

# THE IMPACT OF THE EXERCISES OF DIVIDED ATTENTION IN THE DEVELOPMENT OF SOME PHYSICAL AND MOTOR ABILITIES AND THE SKILL OF THE BACK STRIKE OF THE TENNIS PLAYERS

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**ABSTRACT:** *The problem of research through repeated field visits from female researchers to the Tennis Academy in Baghdad, where they noted the need to prepare exercises to help trainers and young people to meet the requirements of this game, calling for this need to pay attention to the continuous renewal in the type of exercise to take into account individual differences according to the determinants of the principles of training And not exaggerated, which simulates the training reality, which must take into account the type of the sample level of young people and their sex, so the researchers are required to delve into this problem as an attempt to develop some physical and motor abilities and the skill of the rear strike The aim of the research is to prepare the exercises of divided attention for the emerging players in the tennis, and to identify the effect of the exercises of divided attention in some physical and motor abilities and the skill of the back strike in the players of tennis. The researchers imposed statistically significant differences between the test and the tribal and the remote in measuring physical and motor abilities for beginners and rear strike skill for the experimental and control groups and for the post-test. The researchers used the pilot method of the experimental and control groups as determined by the players who are emerging at the Tennis Academy in Baghdad Ammar (13-15) years. Ten (10) players were chosen by the intentional method of the main research experiment out of 15 players. Five players were divided into the main research experiment. The tests were carried out for some physical, motor and skill abilities. The exercises of divided attention were applied during the training modules. After the program, the post-tests were carried out in the sample. The researchers concluded that the exercise of divided attention has a positive effect on Development of Q The researchers recommended the adoption of the training curriculum on the exercises of divided attention when training the physical, motor and athletic abilities of the tennis players, and to carry out studies and research similar to the use of the exercises of divided attention to achieve positive results in physical development, mobility and skill.*

**Keywords:** exercises of divided attention and some physical and motor abilities and the skill of the rear strike.

## 1- DEFINITION OF RESEARCH

### 1.1: INTRODUCTION AND IMPORTANCE OF RESEARCH

The training in modern exercises has become the best process to reach the athlete to levels that qualify them to enter the competitions and competitions by preparing them in various qualities, including physical and motor qualities, which is effective and influential to contribute to reaching a high-level skill during the game. The rapid scientific and cognitive progress that the world is witnessing in the various sciences, especially the sciences of physical education, has not come from a vacuum, but rather comes from a combination of efforts to achieve the best performance, so it is understood from the content of the process of sports training as a continuous process. To achieve the objectives pursued by this scientific in improving the condition of the athlete training, which places the responsibility on the trainers and academics to continue research, which adopts the methodology of scientific research methods devoid of improvisations or predetermination when using training tools from And this contributes to the planning of sports training in accordance with the correct determinants of this planning, which should be committed to avoid the jurisprudence, which calls for increased interest in choosing the type of training method that should be actual need according to those requirements to avoid loss of efforts, Simulated training reality in order to achieve the objectives required in full to take into account the economy.

The game of tennis is one of the games of individual fun and with a great follow-up, not only the development of methods of play and physical abilities and mobility, but more to the attention to the operations and knowledge of the impact on improving performance and methods of

development, which is important in this game, which has the advantages of the exciting speed of movement , So it requires attention to realize the details of the game and the quick action that helps to perform quickly and accurately to achieve the goal is to reach high levels, where mental processes play a key role and important in mastering the basic skills of the Games, especially the game of tennis and these Operations is divided attention, which is a mental process visual manifestation of attention.

The emerging tennis player needs all the players in the various games and events to continuously improve his abilities to meet the conditions of competitions that require improvements in physical and motor abilities to be linked to the development of skill performance. The players cannot be deprived of the role of the senses in the application of training loads and different methods and techniques of regulation These loads, and this is what the trainers' effort in sound construction depends on when using their own exercises to achieve more than one purpose in a single job. The investment of the senses cannot be limited to kinetic learning only. Hence the importance of research in the preparation of divided attention exercises and their impact on the development of some physical and motor abilities and the skill of the back strike of the players of the TV [5].

### 1.2: PROBLEM SEARCH: -

That the continued presence of players emerging in the ground in the training environment of the limits of the tennis court and the accompanying of different stimuli lead to their familiarity with this training environment, and according to the nature of the human that this habitual instructs the brain to neglect the various stimuli that lower the level of raising the young people, which may need to serve According to the nature of the matches, it is

characterized by rapid strides in the skill of the rear strike in which there is a need to progress levels of mental processes, the stimuli must be activated in proportion to the changing circumstances of this skill, which is characterized by In the course of the frequent field visits from female researchers to the Tennis Academy in Baghdad, they noticed the need to prepare exercises that help trainers and beginners to meet the requirements of this game. This call calls attention to the continuous renewal in the type of exercise to take into account the individual differences according to the determinants of the principles of sports training , In a way that does not exaggerate, which simulates the training reality that must take into account the type of the sample of young people and their sex, which should be working with them exercises the unity of mental and motor goal, Yes performance is required, and this need committed researchers to delve into this problem, an attempt to develop some of the physical abilities and motor skill and background strike for young tennis players.

**1.3: OBJECTIVES OF THE RESEARCH:** - according to the sequence of actions the study will aim to:

1 - Preparation of divided attention exercises for players emerging from tennis.  
2. Identify the impact of divided attention exercises on some physical and motor abilities of young players in athletics.

3 - Identify the impact of divided attention exercises in the skill of the rear strike in the players emerging from tennis.

**1.4: RESEARCH HYPOTHESES:** - Which reflected the problem of the study and in accordance with its objectives will assume the following researchers: -

1- There are statistically significant differences between the tribal and remote tests in measuring the physical and motor abilities of the young players and the skill of the rear strike for the experimental and control groups and for the post-test.

2 - There are statistically significant differences between the post-test in measuring the physical and motor abilities and the skill of the back strike of the tennis players of the experimental and control groups.

**1.5: RESEARCH AREAS:**

1.5.1: The human field: - The emerging players in the tennis academy in Baghdad at ages (13-15) years.

1.5.2: Timetable: - From 1/2/2018 -2 / 4/2018

1.5.3: Spatial field: Iraqi tennis academy stadiums - Baghdad - Jadiriyyah.

**1.6: DEFINITION OF TERMS DIVIDED ATTENTION:** the possibility of the subject to pay attention to two things in one [1].

**2. RESEARCH METHODOLOGY AND FIELD PROCEDURES:**

**2.1: RESEARCH METHODOLOGY** According to the data of this study, the researchers will pursue experimental research, which is defined as "deliberate and specific change of the specific conditions of the phenomenon and observation of the outcomes of change in the phenomenon studied. It is also known as the use of experience in proving hypotheses" [2].

**2.2: The research community and its design:**

As determined by the players emerging at the Tennis Academy in Baghdad at ages (13-15) years, has been done (10) players of them by the deliberate way of the main search experience out of (15) players, were also divided (5)

players conduct a major search experiment The reasons for selecting this sample were the regularity of the players in attendance, as well as the availability of the necessary resources for the current study and (5) control players. In order to maintain the integrity of the internal experimental design, the homogeneity of the main research sample will be verified in the values of some anthropometric variables Which are extraneous variables that affect the results of dependent variables. And were represented in the variables of height, weight, time and training, as shown in table (1).

**Table (1): The mean, the standard deviation, the mean, and the coefficient of torsion between the individuals of the research sample for the purpose of homogeneity.**

| Variables and unit of measurement | Standard deviation | Mediator | Arithmetic mean | n | Factor Torsion |
|-----------------------------------|--------------------|----------|-----------------|---|----------------|
| Length (cm)                       | 4,827              | 145      | 144,4           | 5 | -0,372         |
| Weight (kg)                       | 5,393              | 40       | 40,6            | 5 | 0,333          |
| Age (year)                        | 0,836              | 11       | 10,8            | 5 | - 0,717        |
| The training age (year)           | 1,516              | 7        | 7,4             | 5 | 0,791          |

From Table (1), the values of the splicing coefficients were limited to ( $\pm 1$ ) and the distribution was moderate. This indicates the homogeneity of the research sample in the variables referred to in the table and its distribution within the natural curve [6].

**2.3: FIELD RESEARCH PROCEDURES:**

**2.3.1 TESTS USED IN RESEARCH:**

Back strike skill test (1):

Test Name: Accuracy of the front and rear shocks.

Purpose of the test: Assess the accuracy of the front and rear blows.

**TEST PROCEDURES:**

1. At the beginning of the test, the participants must have completed the warm-up and ready to conduct the test.

2 - (6) balls given to the player from the two sides, one front and the other background, and the player to hit the ball inside the individual stadium in a straight line.

3 - Give (6) other balls for players from both sides, one front and the other background, and the player to hit the ball in the individual stadium country.

4 - Score points are calculated in light of the place of the fall of the ball.

5. The supporting player must throw the ball in the middle of the ball between the transmission line and the baseline, and the player has the right to reject the irregular ball which lies outside the correct area [7].

**CALCULATION OF ACCURACY POINTS OF GROUND STRIKES:**

1. One point when the ball falls in any area of the center outside of the planned target match.

2 - Two points when the ball falls within the target area of accuracy before the transmission line.

3 - (3) points when the ball falls within the target area back to accuracy and in the individual tennis court.

**EXPLOSIVE FORCE TESTS:**

**Test 1:** Explosive force test: (for arms) (1):

Test Name: From sitting position on the chair push the medical ball (2) kg hands to the front.

Purpose of the test: Measure the explosive force of the arms and shoulder strap.

Tools: Medical ball weighing (3 kg), chair, tape measure, and the belt fixing the player on the chair.

Description of the test: The laboratory sits on the chair, and is fixed by a belt to prevent the trunk and back from participating in the performance of the sitting position the player to throw the ball as far as possible.

Actions: The player performs three attempts to throw the ball.

Method of registration: The best three attempts are calculated, and the measurement is in meters and its parts.

**Second test:** explosive power (for both men) (2):

Test Name: Wide Jump of Stability.

Test width: measure the explosive force of the two men.

Strength tests of speed:

The first test: the speed characteristic (for arms) (1):

Test Name: Test the bending and extension of the arms from the front end for the maximum number of (10) seconds.

Purpose of the test: Measure the speed of the arms.

Tools: Stopwatch.

Description of the tests: The laboratory takes the position of the front arm with the arms on the ground and when the start signal is heard, the laboratory will bend and extend the arms with the installation of combs of the feet on the ground [8].

Method of recording: the number of flexions and tensing of the index of muscle strength.

The second test: the force characteristic of speed (for both men) (2):

Name of the test: from the position of bending the knees fully jump up for (10) seconds.

Purpose of the test: Measure the speed-specific strength of the two men.

Tools: Stopwatch.

Description of tests: The laboratory takes the standby position and, upon hearing the start signal, the laboratory jumps up to fully bend the knees.

Method of recording: the number of folds and tides in 10 seconds.

Fourth: Fitness test (3):

Name of the test: shuttle run.

**Purpose of the test:** Measurement of agility.

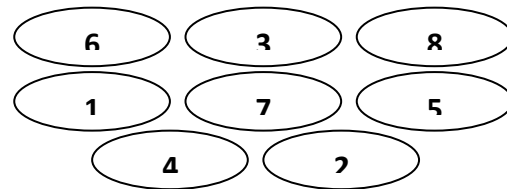
**Tools and devices:** Stopwatch, playground.

**PERFORMANCE METHOD:**

The player stands behind the line of the end of the pitch, and when he hears the starting signal he runs in a straight direction to touch the middle line (1) with the right hand and then turns towards the line (transmission area) 2 in the middle of the field, (3), which is located in the second half of the field where it touches the right hand, then turn to the middle line to touch it with the right hand (4), then turn towards the end line to touch the feet together (5) .

**TEST INSTRUCTIONS:**

- The line is touched each time with the right hand.
- In the event of a mistake, the player is retested after taking sufficient rest.



**Figure (1): Demonstrates the numbered circuits to measure kinetic compatibility between the two legs and eyes.**

Recording method: The player's time is recorded according to the specified route since the start signal is announced until the finish line is reached [9].

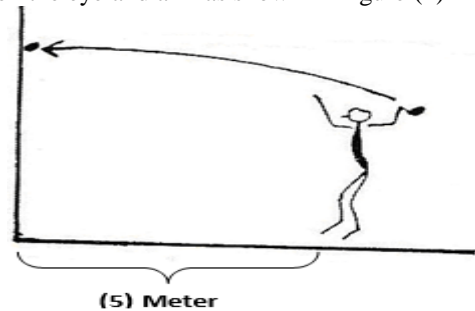
Fifth: Testing the motor compatibility between the two men and eyes (1):

Test Name: Numbered Circuits.

The objective of the test: measuring the kinetic compatibility between the two legs and eyes as shown in Figure (1).

. Sixth: the test of motor compatibility between the eye and arm (1):

Test Name: Throw and receive balls on the wall. The objective of the test: measuring the kinetic compatibility between the eye and arm as shown in Figure (2)



**Figure (2): Demonstrates throwing and receiving balls on the wall**

**2.3.2: CONDUCTING TRIBAL TESTS:**

The pilot tests were conducted at 4 pm on Tuesday (13/2) at the tennis courts in Al-Jadriya. The rear-strike test was applied in tennis and physical and motor tests were performed on Wednesday (14/2) The conditions of this application will be fixed on the experimental sample of the experimental and control groups. The purpose of these tests is to pre-determine the experimental design that requires their equalization and that they are online Launch One before that experimentation [10].

**2.3.3: MAIN EXPERIENCE:**

The researchers prepared the exercises of divided attention and applied these exercises during the training module. The curriculum was implemented by the researchers on Friday (16/2/2018) until 30/3/2018 at the rate of (3) units (6) weeks, bringing the total number of training units (18) training units. The exercises were followed by the experimental group, and the control group applied the exercises of the trainer

**2.3.4: CONDUCTING REMOTE TESTS:**

After the completion of the training curriculum, the researchers conducted remote tests of the skill of the back strike of the research sample at 4 pm on Sunday (1/4/2018) at the tennis courts in Jadiriya and on Monday (2/4/2018) And the mobility at 4 pm after the completion of the application of the training curriculum, which took (6) weeks, the researchers were keen to be the tests of the same

conditions of time and place and the tools used and the work team assisted by tribal tests [11].

### PRESENTATION, ANALYSIS AND DISCUSSION OF THE RESULTS:

Presenting, analyzing and discussing the results of the first objective: To achieve the first objective, which aims to identify the effect of divided attention exercises in the tribal and remote testing in some physical and motor abilities and

the skill of the rear strike in the experimental and control tennis players.

While the calculated T value of the tennis players was (3.61), which is greater than the tabular value of (2.132) at the level of 0.05 and the degree of freedom [4], which means there are statistically significant differences in the test of kinetic compatibility between the eye and the arm and in favor of Post-test as shown in table (2).

**Table (2): Shows the computational, standard deviations and calculated values between the experimental and control groups in the post-test**

| Variables  | MEASRUING UNIT | THE FIRST TEST |        | THE LAST TEST |        | VALUE T | SIGNIFICANCE |
|--|----------------|----------------|--------|---------------|--------|---------|--------------|
|  |                | s              | h      | s             | h      |         |              |
| Skill  | degree         | 15.6           | 1.095  | 11.2          | 2.28   | 3.481   | Spiritual    |
| Explosive force of arms                            | cm             | 312            | 15.637 | 260           | 11.535 | 5.352   | Spiritual    |
| Explosive power of the two men                     | cm             | 240            | 20.310 | 185           | 13.452 | 4.010   | Spiritual    |
| Distinctive force of speed for the arms            | sec            | 14.8           | 1.303  | 12.8          | 1.143  | 2.309   | Spiritual    |
| Characteristic speed of the two men                | sec            | 18.2           | 3.033  | 14.7          | 1.126  | 2.164   | Spiritual    |
| Fitness  | sec            | 14.75          | 1.34   | 15.5          | 1.23   | 2.122   | Spiritual    |
| Dynamic compatibility between the eye and the legs | sec            | 6.01           | 0.45   | 7.68          | 0.68   | 4.09    | Spiritual    |
| Kinetic compatibility between eye and arm          | degree         | 10.12          | 0.48   | 8.47          | 0.56   | 4.47    | Spiritual    |

The table value (1.860) was below the level of significance of 0.05 and the degree of freedom 8.

### 3. DISCUSSION OF RESULTS:

By presenting the results in tables 2, 3 and 4, Which showed significant differences between the tests of tribal and remote and for the benefit of the dimension and both groups, experimental and control of the variables of some physical and motor abilities and performance of the skill of the strike back the researchers attributed the reason for these differences [11].

For the experimental group to the introduction of split observation exercises within the training units and overlap with special exercises followed by members of the experimental group, which had a positive impact on the development of physical abilities and the ability of motor compatibility and the skill of the rear strike, which requires coherence and consistency at these stages, and this helped to clarify the movement in this bitter And the speed of performance of players to skill, and thus to the sense of the right timing, which led to improved ability of motor compatibility and a good acquisition of the skill of the strike back, and this is consistent with some studies and research indicated the importance of the use of split observation exercises in the training of skills and physical And had "an impact on the improvement and development of the technique of various mathematical skills, especially if combined with the diversity of exercises in skill training".

As for the control group, which showed significant differences, the researchers attributed them to the commitment of the members of this group to the training

units and the regular repetitions, because repetition is one of the important aspects in the training process and without it does not occur the training process and the repetition or training on the technical performance In the right way helps to increase the experience of mobility, "Experience has shown that the proper training of skills achieves the best results, because understanding the relationships between the elements of skill and create the foundations of motor memory helps to develop the level of learning."

Also, the nature of the skillful performance of most sporting events and skills in general tennis game, including the skill of the back strike in particular require to have their own training and privacy in the technical performance is different from the rest of the skills and other sports, as the exercise of the technical stages of this skill with the exercises split look Help young players to sense the right timing of performance and through the rhythmic exchange of tension and relaxation that reduces the burden on the nervous system and muscle, which leads to delay fatigue in the players, because the diversity of exercises applied to the excitement and Thrill is a motivational tool that stimulates the players' motivation and energy. In addition, it creates an atmosphere full of excitement and excitement to exercise in order to alleviate the difficulty in the technical stages of the skill of the rear strike and thus develop the spirit of fun and joy in the performance of vocabulary units "The important foundation is that the player will learn better and excel in the performance of motor skills if his motives are consulted through thrill and excitement" [3].

#### 4. CONCLUSIONS AND RECOMMENDATIONS:

##### 4.1: CONCLUSIONS:

After processing the results obtained statistically, the researchers reached the following conclusions:

1. The results of the statistical evaluation in the application of the divided attention exercises showed a positive change in favor of the experimental sample of the tennis players.
2. The use of divided attention exercises has a positive impact on the development of the physical and motor abilities of tennis players.
3. The use of divided attention exercises has a positive effect on the development of the rear-strike skill for high-school players.

##### 4.2: RECOMMENDATIONS:

The researchers made the following recommendations based on the findings of the research, which must be taken into account:

- 1- Adopting the training curricula on the divided attention exercises when training some of the physical, motor and athletic abilities of the tennis players.
- 2 - Taking the results of this study and dissemination of the positive results achieved in physical, motor and skill development.
- 3- To conduct studies and research related to the impact of the use of divided attention exercises in physical abilities, mobility and skills in other sports activities.

##### DIVIDED ATTENTION EXERCISES:

1 - The player stands on the line of the transmission area, and starts the coach handling two cards at the same moment, one in red and the other green so that the focus of the player directed at the ball and the sound of the coach to determine the color of the ball to be repelled and returned to the coach.

2 - Four square areas, each area is assigned a certain color and the player stands on the opposite side on the line of the sending area and the coach begins to handle the ball and determine the color of the area where the ball should fall.

3. Two areas are marked on the wall in red and green and the coach begins to handle the ball for the player, specifying the color of the area by the coach to which the ball should be thrown.

4 - The player stands on the line of the dispatch area and the coach starts handling two cards at the same moment one high and the other lowly as the player starts to repel the balls according to the guidance of the coach, once he repels the high ball and again it repels the low ball.

5. The red and green areas are marked on the wall with the player in front of the player and the player moves between the players. At the same time, the coach begins to manipulate the ball to the player, specifying the color of the area to which the ball should be thrown.

6. The player shall be stopped on the line of the sending area and the coach and the assistant coach shall be on the opposite side. The colored balls shall be handled at the same moment by the coach and the assistant, with the player being directed by the coach or assistant.

7 - The player stands on the line of the transmission area, and the coach starts to handle two cards at the same moment, one in red and the other in green so that the focus of the player directed at the ball and the sound of the coach to determine the color of the ball to be repelled and return

to the coach with wear heavily weighted in the arm of the player.

8 - Two square areas on the pitch, each region in a certain color, and the player stands on the opposite side of the line of the transmission area with the player's trunk tied rubber ropes and starts the coach to handle the ball and determine the color of the area that should fall the ball.

Ayman Najmuddin,, a proposed training curriculum for the development of aerobic and anaerobic capacity and its impact on some physical, functional and skill variables, PhD thesis, Baghdad University, Faculty of Physical Education for Girls, 2005, p. 75

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