

The Effect of Special Exercises to Develop Some Physical and Skill Capabilities Using Basketball Auxiliary Materials (3 vs 3) for Youth Players

Zaid Mohammed Jabbar¹, Mohammed Jabbar Monadi²

¹The General Directorate of DhiQar Education/Al-Islah Department, ²The General Directorate of DhiQar Education/Technical Supervisor/Department of Sports and School Activity

Abstract

For weight lifting exercises, these exercises work to develop (the explosive strength of the arms) and (the force characterized by speed, and the bearing strength of the two legs) as well as developing the skill of shooting by jumping with two point and through the researcher's follow-up to the matches, he found that many young players lose a lot of physical and skill capabilities with the passage of time, especially in the last minutes of the game. Due to the lack of interest in some requirements of the training process, including (the explosive strength of the arms) and (the force distinguished by the speed and the bearing strength of the two legs) in addition to the skill capabilities chosen in the research as well as the small number of training units, which leads to inconsistency with the requirements and training of physical and skill performance and the type of muscular work to perform. Hence, the research problem crystallized, as the researcher decided to study this topic and prepare special exercises to develop some physical and skill capabilities using auxiliary tools to develop and their impact on the performance of two-point hopping by basketball players for (3 vs 3) for youth.

Keywords: *Special Exercises, Physical, Skill Capabilities, Basketball.*

Introduction

Sports training based on scientific principles is one of the most important factors that enable us to reach the highest level of sports¹ that can be reached, and special exercises are one of the method of sports training that aims to raise the efficiency of players in terms of physical and skill, and from here comes the role of auxiliary tools that have The biggest impact and the basis in training various sports, including the basketball game for (3 vs 3), as we note that the various sports departments² and coaches around the world are looking for everything new in order to contribute to developing the level of performance of players and improve their results, which affects and positively in the development of capabilities Players physically and skillfully³. The basketball game for (3 vs 3) is one of the games that were recently developed and started to spread in various countries, including our dear country, Iraq. This game has many characteristics that differ from the usual basketball, as it is practiced in half of a stadium measuring (11 m ×

15 m) With a time of (10) minutes for the match, the team that scores (21) points ends the match in its favor even if it is before the specified time, and the attack time will be (12) seconds, and this requires a special physical preparation to help the players to continue with physical and skill performance and at the same level³.

Among the most important physical abilities in the basketball game for (3 vs 3) are (the explosive strength of the arms) and (the force characterized by speed, and the bearing of force for the two men) As for the skill that is more important is aiming to jump with two points, that training the physical abilities of the basketball game for (3 vs 3) in ages (under 18 years) for young players is one of the essential things in order to build a training base to supplement the national teams, as it represents a stage of preparation in advance for clubs and teams players, using tools and scientific method to achieve better results for them in the future. Hence the importance lies in preparing special exercises to develop skillful physical abilities by using the auxiliary tools, as

these tools have become used by the world as an integral component of weight training and these exercises work to develop (the explosive strength of the arms) and (the force characterized by speed, and the bearing of force for the two men) as well as the development of Shooting skill by jumping with two points⁴.

Sample homogeneity and sample equivalence:

Sample Homogeneity: The researcher conducted the homogeneity of the sample members, and the researcher used the coefficient of variation and conducted the homogeneity in each of the length, weight, age, training age, and table (1) shows that.

Table (1). Shows the equivalence of the control and experimental groups in the sample measurements and the research variables.

No.	Variables	M	Control group		Experiment group		The calculate value of (T)	The scheduled value of (T)	Statistical significance
			M	SD	M	SD			
1	Explosive power For arms	Watt	4.47	0.30	4.48	0.31	1.374	1.76	Not significant
2	Distinguished strength Fast For the two legs	S	9.97	0.611	9.85	0.680	0.514		Not significant
3	Stamina	No.	35.9	5.44	30.2	7.42	1.95		Not significant
4	Aiming from the he front by jumping	Point	14.5	1.354	15.2	1.398	1.197		Not significant

Method

1. Arab and foreign sources.
2. World Wide Web (Internet).
3. Observation and experimentation.
4. Personal interviews.
5. The assistant team.

Devices and auxiliary tools used in the research:

- A device for measuring weight (country of origin, China), count (1).
- A laptop computer (hp - pavilion g6/elite book) (country of origin, America), count (1).
- Canon type digital camera (country of origin, Japan), count (2).
- Stopwatch type (Omega) and (Han Hart) (country of origin, China) count. (2).
- Legal Basket Balls (Molten) Number (10).
- A medical ball weighing 3 kg, count (1).
- Whistle (molten), count (2).
- Patio and seating areas.

- Chairs, number (4).
- Leather tape measure length (20 m), count (1)
- 4 colored adhesive tape.
- Signs of (10) height (30) cm
- cones of different heights, number (10).
- Recording papers and pens.
- Half a legal basketball court.
- Ground stairs (1).
- Lean handles.
- Different tensile elastic cords (country of origin Germany - manufacturer/acreative).
- Jumping ropes (country of origin Germany - manufacturer/acreative) count (4).

Determining the physical and skill capabilities of basketball for (3 vs 3) and its tests: After reviewing the available scientific sources that are appropriate to the subject of the study and through conducting personal interviews with trainers with expertise and specialization, as well as the researcher relying on his personal experience, physical and skill capabilities were identified where physical capabilities were chosen and

they are both (the explosive capacity of the arms and the strength marked by speed And bear the strength for the two men) As for the skillful abilities, the skill of shooting was chosen by jumping by two points and peaceful aiming.

Determining the tests for basketball's physical aptitude for (3 vs 3): The test is (a set of exercises given to the individual with the aim of identifying his abilities and aptitudes or qualifications, by examining the researcher on a set of scientific sources as well as conducting personal interviews with coaches and those with experience and specialization in the field of sports training as well as benefiting from the researcher's modest experience as a player in the league Excellent Iraqi basketball as well as his participation in (3 vs 3) tournaments held by the Iraqi Central Basketball Federation in previous years, a group of physical and skill tests were chosen that are appropriate to the nature of the research.

Describing physical and skills tests :

Describing physical ability tests:

First : Arms explosive power test: Throwing a medical ball weighing (3) kg with two hands from a sitting position on the chair.

The purpose of the test: To measure the explosive power of the arms of the arms.

Instruments used: A medical ball weighing (3) kg, a tape measure and a chair with a secured torso strap.

Method of performance: The laboratory sits on the chair and the medical ball is held in hands with hands so that the ball is higher and behind the head.

Conditions: The laboratory is granted three consecutive attempts, and the laboratory must be allowed to perform a number of throws for the purpose of warming up before performance. When the laboratory moves during the performance of one of the attempts on the chair, the result is not counted and another attempt is given instead.

Recording: The distance between the front edge of the chair and the nearest point the ball places on the ground is calculated. The result of the best attempt is calculated from the three attempts.

Second: Strength test for the two legs speed:

Name of the test: The forward jump test for the two legs during (10 seconds).

The purpose of the test: To measure the characteristic velocity of the muscles of the legs.

Tools: Flat space floor space, tape measure, stopwatch, whistle, chalk or marker

Method of performance: The laboratory stands on the starting line and when you hear the start beep and start the operation of the stopwatch, the laboratory launches with the maximum speed forward in front of the two legs from the moment of the first whistle until the timing reaches (10 seconds) and the distance traveled by the player during the test time is calculated.

Recording: The distance traveled is measured in meters and its parts during time (10 seconds).

Third: strength tolerance test:

Test name: Endure the strength of the two legs.

The purpose of the test: To measure the strength of the two men.

Tools: Flat ground or legal basketball court, person with height (30) cm.

How to play: Upon hearing the beep, the player starts jumping from the stake of the two sides (right and left) for a period of (30) seconds.

Recording method: Calculates the maximum number of jumps for a player within (30) seconds.

Exploratory Experience: The exploratory experience is a practical training for the researcher to determine the negatives and positives that the researcher meets during the test to avoid them, and this is why the researcher conducted his exploratory experience on a sample of (8) players from the young players of Al-Furat Sports Club in basketball and with the help of the team after explaining the tests For them and how to register, the experiment was carried out on (1/8/2019) on (Thursday), at exactly (4/PM) and continued for one day divided between physical and skill tests, so it was:

1. Knowing the difficulties and problems that the researcher faces during taking the tests.

2. Knowing the time taken for each user test.
3. Ensure that the auxiliary team understands the vocabulary and how efficient it is in applying it.
4. Find the scientific conditions and transactions for the tests (validity, reliability, objectivity).
5. The appropriateness of the tools and devices used in the test.
6. Knowing the difficulties and problems facing the researcher during the application of special exercises.
7. Knowing the time taken to perform exercises.

The scientific foundations of the test: The researcher has taken into account the scientific conditions that must be met for the selected tests within the study, and mentions QaisNaji and Bastawisi Ahmed (1987) (The most important characteristics of a good test, as well as measurement, are the test of validity, reliability, and objectivity factors for that test or measurement).

Honesty: There are several method for measuring the honesty of the tests, including (apparent honesty). The apparent honesty means that “the test appears to be true in its apparent form because its name relates to the function to be measured. The apparent honesty can be relied upon in the validity of the test and its sincerity, which is the method the researcher used to find the truthfulness of the tests

Stability: “The concept of persistence is the degree of confidence, i.e. the result of the test with a constant value during repetition or repetition, i.e. the meaning of persistence of the results obtained by the researcher if the experiment was repeated on the same group. A week has passed since physical tests were repeated on 7/8/2019 on Wednesday, and the researcher used the Law of Correlation Coefficient (Pearson), to extract the coefficient of persistence, and physical and skill tests had a high degree of stability.

Objectivity: The method for calculating the scores in the tests used in the research was determined by time or number and is objective in itself.

Research Procedures: The researcher has determined all the requirements of the main experiment through identifying physical and skill tests using the auxiliary tools, and after conducting the exploratory experiment and benefiting from them in organizing work and preparing for the main experiment, the researcher

has conducted a pre-training unit for the individuals of the main experiment sample in order to familiarize the sample members with the nature of the exercises To be trained on.

Pre-test: After providing all the necessary conditions and requirements for the tests, the researcher conducted the tribal tests on (8/8/2019) on Thursday, where the researcher conducted the tests for physical and skill capabilities.

2-11 Exercises:

First-Goals: The researcher prepared exercises aimed at developing (the explosive ability of the arms) and (the force characterized by speed and endurance of strength) for the two men. The exercises also aimed at developing both skills of two-point jumping and peaceful shooting, using the auxiliary tools, for young players in basketball.

Second- Standards:

Test the content of the proposed training curriculum

A- To contribute to achieving the goals of the special preparation stage (physical and skill) for young players (Al-Nassiriya Sports Club in basketball).

B- The contents of the curriculum should be consistent with the physical and skill characteristics of the players.

C - The curriculum was applied by extracting the average tension of all exercises used in the curriculum.

D - to take into account what means and capabilities affect when implementing.

E - Diversity in the contents of the curriculum and flexibility in implementation, which makes the effect of the curriculum clear on implementation.

F- The auxiliary tools used in the research should fit the capabilities of young players to use and interact with these tools.

Third - Training Method: The researcher used the exercises with the method of high intensity young training.

Dimensional tests: After completing the application of the exercises used in the research to the main research sample, the post-tests were conducted on the experimental and control group, taking into account

“in all the circumstances, the method of implementation and the tools used, since the post-tests were done on (9/10/2019) on (Wednesday) the researcher By conducting physical and skill tests.

Statistical Means: The researcher used the necessary statistical means to treat the results in a way that serves the research goals and relying on the SPSS-24 statistical bag, which is:

1. Arithmetic mean
2. Standard deviation.
3. Percentage.
4. (T) for the specimen samples.
5. Persson coefficient of stability.

Circles and standard deviations and value (T) calculated and the significance level and type of significance of the physical capacities and skill shooting by jumping two points in the tribal and posttests of the experimental group, reaching the arithmetic mean of the ability of the explosive armrests in the pre-test (5.51) and standard deviation (In the post test, the mean was (6.16) and the standard deviation was (1.21). The calculated value of (T) was (2.301) and the significance level was (0.05). As for the type of significance, it was (moral). The tribal (18.28) and the standard deviation (6.37), and in the post-test the mean (31.05) and the standard deviation (2.41), while the calculated value of (T) was (3.421). As for the level of significance it reached (0.05) and the type of significance (moral), and the mean of bearing the strength of the two legs in the pre-test (3.62) and the standard deviation (3.50), and in the post-test the mean (53.25) and the standard deviation (5.37), and the value of (The calculated value has reached (3.425) and the level of significance (0.05). The type of significance is (moral). The standard (1.29), the calculated value of (T) was (2.678), and the significance level was (0.05) and the type of significance (moral).

The arithmetic mean, the standard deviations, the calculated value (T), the level of significance, and the type of significance of the physical capabilities in the pre and posttests of the control group, as the mean of the arm's explosive power in the pre-test (5.63) and the standard deviation (0.89), and in the test The dimensional mean (5.86) and the standard deviation (1.34), and the calculated value of (T) was (3.021) and the level of significance (0.05) as for the type of significance was

(moral), and the mean of the force marked by the speed of the two legs in the tribal test (19.02) and the deviation The standard (2.03), and in the post test, the mean (28.30) and the standard deviation (3.61), as for the value The calculated (T) was (3.542) while the significance level was (0.05) and the significance type (moral). The mean for the strength tolerance of the two legs in the pre-test was (33.25) and the standard deviation (2.50), and in the dimensional test the mean (40.25) and the standard deviation (3.50), while the calculated value of (T) was (2.487) and the level of significance (0.05) As for the type of significance, it is (non-significant). The mean of the correction for jumping was two points in the pre-test (5.75) and the standard deviation (1.70), and in the post-test the mean (9.50) and the standard deviation (1.29). (3.267). The level of significance was (0.05) and the type of significance (moral).

The researcher attributes the positive results to the control group as a result of the coach's curriculum and their commitment to applying it during the daily training units and the results of physical and skill tests have shown that they have evolved and this confirms the correlation between physical capabilities and basic offensive skills in basketball, “The physical factor must include the strength of the player who helps him to Shooting with strength, agility and flexibility is the player who can take the right position when shooting. Through the foregoing, the researcher sees that the development of basic offensive skills in basketball comes as a result of the practice of regular and planned training correctly, which affected the physical capabilities of the research sample and consequently affected the basic offensive skills that developed well after the application of exercises and that had an effective impact in increasing The accuracy of performing basic offensive skills in basketball, and this is what (Mohammed Hassan Allawi, 1994) indicated that “physical preparation of strength, endurance and speed is considered the main pillar for raising the tactical level of players. The researcher agrees with (Qasim Hassan Hussein) that the training process is “the continuous organized process that gains the individual knowledge, skill, ability, ideas or opinions necessary to perform a specific work or achieve a specific goal as well as achieving organizational goals and adapting to work and what is offered to the individual from Certain information, skills, or mental attitudes are necessary in the organizational viewpoint to achieve the organization's goals”.

Conclusions

According to the research results, the researcher reached the following conclusions: The exercises prepared by the researcher have a positive and effective impact in developing physical abilities and two-point shooting skill by jumping in basketball for youth. As a result of the development of physical abilities, this was the reason for developing the skill of shooting with two points by jumping in basketball for youth.

1. The researcher recommends the use of exercises prepared by the researcher because of its positive impact on changing and developing some physical variables and the skill of aiming with two points in basketball.
2. The researcher recommends adopting the exercises that he prepared in the research to develop the physical capabilities that were chosen in the research.
3. Encouraging trainers to prepare special exercises to develop physical and skill capabilities.
4. Conducting research and studies on the numbers of special exercises for the category of applicants in the basketball game.
5. Carrying out similar studies and other sports activities.

Financial Disclosure: There is no financial disclosure.

Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the General Directorate of DhiQar Education and all experiments were carried out in accordance with approved guidelines.

References

1. Fakher A. Foundations of Scientific Research in Behavioral Sciences, 1st edition, Beirut, Dar Al Malayeen, 1979; 116
2. QaisNA, Bastawisi A. Tests and Principles of Statistics in the Mathematical Field, Iraq, Baghdad University Library. 2000; 289-291.
3. QassemHH, Bastawisi A. Isotonic muscle training, 1st edition, University of Baghdad, Arab World Press, 1979; 33.
4. SeragE. Physical preparation in soccer. 2007; 183.
5. Fayez B, Muayyad A. Basketball, Mosul University, Dar Al-Kutub for Printing and Publishing, 1978; 201.
6. Al-Mandalawi Qasim Hassan Mahdi and others: tests, measurement and evaluation in physical education, Mosul, Higher Education Press, 1990; 107.
7. QaisN, Bastawisi A. Tests and Principles of Statistics in the Sports Field, Baghdad, Higher Education Press. 1987; 105.
8. Haider A. The Basics of Writing Scientific Research in Physical Education and Sports Science, 1st edition, Al-Waei Library for Printing and Publishing, 2015; 122.
9. Wajih Mahjoub et al .: Scientific research method and approaches in physical education, Higher Education Press and Scientific Research, Baghdad, 1985; 152..
10. Serag E. a previously mentioned source. 2000; 151.
11. Mahmoud A. Teaching and Training Boxing, Mosul, Higher Education Press, 1991; 42.
12. Mufti I. Modern Sports Training, Planning, Application and Leadership, 1st Edition, Dar Al-Fikr Al-Arabi, Cairo, 1994; 22.
13. Moayad A, Fayez B. Basketball, Mosul, Higher Education Press, 2nd edition, 1999, p. 23.
14. Muhammad H. The Science of Athletic Training, 13th Edition, Cairo, Dar Al-Maaref, 1994, p. 213.
15. Qassem HH. The Comprehensive Sports and Physical Encyclopedia, Amman, Dar Al-Fikr Printing, 1998; 178.
16. Majid AM. Modern Sports Training, Basra, Al-Nakhil Press, 2009; 15.
17. Essam AK. Sports Training, Theories, Application, Alexandria, Al-Safir Newspapers Press, 1989; 146