Thi Qar University Journal of Physical Education Vol 2 Issue 3 P1

مجلة جامعة ذي قار لعلوم التربية البدنية

مجلة علمية محكمة تصدرها كلية التربية البدنية وعلوم الرياضة

The Effect of Special Exercises to Develop Some Motor Abilities in the Performance of Chest Handling Skill in Young Basketball Players

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Article history:
Published online: 20/6/ 2025

Keywords:
special training

Motor Abilities

Basketball

ABSTRACT

,The game of basketball has received great attention among athletes and specialists like other sports events, as it has become famous and occupied a special place among the rest of other team sports. Motor abilities are one of the important determinants in the performance of sports skills, as they contribute to directing motor performance and developing skill performance, as the chest handling skill is the most prominent skill ,in the game of basketball, which requires high motor abilities, including flexibility the preparation agility and motor compatibility. The importance of the research lies in of exercises to develop some motor abilities at the level of performance of the chest handling skill in basketball for young people, so this information is an appropriate tool in the hands of the coach and makes the training process built according to sound .scientific foundations, thus saving effort and time for both players and coaches Through the researcher's observation of the matches of youth basketball teams. In addition to consulting some coaches and teachers who confirmed that there is a weakness in the performance of this skill, the researcher believes that the reason for age) this is a weakness in the motor abilities that the basketball player must possess The research aims to prepare special exercises to develop some motor .(groups The .abilities in performing the chest handling skill in young basketball players researcher used the experimental method in the method of equal control and experimental groups to suit the nature of the research, and the research population and sample represented the 24 players of the Specialized School for Basketball for the season 2024-2025

1- Introduction to the research:

1-1 Introduction and the importance of the research:

Sport has a great place among the countries of the world, and each of the countries of the world seeks to compete with other countries to make sports a success using advanced and modern methods in sports sciences in general to achieve the best in achieving sports achievements, as it relied on modern scientific foundations in the development and development of physical aspects due to its great impact on achieving sports achievements and titles at the highest possible level, and that the development witnessed by the world and in all areas of life included the sports field as well, and this is what we have observed. In the past few years, through the development of the technical, physical and planning performance of the players, and achieving records for all events, whether individual or collective.

The game of basketball has received great attention among athletes and specialists, like other sports events, as it has become famous and occupied a special place among the rest of the team sports. Reaching the high and good level did not come randomly, but it came with a deep scientific study related to sports training and other sciences that are closely interconnected, and science and research work in this specialty, and motor abilities are one of the important determinants in the performance of sports skills, as they contribute to directing motor performance and developing skill performance, especially in team games such as basketball, and the basketball player needs physical qualities and motor abilities appropriate with this game, as the player begins to develop these qualities according to the program. Certain or other genetic traits and other traits as well as the development of skills, the player needs to develop those skills well and at a high level because the results of matches depend on the basic skills to a great extent. The chest handling skill is the most prominent skill in the game of basketball, which requires high motor abilities, including flexibility, agility and motor coordination.

The skill of chest handling in basketball is of great importance, especially for young players, as a player who has a good chest handling skill can control the ball and through it he can make appropriate and tactical decisions better. Chest handling in basketball requires high concentration, speed of decision-making, and precision in execution, and is one of the key skills that affect the success of offense and defense.

The importance of the research lies in identifying the effect of exercises to develop some motor abilities atthe level of performance of the chest handling skill in basketball for young people, so this information is an appropriate tool in the hands of the coach and makes the training process built according to sound scientific foundations, thus saving effort and time for both players and coaches.

1-2 Research Problem:

The performance of each of the basic skills in all sporting events, whether team or individual, requires players to possess motor qualities and motor abilities that lead them to perform those basic skills. Basketball is one of the team games that requires motor coordination to perform its basic skills, as the basketball chest handling skill is one of the important skills that, if mastered well, can perform planning duties, whether defensive or offensive in matches. for the games of

youth basketball teams , as well as consulting some coaches and teachers who confirmed that there is a weakness in the performance of this skill, and the researcher believes that the reason for this is a weakness in the motor abilities that the basketball player must possess (age groups), so the researcher decided to delve into this problem.

1-3 Research Objectives:

1- Preparing special exercises to develop some motor abilities in performing the chest handling skill in young basketball players.
2- To identify the results of the differences between the pre- and post-tests of the control and experimental groups in the development of some motor abilities in the performance of the thoracic handling skill in young basketball players.
3- Identifying the results of the dimensional differences of the control and experimental groups in the development of some motor abilities in the performance of the chest handling skill among young basketball players

1-4 Research Hypotheses:

1- The presence of a positive effect of special exercises on the development of some motor abilities in the performance of thoracic handling skill in young basketball players.

2- There are significant differences between the results of the pre- and post-tests of the control and experimental groups in the development of some motor abilities in the performance of the chest handling skill in young basketball players.

3- There are significant differences in the results of the post-tests of the control and experimental groups in the development of some motor abilities in the performance of the chest handling skill among young basketball players

1-5 Research Areas:

1.5.1 The human sphere:
Young players at the Specialized School of Basketball (Nasiriyah) for the 2024-2025 season.
1.5.2 Spatial Domain:
Martyr Haider Kamel Burhan Hall (Closed Sports Hall) in Dhi Qar Governorate.
1.5.3 Temporal Domain:
From 1/12/2024 to 20/3/2025.

2- Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the experimental method in the method of two equal control and experimental groups to suit the nature of the research.

2-2 Research Population and Sample:

The research population was represented by the 24 players of the Specialized School of Basketball for the season 2024-2025, and the research sample was selected in the deliberate way, and all of them were selected for the research sample, so the number of the research sample is 24, and they were divided into two control and experimental groups, and the number of each group

reached 12 players, and for the purpose of achieving homogeneity between the players, the following variables were adjusted in Table No. (1).

Table (1)

Shows the arithmetic media, standard deviations, and coefficients of difference for the research sample

Experimental Group			Control Group			Unit of Measurement	Variable
Divergence coefficient	Standard deviation	Arithmetic mean	Divergence coefficient	Standard deviation	Arithmetic mean		
2.29%	0.34	14.92	2.33%	0.35	15.0	year	lifetime
2.33%	3.9	167.5	2.26%	3.8	168.0	(cm)	Length
6.45%	4.0	62.0	6.67%	4.1	61.5	(kg)	Mass
11.9%	0.75	6.3	12.5%	0.8	6.4	(ii)	Thoracic handling
7.04%	0.88	12.5	7.14%	0.9	12.6	(ii)	Agility
10.57%	0.83	7.85	10.9%	0.85	7.8	(ii)	Compatibility
11.31%	3.2	28.3	11.74%	3.3	28.1	(cm)	Flexibility

2-3 Research Tools:

1- Tests and measurement.
2- Scientific sources and references.
3- The Internet.

3-4 Devices and Instruments Used in the Research:

1- Basketball court.
2- Basketball 25.
3- Medical scale.
4- Stopwatch.
5- Whistle.
6- Tape measure.
7- Indicators.
8- Distance pointing tools.

2.5 Field Research Procedures:

2.5.1 Tests used in the research:

The researcher relied on motor abilities tests that included flexibility, motor compatibility and agility test, as well as the chest handling skill test used in the study by reviewing and relying on scientific sources and references.

3.5.2.1 Basketball Thoracic Handling Test [1]

Purpose of the test: Measure the ability of the tester to handle and receive the ball

Instruments used in the test: Stopwatch, 25 basketballs, smooth wall, whistle

How to perform the test:

The tester stands behind a line drawn on the floor and 9 feet (2.70 cm) from the wall, and upon hearing the start signal, the player handles the chest to the wall, provided that the handling is at the level of the lab's chest and as soon as possible, then receives the ball after it bounces off the wall to repeat the handlings until 10 handlings are performed.

Sign up:

The time is calculated when the ball touches the wall in the first successful handling and continues until the ball touches the wall in the tenth and last successful handling.

3.5.2.2 Agility Measurement Test:[2]

Test Name: Zackzak Slalom Running.

Instruments : Five distance indicators between one (3) meter indicator, measuring tape, an appropriate number of distance marking instruments.

Test Instructions : The tester is given only one attempt.

Registration: The time it takes for the laboratory to cut the rectangle is recorded three times to the nearest fraction of a second, and starts from the moment the start signal is given until the finish line is crossed after the completion of the third cycle.

Test Description : The player takes the readiness position from the high start behind the starting line, when the start signal is given, he runs the zigzag between the five lists in the form of (8) in English.

Method of Performance: The tester starts running from a standing position at the starting line, and the direction of running is according to the shape specified in the drawing, which is in the form of No. 8 in English, and the legs or signs should not be pulled, pushed, removed, moved from their places or collided with them, but it is required to rotate around them, when the tester completes three cycles, he must continue running until he crosses the finish line.

(1 Raysan Khraibat Majeed: Encyclopedia of Measurements and Tests in Physical and Sport Education, Vol. 1, Basra, Higher Education Press, 1989, p. 373.

Zuhair Al-Khashab and others: **Football**, 2nd Edition, Mosul, Dar Al-Kutub for Printing [2] and Publishing, 1999, p. 205.

3.5.2.3 Measuring the flexibility of the legs and torso:

Test Name: Trunk Bending Forward from Standing [3]

Purpose of the test : To measure the flexibility of the spine on the horizontal axis.

Tools :

- A seat without a backrest, where the number (50) is parallel to the surface of the ruler and the number (100) is parallel to the lower edge of the seat.
- A wooden indicator moving on the surface of the ruler.

Performance Specifications : The tester stands on top of the bench with the feet folded with the toes fixed on the edge of the seat and the knees are kept straight, the testator bends his torso forward and down so that he pushes the pointer with his fingertips as far as possible, and is fixed at the last distance he reaches for two seconds.

Instructions :

- Knees should not be bent during performance.
- The laboratory has two attempts, the best of which is recorded for him.
- The stem should be bent slowly.
- Hold at the last distance reached by the laboratory for two seconds.

Registration : The distance achieved in the two attempts is recorded for the laboratory and the maximum distance is calculated in centimeters.

3.5.2.4 Numbered Circuit Test:[4]

Purpose of the test : Measuring the compatibility of the legs and eyes

Tools: A stopwatch, eight circles are drawn on the ground, each of which is sixty centimeters in diameter, the circles are numbered as shown in the figure below.

Performance Specifications: The laboratory stands inside Circle No. (1) when hearing the start signal, he jumps with his feet together to Circle No. (2), then to Circle No. (3), and then to Circle No. (4), and this is done at full speed.

.To record the maximum possible time for the laboratory : **Registration**

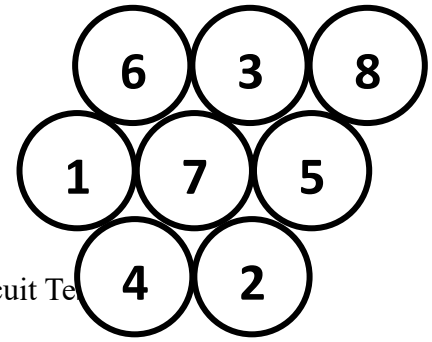

Figure (1) Numbered Circuit Te

[3] Muhammad Sobhi Hassanein: **Measurement and Evaluation in Physical Education**, vol. 1, Cairo, Dar al-Fikr al-Arabi, 2001, p. 265.

[4] Muhammad Hassan Allawi: Football Skills: Education and Training, Cairo, Dar Al-Ma'arif for Publishing and Distribution, 1992, p. 103.

3-6 Exploratory Experiment:

4- The researcher conducted the exploratory experiment on 10/12/2024 on (6) players from the Dhi Qar University basketball team who are outside the study sample, with the aim of:

1. Ensure that the team understands the nature of the test and how it is performed.
2. Difficulties to the test and its avoidability.
3. The suitability of the test used for the research sample.
4. The suitability of the necessary equipment and tools to perform the test.
5. Know how long it takes to take the test.

2.7 Main Experience:

2-7-1 Prerequisite Tests: After the researcher was able to perform the motor abilities and thoracic handling tests, the researcher conducted the motor abilities tests and the chest handling skill test in basketball on Friday, 13/12/2024 and at Haider Kamel Burhan Hall in Dhi Qar.

2.7.2 Exercises used:

Special exercises were prepared to develop some motor abilities in performing the thoracic handling skill in basketball, and they were applied to the research sample during the main section of the training modules.

The intensity ranged (80-90) as the high-intensity interval training method was used, as for rest, the pulse was adopted as an indicator of rest, as the number of heart beats between repetitions was 120-130 z/min and rest between totals 110-120 z/min, and the duration of using the exercises is two months (8 weeks) with three training units per week, thus the total number of training units becomes 24 training units, and the main section and the experimental group were used only, while the training in the rest of the sections for all The players are for the coach . Also, the training period is from 15/12/2024 to 8/2/2025.

2-7-3 Post-Tests: The post-tests were conducted on Sunday, 9/2/2025 at Haider Kamel Burhan Hall in Dhi Qar.

3.8 Statistical Methods:

The researcher used the Statistical Portfolio Software (SPSS) to process the data obtained from the results of the tests under research.

3. Presentation, analysis and discussion of the results:

3-1 Presentation of the Results:

The results will be presented and discussed in the light of the statistical data obtained from the research sample as follows:

In light of the research hypotheses, the researcher will present the results reached according to the following tables:

Table (2)

Shows the significance of the differences between the pre- and post-intermediate in the variables of motor abilities and thoracic handling under study for the experimental group

level Significance	Calculated T Value	Telemetry		Tribal Measurement		unit scaling	Variables
		Standard deviation	My arithmetic average	Standard deviation	My arithmetic average		
Moral	6.14	0.70	10.80	0.90	12.50	second	Zig Running Zakzak
Moral	4.92	2.9	34.5	3.2	28.0	poison	Bending the torso forward from standing
Moral	5.55	0.60	6.20	0.85	7.80	second	Compatibility of Legs and Eyes
Moral	5.72	0.65	4.90	0.80	6.30	second	Thoracic handling

Table (3)

Shows the significance of the differences between the pre- and post-measurements in the variables of motor abilities and thoracic handling under study
For the control group

level Significance	Calculated T Value	Telemetry		Tribal Measurement		unit scaling	Variables
		Standard deviation	My arithmetic average	Standard deviation	My arithmetic average		
Non-D	1.15	0.95	12.30	1.00	12.60	second	Zig Running Zakzak
Non-D	0.89	3.3	29.2	3.4	28.5	poison	Bending the torso forward from standing
Non-D	1.01	0.88	7.55	0.90	7.85	second	Compatibility of Legs and Eyes
Non-D	1.20	0.80	6.10	0.85	6.40	second	Thoracic handling

Table (4)
Shows the significance of the differences between the two dimensional measurements in the variables of motor abilities and thoracic handling under study

For the experimental and control groups

level Significance	Calculated T Value	Control Group		Experimental Group		unit scaling	Variables
		Standard deviation	My arithmetic average	Standard deviation	My arithmetic average		
Moral	4.02	0.95	12.30	0.70	10.80	second	Zig Running Zakzak
Moral	4.10	3.3	29.2	2.9	34.5	poison	Bending the torso forward from standing
Moral	4.35	0.88	7.55	0.60	6.20	second	Compatibility of Legs and Eyes
Moral	4.21	0.80	6.10	0.65	4.90	second	Thoracic handling

4.2 Discussion of the Results:

Through Table No. 4, the results of the motor abilities and thoracic handling tests are shown, through which significant differences appeared in the post-tests between the experimental and control groups, which indicates a morality and preference in the post-results of the experimental group at the expense of the control group, and the researcher attributes that the training units were sufficient to develop motor abilities, which led to the development of the thoracic handling of the players, and that the exercises used in the training units had a role in the development of the experimental group, and this is consistent with Hanafi Hammoud Al-Mukhtar (1988)[5] "Proper planning and selection of appropriate exercises that enable the coach to develop physical qualities and at the same time work to master the player's basic skills".

The members of the research sample achieved good results, as motor abilities are moving in the direction of building a player who is prepared to develop his basic skills easier and faster , especially since there is a correlation between motor abilities and skill performance, and therefore the development in some motor abilities led to the development of the skill of chest handling in basketball, as "motor abilities are what enable the player to perform the various motor skills required by the game he practices correctly, as they constitute the cornerstone of the player's reach the levels. High athleticism is a necessary quality for the athlete and determines the importance of one or more other motor abilities according to the nature and requirements of the game being

[5] Hanafi Hamoud Al-Mukhtar: The Technical Director of Football, Al-Kitab Center for Publishing, Cairo, p. 91.

played, taking into account that there are close correlations between the different motor abilities and physical attributes."[6]

Motor abilities and their integration are a reason for improving performance in general, and even contribute to the development of common abilities, especially that some motor abilities are a combination of two or more abilities, and this in turn is reflected in the level of skill performance, as Hanafi Mukhtar (1974) pointed out: "Motor qualities play an important role in the complex skill performance of the player."(7)

The results of the post-test of the chest handling skill also show good results, as practice, effort in training and continuous repetition are necessary because it constitutes an auxiliary factor in the process of the player's interaction with the skill and controlling and refining his movements to achieve consistency between the movements that make up the skill in a proper sequential performance and an appropriate time that shows a high level of performance, and agility is one of the most important motor abilities that a basketball player needs in the implementation of basic skills well, as well Motor Adaptation: "These exercises inevitably lead to improved neuromuscular compatibility and the adequacy of the working muscles in developing their ability to perform." [8] Also, the attribute of flexibility is a basic quality in motor abilities and is necessary for the skill performance of the game, because it enables the player to reach the appropriate range of motion for each skill, as "special exercises serve to guide the integration of the fitness level of a certain element, as well as the ability to flexibility and the elements of technical and planning performance, and link it to building the quality of creation and the psychological qualities of the competition." (9)

The research sample enjoys a high level of development in some of the motor abilities shown by the results of the post-tests, and since motor abilities constitute an important factor in the ideal performance, which is represented in accuracy and fluidity, which in turn is reflected in better results of skill and reaching higher levels in most games and events, especially those that require continuous physical effort for long periods, such as in the case of skill performance in basketball. Especially the handling skill, which is the most skilled used in basketball matches , which requires great and continuous physical effort during training and competition.

5. Conclusions and Recommendations:

5.1 Conclusions:

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[6] Emad Al-Din Abbas Abu Zeid: **The Scientific Foundations of Football,** Cairo, Dar Al-Kitab Publishing, 2005, p. 82.

[7] Hanafi Mukhtar: **Planning in Building Collective Teams**, 1st Edition, Ma'arif Foundation, 1974, p. 112.

[8] Ali Muhammad Saleh: The Science of Sport Training, 2nd Edition: Benghazi: Publication of the Coming of Qaryu University, 1993, p. 101.

[9] ,Hara: **The Origins of Training** (**Translation), Abd Ali Nassif**, 2nd Edition, Mosul .Higher Education Press, 1990, p. 90

1- Special exercises designed to develop motor abilities have had a positive impact on improving thoracic handling performance.

2- The experimental group showed significant improvement, while the control group did not record significant differences.

3- There is a correlation between the development of motor abilities and the improvement of skill performance.

4- The results underscore the importance of planning modern training programs that suit the characteristics of young players.

5- Having motor abilities gives the player an advantage in mastering basic skills, including the skill of handling in basketball.

5-2 Recommendations:

1- Giving the basic skills under consideration is of great importance when selecting players in basketball.
2- Give the basic skills under study enough time when coaching players in basketball.
3- Adopting special exercises as a constant part of training age groups.
4- Conducting periodic tests to measure agility, compatibility, and flexibility during training periods.
5- Train players in difficult harmonic and coordination exercises so that players can make appropriate decisions in competition.
Conducting research on the relationship between motor abilities under study and other skills in basketball.
7- Dissemination of the training program to clubs and schools interested in age groups.

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Attachment (1)

Sample Training Module

The objective of the training module: to develop the skill of thoracic handling by improving some motor abilities .

Time: 45 minutes Intense: 85
Age Group 14–16 years Location: Indoor gymnasium

Exercises used in the module:

Goal	Comfort between groups	Rest between repetitions	Time	Exercise	section
Developing Agility	Pulse return 110-120 z/d	Pulse return120-130 d/m	5	Agility Drill	Main Part
Handling Development	Pulse return 110-120 z/d	Pulse return120-130 d/m	10	Performing chest handling on circles drawn on the wall	Main Part
Eye-leg compatibility	Pulse return 110-120 z/d	Pulse return120-130 d/m	5	Guiding a rubber ball with your feet and hands	Main Part
Integrating compliance and handling	Pulse return 110-120 z/d	Pulse return120-130 d/m	5	Chest handling with lateral jump	Main Part
Developing Resilience	Pulse return 110-120 z/d	Pulse return120-130 d/m	5	Anterior and lateral stretching exercises	Main Part

Speed and Skill Performance Compatibility	Pulse return 110-120 z/d	Pulse return120-130 d/m	5	Fast handling with sudden change	Main Part
Returning the body to a resting position			10	Relaxation and deep breathing exercises	