test to Yeh.	Motor response	2
×	0%	0	2. Nelson test to measure the time of return of the foot.		
×	0%	0	3. Stand-up running test.		
	100%	15	1. a test Simo Semo For agility.	Agility	3
×	0%	0	2. Edgren's test Edgren sidesteps.		
×	0%	0	3. Barrow test Barrow running zigzag.		
	100%	15	1. Sitting and arm extension test.	Flexibility	4
×	0%	0	2. Trunk lift test.		
×	0%	0	3. Back pull test.		
	93.33%	14	1. aA test of aiming at a target divided into squares numbered on both sides.	Scoring	5
×	6.66%	1	2. aFoot scoring test on overlapping rectangles.		
×	0%	0	3. aA test of scoring against a goal divided into squares .		
×	0%	0	4. aThe scoring test from standing on a football goal is divided into strips		

Thus, work settled on the following physical and motor tests and the scoring test in futsal:

1. Vertical jump test from stability/ (explosive force)(Abdul-Jabbar and Ahmed, 1987, p. 343) .
2. Nelson motor selection response test to Yeh/ (Motor response)(Allawi and Radwan, 1983, p. 245).
3. a test Simo Semo For fitness / (fitness)(Ismail, 2016, p. 304).
4. Sitting and arm extension test (flexibility)(Ismail, 2016, p. 60).
5. aA test of aiming at a target divided into squares numbered on both sides (Abdul Hamza, 2011, p. 198).

### **Scientific foundations For tests Physical and motor abilities And Futsal scoring skill test:**

It was completed Conducting the exploratory experiment on 10/5/2023 AD on (10) players from Youth and Sports Forum in Al-Sulaikhearly ft. halls To verify scientific transactions (honesty, consistency, and objectivity) and As follows:

#### **1. the sincerity:**

As The researchers served a distribution method Forms for experts and specialists to seek their opinions on determining the most important tests Physical, motor, and scoring skill tests in futsal According to what (Thaer Daoud Salman 2020 AD) states, "Content validity aims to know the extent to which the test or scale represents aspects of the trait, characteristic, or period to be measured, and whether the test or scale measures a specific aspect of this phenomenon or measures it completely." (Al-Qaisi, 2020, p. 25) And so it happened researcher One Honestly the content to All tests.

#### **2. the stability:**

Reliability, according to what was mentioned by (Thaer Daoud Salman 2020), means "its ability to give the same results or results close to them if it is re-applied to the same individuals and in similar circumstances. If the same individual obtains the same score on the same test when applied more than once, then here the test is characterized." "It has a high degree of stability." (Al-Qaisi, 2020, pages 185-186) , So It was completed Calculating the reliability of tests Physical, motor, and scoring skills test in futsal By (test and retest) method by conducting a reconnaissance experiment on (10) players from Youth and Sports Forum in Al-Sulaikhearly Provide halls, and through the use of The simple correlation coefficient (Pearson) between the scores of the first and second measurements It was completed It was concluded that all tests had high reliability because all of their calculated values were at a significant level (Sig) Smaller than the value of the approved significance level (0.05) (Al-Qaisi, 2020, p. 29) As in grandfather For (3).

#### **3. the Objectivity:**

in order to learn about the objectivity of tests physical, motor, and scoring skills test in futsal, it's done calculating the value of the simple correlation coefficient (Pearson) between the degrees of the first and second judgments, as objectivity means "the evaluators do not differ in judging something or a specific topic." (Mustafa, 2001, p. 50) It was concluded that all tests are highly objective due to the significance level values being (Sig) It was smaller than the value of the approved significance level (0.05) as shown in the table (3) Also.

**Table 3 Represent Reliability and objectivity of physical and motor ability tests And Scoring in futsal**

indication	Sig	Objectivity	indication	Sig	Consistency	the exams	T
D	0.000	0.855	D	0.000	0.840	Vertical jump from a standstill	1
D	0.000	0.804	D	0.000	0.793	Nelson's motor response selection to Yeh	2
D	0.000	0.807	D	0.001	0.782	Simo Semo For agility	3
D	0.000	0.839	D	0.000	0.814	Sitting and extending the arms	4
D	0.000	0.913	D	0.000	0.886	Scoring towards a goal divided into squares numbered on both sides	5

**The main experiment:**

Before starting the statistical treatments, the researchers conducted a normal distribution test using the Shapiro-Walk test (Shapiro-Wilk) for all tests of physical and motor abilities and the scoring test in futsal, as in Table (4), Given that all values of the significance level (Sig) for all physical and motor tests (Futsal scoring test) It is greater than the

approved significance level of (0.05), which indicates that the data follows a normal distribution. Researchers have the right to use statistical treatments: Parametric statistics.

**Table 4 Evaluate physical, motor, and scoring tests in futsal**

Shapiro-Wilk			the exams	T
Sig	Df	Statistical		
0.094	260	0.792	Vertical jump from a standstill	1
0.251	260	0.799	Nelson's motor response selection to Yeh	2
0.211	260	0.837	SimoSemo For agility	3
0.076	260	0.881	Sitting and extending the arms	4
0.120	260	0.805	Scoring towards a goal divided into squares numbered on both sides	5

Then he rose researcher One Conduct the main experiment on 10/15/2023 AD and until 12/10/2023 AD. On the main research sample, which is: With the youth and sports forum players in futsal in Baghdad Governorate for the 2023 sports season–2024 AD. And that B Apply all tests: Physical fitness, movement, and scoring in futsal on the field of each forum. And in reality one day for every forum. After completing all tests for all forums, the data has been audited in order to be processed statistically to achieve the objectives of the study.

#### **Statistical methods:**

The ready-made program was used (IBM SPSS Statistics Ver 25) To extract the percentage, Pearson's simple correlation coefficient, Multiple linear regression (**Multiple Linear Regression**) in a way (**Stepwise**)

### **3-PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS**

The relationship was extracted between the tests (vertical jump for stability, and Nelson for the kinetic response of selection) to Yes, and SimoSemo For agility, sitting and arm extension) with the skill of scoring in futsal by using the simple Pearson correlation coefficient, and a matrix of correlation coefficients shown in Table (5) was reached.

It is noted that the matrix includes (10) correlation coefficients (diagonal cells were not counted), of which (6) are significant correlation coefficients at a rate of (60%) because the values of their significance level were smaller than the values of the significance level (The approved Sig is (0.05), and (4) non-significant correlation coefficients are (40%) also because their significance level values were greater than the approved significance level (Sig) values of (0.05).

**Tabel 5 Intercorrelations coefficient matrix For physical, motor and scoring tests in futsal**

Scoring towards a goal divided into squares numbered on both sides	Sitting and extending the arms	SimoSemo for fitness	Nelson's motor response selectiontoYeh	Vertical jump from a standstill	Variables
0.816*	0.238	0.733*	0.002	1.000	Vertical jump from a standstill
0.841*	0.192	0.695*	1.000		Nelson's motor response selectiontoYeh
0.822*	0.538*	1.000			SimoSemo for fitness
0.161	1.000				Sitting and extending the arms
1.000					Scoring towards a goal divided into squares numbered on both sides

**Logical analysis of multiple linear regression of physical and motor tests in relation to the performance of the scoring skill in futsal:**

using Scoring As a dependent variable, he rose researcher One Using multiple linear regression using the method (**Stepwise**) to extract the contribution percentage Tests of physical and motor abilities in terms of performance Skill Scoring in futsal As in the table (6).

**Tabel 6 Shows the contribution percentage Physical and motor abilities In skill Scoring in futsal**



Contribution percentage	T value	Beta coefficient	F value	The slope of the regression line	Fixed amount	The coefficient of determination	Multiple correlation coefficient	Requirements	form
0.03%	1.053 0.000*	- 0.006	1.003 0.001*	1.689	12.008	0.000	0060.	Vertical jump from a standstill	the first
2.3%	1.077 0.000*	- 0.155	1.094 0.000*	47.582	63.671	0.023	1520.	Vertical jump from a standstill	the second
	1.478 0.000*	- 0.213		0.239				Nelson's motor response selection to Yeh	
9.1%	2.651 0.001*	- 0.526	3.086 0.003*	161.226	188.178	0.091	3020.	Vertical jump from a standstill	the third
	1.025 0.000*	0.004		0.106				Nelson's motor response selection to Yeh	
	2.632 0.000*	0.599		0.703				SimoSemo for fitness	
9.4%	2.643 0.000*	0.569	2.366 0.032*	174.554	201.504	0.094	3070.	Vertical jump from a standstill	the fourth
	1.294 0.000*	0.059		0.166				Nelson's motor response selection to Yeh	
	2.120 0.002*	- 0.738		0.866				SimoSemo for fitness	

	1.529 0.021*	0.087		0.124				<b>Sitting and extending the arms</b>	
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The results of the multiple linear regression analysis are shown in the table(6)That contribution percentagePhysical and motor abilities as a function of performing the scoring skill in futsalIt was as follows:

**First variable:**(Vertical jump from standstill ):

The multiple correlation coefficient was (0.006), the regression coefficient (determination) was (0.000), and the constant value was (12.008), while the calculated (F) value was (1.003) at a significance level of (0.001), which is significant because it is less than the approved significance level (< 0.05) while the calculated (t) value reached (1.053) at the significance level (0.000), which is significant because it is less than the significance level (< 0.05) and the value of the beta coefficient (-0.006). This variable achieved a significant contribution(0.03%).

**The second variable:**(Vertical jump from standstill**AndNelson's motor response selectiontoYeh**):

The multiple correlation coefficient was (0.152), the regression coefficient (determination) was (0.000), and the constant value was (63.671), while the calculated (F) value was (1.094) at a significance level of (0.000), which is significant because it is less than the approved significance level (< 0.05) while the value of (t) calculated, respectively, was (1.077, 1.478) at a significance level of (0.000, 0.000), which is significant because it is less than the significance level (< 0.05) and the value of the beta coefficient, respectively. (-0.155, -0.213), and this variable achieved a contribution rate of (2.3%)

**The third variable:**(Vertical jump from a standstill**AndNelson's motor response selectiontoYehAndSimoSemo for fitness**):

The multiple correlation coefficient was (0.302), the regression coefficient (determination) was (0.091), and the constant value was (188.178), while the calculated (F) value was (3.086) at a significance level of (0.002), which is significant because it is less than the approved significance level (< 0.05) while the calculated (t) value reached, respectively, (2.651, 1.025, 2.632) at a significance level of (0.001, 0.000, 0.000), which is significant because it is less than the significance level (< 0.05) and the value of the beta coefficient, respectively (-0.526, 0.004, 0.599), and this variable achieved a contribution rate of (9.1%).

**Fourth variable: (Vertical jump from a standstill And Nelson's motor response selection to Yeh And Simo Semo for fitness Sitting and extending the arms):**

The multiple correlation coefficient was (0.307), the regression coefficient (determination) was (0.094), and the constant value was (201.504), while the calculated (F) value was (2.366) at a significance level of (0.032), which is significant because it is less than the approved significance level ( $< 0.05$ ) while the calculated (t) value reached (2.643, 1.294, 2.120, 1.529) at the significance level (0.000, 0.000, 0.002, 0.021), which is significant because it is less than the significance level ( $< 0.05$ ) and the value of the beta coefficient, respectively. (0.569, 0.059, -0.738, 0.087), and this variable achieved a contribution rate of (9.4%).

**Discuss the results:**

It is clear from the table (6) That downhill Multilinearity by gradient method It resulted in the ranking of all variables without deleting any of them, as the most important Physical and motor abilities Which is a test (Vertical jump from a standstill), and test (Nelson's motor response selection to Yeh), and test (Simo Semo For agility), and test (A For sitting and extending the arms) It has significant contribution rates In terms of performing the scoring skill in futsal in the rate of (9.4%), and the researchers believe that the nature of the game and the style of skill performance includes a logical correlation for both physical and motor abilities with the skill of scoring in futsal, so the characteristic (Explosive force has its role in futsal In strengthening the body's organs players And the development of muscle groups They have and Which has a role As Sassy In the speed of play They have , And when it was Scoring skill is required from the player Maximum power in the shortest possible time So it should He has it M The ability to score powerfully and quickly, as well as to jump high, So Prepare from The most important conditions for explosive strength training development Strength with speed same time Therefore, mastering all types of jumping and scoring occurs when... Complete Develop strength and speed with a And equally This is consistent with what was indicated by (Haider Ghazi 2005), citing (Abdel Nasser Al-Qaddoumi): "The principle of specificity in training means that training includes movements similar to the nature of performance in the practiced activity." (Ismail H., 2005, p. 54) It also agrees with (Ali Al-Baik, 2006 AD): "Explosive power is one of the most important requirements for a football player and team sports players in general. Kicking the ball and jumping up to hit the ball with the head is considered explosive power." (Al-Baik, 2006, p. 109).

Also, the importance of the characteristic (kinetic response) of the scoring skill in futsal football is consistent with what (Muwafaq Al-Mawla, 2000 AD) pointed out, "The speed of response in football is the time it takes to perform from the moment the scoring opportunity appears until the end of the scoring process." (Al-Mawla, 2000, p. 71), It is consistent with what

was mentioned by (Wamid Shamil 2003)The fact thatalf the player possesses good motor speed and the ability to perform various types of simple and complex skills, he will have a superior ability to perform all other movements and change them according to the playing conditions."(Kamel W., 2003, p. 18)(1),

The importance of the attribute (agility) for the scoring skill in futsal is consistent with what was pointed out by (Saddam Muhammad 2013): "Agility is the attribute of a successful player, using reverse performance methods for the exercise, changing the timing and speed of the movements, working to change the boundaries of the field, changing the method of performing the exercise, performing complex movements, and creating a surprise." Regarding exercise performance(Ahmed, 2013, p. 90), AndIt agrees with what was stated by (Qasim Lazam and Furat Jabbar, 2004 AD): "The movements made by the football player require sufficient strength, accompanied by appropriate speed and good flexibility, and thus the performance is beautiful and consistent, and coordination is the most accurate concept of the player's agility."(Sabr and Jabbar, 2004, p. 46).

The importance of the attribute (flexibility) for scoring skill in futsal matchesWith (Mufti Ibrahim 2010 AD) "Flexibility contributes to saving energy and reducing performance time, in addition to its effective role in delaying fatigue, and allows for recovery."(Hammad, 2010, p. 152).

Also, the importance of the skill (scoring) in futsal is that there are contribution rates for all physical and motor abilities that are consistent with what (Qasim Lazam 2010) pointed out: "Shooting is one of the most important football activities and skills to which we must pay great attention in training juniors and youth." And the Sunni groups, because they are traditional, are considered more complex than other futsal events, as learning mistakes in them is difficult to correct and overcome in the advanced stages, and physical and skill training under the conditions of the match on a daily basis and under what is called playing or match training will inevitably lead the players to a wonderful and optimal exploitation of each game. "Their technical and skill capabilities in the process of shooting or exploiting any opportunity towards the opponent's goal at high speed."(Sabr, 2010, pages 245-255)It also agrees with what (Saleh Radhi, 2000 AD) pointed out: "Goaling is the most important skill in football, and through it the results of matches are decided, whether they are from fixed or moving balls. It is the most important part of offensive play and one of the basics of the game at all."(Amish, 2000, p. 42)(1).

#### **4 - CONCLUSIONS AND RECOMMENDATIONS**

##### **Conclusions:**

1. It was found that there is a contribution percentage for Test (Vertical jump from a standstill) as one of the indicators of physical and motor abilities, along with scoring skill in futsal, it increased by (0.03%).
2. It was found that there is a contribution percentage for Test Y (Vertical jump from standstill and Nelson's motor response selection to Yeh) as one of the indicators of physical and motor abilities, the scoring skill in futsal increased by (2.3%).
3. It was found that there is a contribution percentage for Test Y (Vertical jump from standstill and Nelson's motor response selection to Yeh and Simo Semo for agility) as one of the indicators of physical and motor abilities, along with scoring skill in futsal, by (9.3%).
4. It was found that there is a contribution percentage for Test Y (Vertical jump from standstill and Nelson's motor response selection to Yeh and Simo Semo for agility sitting and extending the arms) as one of the indicators of physical and motor abilities, along with scoring skill in futsal, by (9.4%).

### **Recommendations:**

1. It is necessary to conduct similar studies on physical and motor abilities and scoring skills in futsal and at other levels for both genders.
2. It is necessary to conduct similar studies on physical and motor abilities and try to determine the percentage of their contribution to other football skills that were not addressed in the current study.
3. It is necessary to direct researchers and coaches to pay attention to the results of the study in planning future programs to develop the true performance level of futsal players.
4. It is necessary to circulate the results of the final study to all youth and sports forums and sports clubs in order to rely on the tests used to judge the suitability of players to practice futsal.

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