



ISSN Print: 2664-7559
ISSN Online: 2664-7567
IJSHPE 2025; 7(1): 14-19
www.physicaleducationjournal.in
Received: 11-10-2024
Accepted: 16-11-2024

Rand Raad Mhmood Yousif Al-Shaea
Faculty of Basic Education,
University of Al-
Mustansiriyah, Iraq

Some physical abilities and body measurements and their relationship to offensive basketball skills among third-year students

Rand Raad Mhmood Yousif Al-Shaea

DOI: <https://doi.org/10.33545/26647559.2025.v7.i1a.171>

Abstract

The importance of research in identifying some physical abilities and some physical measurements is not the most important offensive basketball skills because physical and physical abilities have a significant impact on basketball skills, especially offensive skills. These abilities vary from player to player. The researcher used the descriptive curriculum in the survey method to solve the research problem. The researcher identified the research community's 49 third-level students. The sample of the research was 15 students, as in table (1). The search sample was selected in a random manner. The research procedures included a physical capability test and a medical ball propulsion test to measure the muscle capacity of the arm. The researcher concluded that there was a moral correlation between both the total body length and the upper end length of the offensive basketball skills of third-level students. There was a moral correlation between the pushing of the ball and the offensive basketball skills. (Medium) followed by a good level and therefore acceptable, the researcher recommends that numerous research be carried out to measure the physical abilities of players and students and the need for coaches and teachers to rely on the use of exercises to develop physical abilities in basketball.

Keywords: Physical abilities, physical measurements, offensive skills

Introduction

Scientists in the issues of physical education and sports science have seen that physical abilities, motor abilities and physical qualities are at the centre of disagreement between East scientists (The former Soviet Union down to East Germany), Western Europe and America each team has what it needs in their opinion. In the same way, flexibility is at the centre of the scientists' disagreement whether physical or motor capability. The most likely view is that physical abilities (Table speed force) and motor capabilities (Agile elasticity balance accuracy) For all simplicity, the efficiency of muscle groups on elasticity for the farthest range of motion is accompanied by flexibility in the movement of the joint and return to the normal position of the body without injuries called elasticity. If the body parts have the ability to move in different directions and angles without ruptures in the working tissue and anti-tissue or impediment to movement if the body is characterized by elasticity. During physical and skill performance, tests and measurements are one of the calendar, diagnostic and guiding tools as well as scientific indicators of good research work based on sound foundations. Here we find it a tool for evaluating different programs, curricula and plans for all levels and limited age stages on sports activity; Therefore, theoretical and practical scientific research is based on measurement, testing and evaluation in the field of physical education and mathematical sciences.

Basketball is prepared. One of the sporting activities that has reached a sophisticated level as a result of the scientific aspect of all aspects of it because it is one of the games that has gained great interest and popularity because of the nature of the fast game and its strength in defence and skill in attack, and because it contains individual foundation skills and a lot of vehicle it has become necessary to detect. For the trainee to achieve a high level of training and mastery of the various skills required by this game, accompanied by excitement and enthusiasm, and for the purpose of upgrading this game to achieve a win, the need to research the details of this game has emerged. The game and the determinants of the impact on the game's results, level of achievement and requirements for success.

Corresponding Author:
Rand Raad Mhmood Yousif Al-Shaea
Faculty of Basic Education,
University of Al-
Mustansiriyah, Iraq

The study aims to identify some of the physical measurements in some of the offensive skills in student basketball, as well as some of the physical abilities of students' basketball offensive skills.

Research Problem

By informing the researcher of many different studies that touched on determining the levels and standards of different games and events and visiting the national centres for the care of sports talent and familiarizing her with the games, the researcher emerged in the mind of the problem by asking the following questions:

What are the standard levels of the most important offensive basketball skills for junior players at the National Sports Talent Care Center in Diyala, which can reflect the performance efficiency of players?

The researcher has set standard levels for basketball players' composite offensive skills, helping to reach higher levels and achieve higher levels at the local, Arab and Asian levels.

Research Objectives

1. Recognize the relationship of physical measurements to some of the basketball skills of third-level students.
2. Recognize the relationship of some physical abilities to some of the basketball skills of third-level students.

Research hypotheses

1. There is a statistically significant correlation between physical measurements and the performance of certain offensive basketball skills.
2. There is a statistically significant correlation between physical abilities and the performance of certain offensive basketball skills in third-level students.

Research Areas

1. **Human Field:** Third Grade Students/Faculty of Basic Education
2. **Time area:** Research was conducted from 12/10/2024 to 29/1/2025
3. **Spatial Area:** Closed Sports Hall at Faculty of Basic

Table 2: Showing expert score and percentage of basketball offensive skills

Admission indication		Relative importance	Experts' Degree	Experimentation
No	Yes			
√		34,54%	18	(Receipt + high coating + peaceful correction)
	√	78,18%	20	Shuttle running (25 * 8) from high start
√		34,54%	18	Offensive Footwork
√		29,09%	14	My fakies
	√	88,18%	25	Run 20 m from bird start

Basketball Candidate Skills Tests

Physical abilities tests

First: Shuttle running test (25 * 8) from high start:

The objective of the test: to measure the velocity tolerance of the two men's muscles.

Tools used: -Metering tape _ duct tape _ stop clock _ level yard longer than 30 m-whistle

Test specification: Two parallel lines draw the distance between them (25) m The laboratory stands at the starting line and at the starting signal it runs at full speed towards the second line to touch it foot and then turns back to the

Education.

Materials & Methods

Research curriculum and its field procedure

Research methodology: The researcher used the descriptive method of survey to fit it in solving the problem of research. The survey method is known as a study by the researcher to detect the problem of society.

Research Sample

The research community identifies the third phase students. The researcher selected the research sample consisting of the third phase students in the Faculty of Basic Education Department of Physical Education and Sports Sciences and the number of (45) students. The research sample was 36 students, as in Table (1). The sample of research was selected in a deliberate manner

Table 1: Shows the description of the society and sample of the research

Society	Sample	Percentage
46	36	75

Devices and tools used in research

1. Balance Weight Number (1)
2. Tape Measuring Number (1)
3. Colored Chalk Number (2)
4. Whistle Number (1)
5. Electronic Laptop Calculator Type (dell) Number (1)
6. Basketball Court
7. Basketball

Field Search Procedures

Identification of tests

Offensive skills were identified and included in a questionnaire form. The form was then presented to the experts and received an acceptance ratio of 30 and the highest approval of the experts (54.45%). However, the researcher used this percentage according to the opinion of 11 experts and the results of accepting three composite basketball skills.

starting line, repeats this performance (8) times to become the traveled distance (25 * 8) = 200 m.

Test instructions: The lab gives two attempts and calculates the best attempt time.

Registration: The laboratory records the time it took to travel the distance by second and its parts

Second

Test ran 20 m from flying start:

Test Purpose: Transitional Speed Measurement

Tools: Measuring Bar-Chalk-Hour Timing-Whistle Second and Part

Second: Test ran 20 m from flying start:

Test Purpose: Transitional Speed Measurement

Tools: Measuring Bar-Chalk-Hour Timing-Whistle

Performance Description: We draw 3 parallel lines on the ground and the distance between the first line and the second line 10 m between the second line and the third line 20 m. The laboratory stands behind the starting line and from the high start at the signal the laboratory runs increasing at a speed up to the maximum at the second start line and ends at the end of the third line.

Registration: Records the time taken by the laboratory from the beginning of the second line until the moment it passes the finish line of the second and its part. The lab is allowed to perform two attempts after giving the standard rest to record its best.

First/test peaceful basketball straightening for 30 seconds

- **The objective of the test:** Getting the tolerance of peaceful correction.
- **Used tools:** Basketball court, basket balls, stopwatch, pre-prepared calendar form. *
- **Performance Description:** The lab stands on the free throw line and holds the ball in the hands. The whistle is heard performing the peaceful straightening in whatever direction it desires and then returning to take a second ball on the chair and on the free throw line to complete the peaceful straightening until 30 seconds.
- **The method of scoring:** The calculation of each successful injury is one point and the figure that reflects the amount of injuries achieved within (30) seconds, as shown in the figure

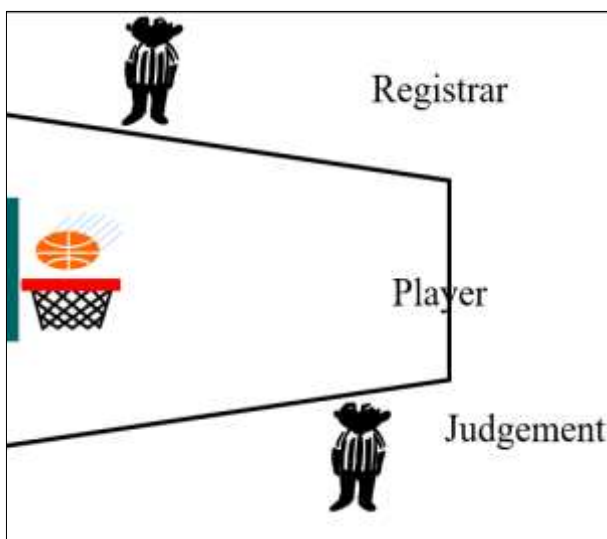


Fig 1: Explains the basketball peaceful correction test for 30 seconds

Second: The skill of aiming from jumping basketball
Test name: Correct from jumping from different places. (1):

The objective of the test: To measure the accuracy of the correction from jumping from different places.

Used tools: Bowball court, legal basket number (5), duct tape and tapes to locate the straightening on the ground, measuring tape to measure distances, pre-prepared calendar form. *

Procedures

1. Fixing a central point below the basket depends on it for marking the main points.
2. From the central point we select (10) points as follows:
 - From the central point we draw five points in different places and within 4.5 meters.
 - From the central point we draw five points in different places and within (6) meters,

As shown in figure (2).

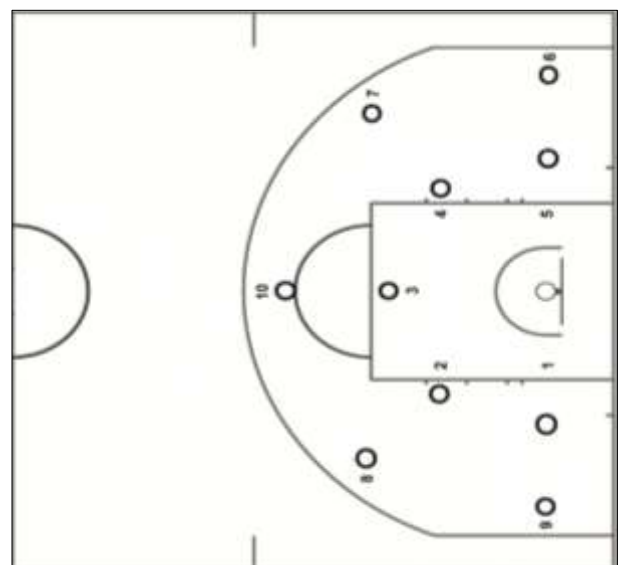


Fig 2: The aiming test shows from jumping basketball from different places

Performance description: The player starts from point (1) by correcting by jumping, moves if the correction succeeds to point (2) and thus continues, and does not move to the next point if it fails.

Test instructions

1. The player (15) is given an attempt from the 10 places.
2. If the player scores (10) injuries in less than (15) attempts, he corrects the rest of his attempts from the point (10).

Test Management

Registrar: He shall call the names first and record the results of the correction by jumping second.

Working Group: Works to prepare the five balls in the designated areas (Nearest and farthest to the basket).

The method of registration: -The same as

1. Calculate (100) points in case of recording (10) injuries from (15) correction.
2. The player (7) loses points for each injury under 10 injuries.

- The player (7) points per injury shall be added more than (10).

Exploratory experience

The research tests exploratory experiment was conducted on Saturday, 2 October 2024 at 10 a.m. in the interior of the Department of Physical Education and Sports Sciences of the Faculty of Basic Education with the following objective:

- Know the time it takes to do tests and sequence them.
- Know the responsiveness of the sample and the ease of the test performance.
- Ensure the validity of used devices and tools.
- Know the ability of the team to perform its tasks accurately and find out how to fill out the form for the research.
- Know the disadvantages and obstacles that may be encountered in conducting tests.

Scientific foundations of tests

First: Believe the test

Honesty is one of the most important basic qualities of a good test, and it is the basis for building tests for the benefit of this quality to different tests and to learn about the components of the test and the individual's capabilities thereafter. "Sincerity has many definitions, most notably and most notoriously, quoting who defines honesty as the degree of health by which testing measures what we want to

measure." In the sense that an honest test measures the function that has been developed to measure it and does not measure another instead or increase it. By familiarizing the researcher with the sources and previous studies that adopted the skill tests, the researcher found that they were rationed and at the same age stage, the researcher used apparent honesty and construction honesty (Content by presenting the test to experts in the field of competence.

Second: Test stability

A good test: "It is the test that gives close results or the same results, as what has been applied more than once in the same circumstances" (In order to verify the stability of the test, the researcher used the test method and retested the test results were taken in the first survey experiments on the reconnaissance samples for a week. The tests were returned a week after the start of the tests, and the sample was made up of (25) Players, the binding coefficient was calculated using the Simple Binding Law (Pearson) between the two applications as an indication of the stability rate.

Third: The objectivity of the test

The tests used by the researcher are based on (digital) results and the tests are not subject to the judgment of the judges in obtaining the result, they are far from biased and self-evaluating and have good objectivity.

Table 3: Shows the stability rate and self-honesty of composite offensive skills tests

Connectedness	Self-honesty	Constant Rate	Tests	TT
Moral	0.916	0.84	Basketball Peaceful Correction Test	1
Moral	0.959	0.92	The skill of aiming from jumping basketball	2
Moral	0.932	0.87	Physical abilities tests	3

The data were treated statistically, with the researcher using the Pearson coefficient at a degree of freedom. N-2 = 4 and indicative level (0.05)

Main experience

After identifying the tests and completing the exploratory experiment, and after adapting the appropriate tools and the place of implementation of the tests and standardizing the time and conditions of conducting the tests according to the order of the exploratory experiment, the researcher applied the tests to the main sample number (38) Player on Sunday coincidence (20/10/2024) where tests were conducted on the research sample at 10 a.m. at the closed base of the Faculty of Basic Education.

The researcher has taken appropriate regulatory measures to ensure the proper conduct of the tests and the achievement of the following objectives:

- Preparation of the place of conducting the tests.
- Explain and display test vocabulary, registration rules and performance method before starting application.

- Give testers a duration of (15) minutes to perform warm-up before starting to apply tests.

Statistical methods the statistical portfolio (SPSS) was used to address the results obtained by the researcher based on scientific sources using the following statistical tools:

- Standard deviation.
- Simple binding coefficient (Pearson).
- Torsion coefficient.
- Adjusted T.
- Zoom Class.

Presentation, analysis and discussion of results

Presentation and analysis of results: View the correlation coefficient between some physical measurements and its interactive skill and correction.

Table 4: The coefficient of association for the following variables

Moral Degree	T value calculated for correction	Moral Degree	QR Accountable For Interviewer	Changing statistical milestones
Moral	0.82	Moral	0.72	Total Body Length
Moral	0.76	Moral	0.66	Length of upper end
Moral	0.68	Moral	0.57	Hand Display

Moral correlation at error ratio (0.05) in front of degree of freedom (12.2.10)

Table (4) shows a moral correlation between the length of the total body and an interactive test where the calculated value (t) (0.72) when compared to the tabular value of (0.57)

and a degree of freedom (10) and an error ratio (0.05) were greater than the calculated value (t).

Table (4) also shows a moral correlation between the length of the kidney's body and the correction test, where the calculated value (t) (0.82) when compared to the tabular

value of (0.57) and a degree of freedom (10) and an error ratio (0.05) were greater than the calculated value (t) of the tabular.

Table (4) shows a moral correlation between the length of the upper end and an interlocutory test where the calculated value (t) (0.66), when compared to the tabular value (0.57), and a degree of freedom (10), and an error ratio (0.05), the calculated value (t) was greater than the tabular value (t).

Table (4) also shows a moral correlation between the height of the upper end and the correction test, where the calculated value (t) (0.76) when compared to the tabular value of (0.57) and a degree of freedom (10) and an error ratio (0.05) were greater than the calculated value (t).

Table (4) shows a moral correlation between the width of

the hand (0.57) and an interactive test where the calculated value (t) was (0.73) when compared to the table value of (0.57) and the degree of freedom (10) and at the error ratio (0.05) the calculated value was (t) greater than the table value.

As can be seen from table (4) there is a moral correlation between the length of the kidney body and the correction test where it was.

The value (t) calculated (0.81) when compared to the tabular value of (0.57) and the degree of freedom (10) and the error ratio (0.05) calculated was greater than the value (t) calculated.

View the correlation coefficient between some physical abilities and my interactive skills and correction.

Table 5: Shows the correlation coefficient of the following variables

Moral Degree	T value calculated for correction	Moral Degree	QR Accountable for Interviewer	Changing statistical milestones
Moral	0.79	Moral	060	Shuttle Running Test (25 * 8) from High Start
Moral	0.73	Moral	0.75	Run 20 m from bird start

Moral correlation at error ratio (0.05) in front of degree of freedom (12.2.10)

Table 5 shows a moral correlation between the 30 m speed test and the interviewing test where the calculated value (t) (0.60) when compared to the tabular value (0.57) and the degree of freedom (10) and the error ratio (0.05) were greater than the calculated value (t).

Table (5) also shows a moral correlation between the 30 m speed test and the correction test where the calculated value (t) (0.79) when compared to the tabular value (0.57) and the free score (10) and the error ratio (0.05) were greater than the calculated value (t).

Table 5 shows a moral correlation between a medical ball force test and an interlocutory test where the calculated value (t) (0.75) when compared to a tabular value of (0.57) and a degree of freedom (10) and an error ratio (0.05) were greater than the calculated value (t).

As can be seen from table (5), there is a moral correlation between the medical ball force test and the correction test, where the calculated value (t) (0.73) when compared to the tabular value (0.57) and the degree of freedom (10) and the error ratio (0.05) were greater than the calculated value (t).

Discussion of results

In the light of the research's findings, the correlation to the total body length variable, the upper end length and the width of the hand, with two interactive skills and correction were moral).

The researcher attributes that there is a strong correlation between physical measurements of the interlocutory and corrective skills because each sport, especially basketball, has sudden physical frictions and that the height of the target needs high flexibility to overcome any impediment directed by the athlete and to register".

Height is one of the most important qualities of basketball players. Whenever the player is long, the center of gravity of the body and next can overcome the height of the net and skill performance: "And that's what the scarf and his weight and height referred to." His study was the relationship between some selected bodily measurements and the explosive power of the upper and lower limbs of basketball players, where he found a peculiar link between the length of the body, the length of the arm, the length of the man with the explosive strength of the upper and lower limbs and

a reverse correlation between the weight and explosive strength of the lower limbs. (7) Relationship.

Conclusion and Recommendation

Conclusion

1. A moral correlation between the physical variables of the total body length and upper limbs and the width of the hand with the offensive skills of basketball.
2. Moral correlation between physical abilities and offensive basketball skills of third-level students.

Recommendations

1. Emphasis by trainers on the use of modern techniques to recognize the performance of skills and develop physical abilities.
2. Interest in developing the physical abilities of third-level students.
3. Conducting similar research involving physical variables and students' physical abilities.

References

1. Kamal A, Hassan SM. Handball. Mosul: Books, Printing and Publishing House; c1989.
2. Tiger E. Measurement and evaluation in special education. Amman: Yazuri Publishing and Distribution House; c2008.
3. Siddiq MA, Samia S. Manual for the preparation and design of psychological tests and measurements. University of El Mina Library; c2005.
4. Al-Yasri MJ. Theoretical foundations of sports education tests. Dar El Dia Printing & Design, University of Babylon; c2010.
5. Abdul Hamid K, Hassanin MS. Measurement in handball. Cairo: Dar al-Arabi Thought; c1980.
6. Abdul-Jabbar QN, Ahmed B. Tests and statistical principles in the field of sports. Baghdad: Higher Education Press; c1980.
7. Job HS, *et al.* Modern principles in basketball. Egypt: United Printing; c2005.
8. Allawi MH, Radwan MN. Skill and psychological tests in sports. Cairo: Arab House of Thought; 1987.

9. Obscured G. Kinesiology and motor learning. Baghdad: University of Baghdad, Beit al-Hakma; c1989.
10. Expresses K. Motor learning between principle and application. Baghdad: The Rock Printing Office; c2002.
11. Mustafa AR. The impact of learning the footwork on the peaceful correction skill. In: Proceedings of the 2nd Scientific Sports Conference, Faculty of Sports Education, University of Jordan. 1993 Jan 30-Feb 2.
12. Mohammed MS. Following up on the offensive rebound of the goal and its relationship with the match results [Master's thesis]. Faculty of Sports Education, University of Baghdad; c1990.
13. Wise AJ. Tests, measurement and statistics in sports. Qadisiyah University: Spectrum for Printing; c2004.
14. Al-Tikriti DY, Al-Obaidi HM. Statistical applications and computer uses in sports education research. University of Mosul: Book House for Printing and Publishing; c1999.
15. Al-Zu'bi MB, Al-Talafha A. The SPSS statistical system: Understand and analyze statistical data. Jordan, Amman: Wa'el Printing and Publishing House; c2000.
16. Barrow M. Movement principles of physical education. Lea & Febiger; c1996.
17. Khraibit R, Daoud T. Methods of designing test and measurement batteries in physical education. Basra: Dar Al-Hekma, University of Basra; c1992.
18. Mahmoud I. Testing the performance of a number of physical and skill variables and their relationship to the results of basketball teams [Master's thesis]. College of Physical Education, University of Baghdad; c2002.
19. Mahmoud M, Hassanein M. The modernity about basketball. Cairo: Modern Book Center; 2012.
20. Mahmoud Z. Establishing tests (physical-skills) designed according to the energy systems of youth basketball players [Doctoral dissertation]. University of Baghdad, College of Physical Education; c2009.
21. Milhem S. Research methods in education and psychology. 1st ed. Jordan, Amman: Dar Al-Maysara; c2000.
22. Naji Q, Ahmed B. Tests and principles of statistics in the mathematical field. Baghdad: Baghdad University Press; c1984.
23. Obeidat T. Scientific research: Its concept, tools, and methods. 1st ed. Amman: Dar Al-Fikr for Printing and Publishing.