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## **The effect of special exercises on the speed of motor response and some basic skills of basketball juniors**

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### **Abstract**

The study aimed to identify the effect of special exercises on the speed of the motor response and the level of performance of some basic skills for basketball juniors. The researcher used the experimental method and identified the research community, who are the juniors of Al-Amarah Sports Club in basketball and registered in the statements of the sub-union at the age of under (166). 12 years old player. They were randomly divided into two groups, control and experimental, with (6) players for each group. And the adoption of some procedures to achieve the objectives of the study. The study came out with the following conclusions. Special exercises had a positive effect on the development of the speed of the motor response, as well as the performance level of some basic skills (pectoral handling, high thrust, shooting from stability) among the members of the experimental group.

**Keywords:** Exercises, speed, motor response, basketball, juniors

### **Introduction**

#### **Introduction and importance of the research**

keen concerned In the training process, the importance of preparing curricula that include special and various exercises to develop and develop the physical and skill abilities of young people, as this category represents the cornerstone for supplementing sports clubs, As this age group must be taken care of through training curricula that combine the physical and the skill side, so that the youth has the ability to perform complex motor skills. And thus the advancement of his sporting level.

and because Game a ball basket It contains many basic skills that are Requires kinetic velocity in Skill performance, and this requires good preparation through many training methods and methods to improve technical performance to achieve the best results. Therefore, this aspect had to be given great importance when preparing juniors. And that To put A training program that simulates the player's physical ability and skill that affects Inevitably on the development of the speed of the motor response and basic skills of the young person through the use of special exercises that have a positive effect Effective and contributing to achieving the main objective of improving performance and achieving achievement, For this reason, our study focused on employing scientific means that may contribute to improving the training situation in a better way For a combination of exercises with specific training visions and the adoption of aids that suit the nature of the kinetic paths of basketball in order to achieve the best achievement.

Hence the importance of our research by paying attention to the special physical numbers that help the youth perform his duties to implement the various basic skills and the possible kinetic speed of those skills, which have a fundamental impact on the results of the matches to reach the highest effectiveness as required by the basketball game, so the researcher set out exercises Especially and employing it within the training curriculum prepared by the trainer to develop the speed of the motor response along with the skillful performance represented by the performance of some basic skills of the game.

### **Research problem**

The kinetic response is one of the physical attributes that is not without any sporting activity because it represents The individual's response to a specific stimulus with a specific movement in the shortest possible time, and the need for it varies from one activity to another Depending on the physical and skill requirements of that activity And to be an adjective the speed From adjectives physical that need it player a ball basket To reach the ideal performance And the result positivity that has evolved level the performance Requires Building Curricula Scientific take look consideration development Capacity physical and

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basic skills with a game a ball basket Through the researcher's follow-up to some of the The training of the junior basketball teams noticed a weakness in the speed of the motor response, which negatively affects the speed Skill performance, especially shooting, as it is considered one of the important factors in determining the results of matches The researcher studies this problem by preparing special exercises that may contribute to developing response speed Movement, speed and accuracy of performing some of the basic skills of the game.

**Research Objective**

Recognizing the effect of special exercises on the speed of the motor response and the level of performance of some basic skills for basketball juniors.

**Imposing search**

Special exercises affect the speed of the motor response and the level of performance of some basic skills for basketball juniors.

**Research methodology and field procedures**

**Research Methodology**

That The variables of the study are what determine the optimal approach to solving the research problem, so the researcher used the experimental method in the manner of the two equal groups (control and experimental) for its suitability and the nature of the study.

**Research community**

The researcher identified her research community, who are the juniors of Al-Amarah Sports Club in basketball and registered with the statements of the Basketball Sub- Union in Maysan Governorate for the 2021-2022 sports season at ages under (16) years, and their number is (16) players, and (4 players) were excluded from them for not complying with the dates The training units where the sample became (12) players and their percentage was (75%) of the original community. They were randomly divided into two control and experimental groups, with (6) players for each group. The researcher proceeded to conduct homogeneity in the following elements (height - weight - training age) as well as equivalence in the study variables (The speed of the motor response and basic skills) for the members of the research sample, which would influence the results of the research, and it was found that the two samples are homogeneous and equivalent.

Tools, devices and means used in the research: (Tests and measurements, Arab and foreign references and sources, basketballs, signs, medical balls, medical scales, stopwatch, colored adhesive tape).

**Tests used in the research**

Test Speed of motor response to a light stimulus: (hawk, 2015)  
 Chest handling test: (Mohammed, 1999)  
 High chuck (rapid) test: (Fares, 2000)  
 Shooting test from stability (throwing Al-Hurra): (Ali, 2004)

**Tribal tests**

The researcher conducted a test of motor response speed and basic skills (Thoracic handling, high thrust, shooting from stability) for the research community at the Martyr Wissam Oraibi hall on Tuesday, 11/1/2022 at exactly ten o'clock in the morning and with the help of the assistant work team.

**The main experience**

The researcher has developed special exercises to develop the speed of the motor response within the training curriculum of the trainer, as well as developing some basic skills represented in chest handling, high thrust and shooting from stability.) weeks and by (24) training units distributed over (3) training units per week for the days (Saturday, Tuesday, Thursday). The exercises were started on Thursday 13/1/2022 and the last training unit was completed on Thursday 10/3/2022. The exercises were rigorously graded during the training units according to the ability of the players and the age group for them, from easy to difficult.

**Post-tests**

The researcher conducted post-tests for the aforementioned research sample on Sunday 12/3/2022 The researcher sought to provide the same conditions as possible as in the tribal tests in terms of time, place, work team and tools used.

**Statistical means:** The researcher used the ready-made statistical package (SPSS) version (23).

Presentation and discussion of the results:

**Show results**

**Table 1:** Shows the arithmetic means, standard deviations, the calculated (T) value, the level of significance, and the significance of the differences in the test Motor response speed and basic skills (before - after) for the two groups

Statistical processors	measruing unit	s	±	Calculated T value	Sig	moral difference	
<b>motor response speed test</b>							
officer	Tribal	time	1.70	0.09	36.7	90.01	D
	after me		43.1	15.0			0.05
experimental	Tribal		72.1	0.09	13	60.00	D
	after me		1.15	04.0			0.01
<b>Chest handling test</b>							
officer	Tribal	Degree	66.4	0.57	7	2 0.0	D
	after me		17	1			0.05
experimental	Tribal		66.31	0.52	15.58	0.001	D
	after me		66.22	2.08			0.01
<b>High chuck test</b>							
officer	Tribal	time	73.7	64.0	85.7	16 0.0	D
	after me		33.5	0.57			0.05

experimental	Tribal		83.71	76.0	14.12	2 0.00	D
	after me		90.21	60.3			0.01
<b>Shooting stability test</b>							
officer	Tribal	Number	66.3	70.5	5	38 0.0	D
	after me		33.5	70.5			0.05
experimental	Tribal		66.3	70.5	13	60.00	D
	after me		8	1			0.01

**Table 2:** Shows the arithmetic means, standard deviations, the calculated (T) value, the level of significance, and the significance of the differences in the test The speed of the motor response and the basic dimensional skills of the two groups

Statistical processors	measuring unit	s	±	Calculated T value	Sig	moral difference
<b>motor response speed test</b>						
officer	time	43.1	15.0	02.5	30.0	D
experimental		1.15	04.0			50.0
<b>Chest handling test</b>						
officer	Degree	17	1	4.52	130.0	D
experimental		66.22	2.08			50.0
<b>High chuck test</b>						
officer	time	33.51	0.057	19.6	3 0.00	D
experimental		90.21	6 0.3			50.0
<b>Shooting stability test</b>						
officer	Number	33.5	0.57	4	160.0	D
experimental		8	1			50.0

Through the results obtained from the statistical treatments in Table (2) to measure the results of the motor response speed as well as the basic skills (Chest handling, high thrust, shooting from stability) dimensionally shows that there are significant differences achieved below the level (0.01) registered in favor of the experimental group members.

**Discussing the results**

**Discussing the results of the motor response speed**

The researcher attributes this development to the nature of the special exercises that took into consideration the time factor included in the training units due to its importance in developing the physical and skill aspects of basketball. The proposed exercises by measuring the time taken and gradual intensity of the exercises executed, which was positively reflected by reducing the times of the motor response speed, and this is consistent with what was indicated by (Abdul Sattar Al-Damad) that training regulator iodine to me Develop and reduce time Speed to reply verb.” (Abd the curtain, 2000) As confirmed by (Theodore Bomba) "The training of reaction time and the ability to perform strong movements in a high sequence and in the shortest time are common athletic abilities in many sports, as well as they are essential elements for the athlete to achieve a high level achievement. " (Theodore, 2010)

The researcher believes that the design and kinetic shape of the exercises were similar to the technical performance of the basic skills, which effectively contributed to the development of performance due to the congruence between the duty of the kinetic action of the exercises implemented. In addition, the development in the speed of the motor response of the arm muscle group is due to the implementation of special exercises using auxiliary means such as medical balls, which were accurate in forming training loads in a modern scientific manner that can have the desired effect on muscle groups in addition to using the element of suspense and excitement to avoid boredom and monotony, which It led to an economy of time and effort without causing muscle stress, and this is consistent with what was indicated by (Mohammed Adel Rushdi) “The development of response speed using auxiliary means leads

to the direction of muscle work being towards the goal of the movement, and the application of exercises correctly, scientifically and according to the methodology It depends on the method and the material precisely, which leads to good results in the training process. (Mohammed, 1982)

**Discussing the level of performance of some basic skills in basketball**

Attributing researcher reasons the differences that I got on her the sample To the effectiveness of the special exercises prepared, as they were varied and far from boredom and similar to a certain extent for performance in matches. This is on one hand and on the other. Other exercises were combining more than one player during the performance, which allowed all players to move in a sequential manner during the performance of the exercises, that codifying these exercises in terms of intensity, size and comfort within the vocabulary of the training curriculum helped to develop performance and this was confirmed by (Mohamed Abdel Rahim) “The exercise is The secret of progress for basketball players, the exercise must be designed carefully and skillfully and contain the basics of movement that create the conditions for the match whenever possible. (Mohammed, 1999) In addition, the exercises included the idea of linking the physical and skill side, since the skills of the basketball game must be played at a high speed between colleagues during competitions to avoid cutting the ball by the opponent, and because it is considered the means through which the ball is transmitted between players belonging to the same team, so the development that took place on the side Physical and represented by the speed of the motor response, which bore fruit on basic skills (Chest handling, high thrust, shooting from stability) being one of the important requirements for performance, as the player must make his decision at high speed to avoid cutting the ball by the opponent, and this is consistent with what (Ali Sabhan) emphasized, “The performance of basic skills requires the player Speed in decision-making and kinetic behavior according to the variables or circumstances facing the player during the performance of the skill, and that the speed of the kinetic response during its implementation is an

essential element to shorten the time and reach the ideal performance correctly. (Ali, 2004)

In addition to the change in the players' positions during the exercise, it provided the opportunity for the player to see several options and take the correct action, especially that the exercises reflect, even in a close manner, the real playing conditions, and this was confirmed by (Wajih Mahjoub) " The advantage of playing lies in the ability to link the aspects of performance to each other, and therefore this feature must be available to basketball players because of its ability to estimate the appropriate situation and take the right decision during the match, and this only comes by repeating those positions during the exercises and designing them in a way.

**Conclusions**

1. Special exercises had a positive effect on the development of the motor response speed of the experimental group members.
2. The special exercises had a positive effect on the development of the performance level of some basic skills (chest handling, high thrust, shooting from stability) among the experimental group members.
3. The special exercises adopted by the experimental group achieved effective positive results compared to the control group.

**Recommendations**

1. Adopting special exercises because of their effective positive effect in improving the level of performance.
2. The need to focus on me Training players with circumstances Similar for circumstances the match.
3. The necessity of adopting physical and skill tests in determining the training status of the players.
4. Conducting similar studies on different age groups and sporting activities.

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**Stage: Special Numbers Unit Intensity: (85%)  
 Unit time: (25) minutes Rest time: (1:1) Unit objective:  
 To develop the speed of motor response  
 Tools used: (basketballs, whistle, medicine ball, colored adhesive tape) and some basic skills**

**Supplement 1:** Shows a model of a training unit using special exercises

Unit Sections	the exercise	exercise intensity	Repetition	Exercise time	Performance time for total exercise	Rest between repetitions	total performance time
main section	The jump shooting exercise The player receives the ball from a teammate and shoots by jumping on the board.	85%	4x4	6/s	24/sec	36/sec	3/d
	Shooting exercise from the free-throw area: the player stands outside the arc of the two points, directing the scoring board, where he runs to the middle of the free-throw line, receives the ball from the teammate and shoots from stability	85%	4x4	5/ sec	20/sec	30/sec	2.20/min
	trot in the place face player facing To the wall and when you hear the whistle Rotation And go fast Towards the goal and receive the ball from the colleague and shoot on the board	85%	12x3	25/sec	1.15/Dr	2.30/min	6,15/min
	Starting exercise (5 m) towards a medicine ball (2 kg): The player moves towards the ball, carries it and performs a shot from stability.	85%	12x3	25/sec	1.15/Dr	2.30/min	6,15/min
	Handling exercise with the wall: The player stands in front of the wall and performs manipulations with the wall for (20 seconds).	85%	12x3	25/sec	1.15/Dr	2.30/min	6,15/min
	High Forward Knee Raise: The player stands and alternates raising the knees until he receives the ball from the teammate quickly and performs the shot from stability	85%	12x3	20/sec	1/d	1/d	3/d