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## Research Article

### The Effect of Special Exercises on Developing the Serving and Receiving Skills of Volleyball Players

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#### ABSTRACT

The purpose of the study is to design unique activities and determine how much of an influence they have on the growth of receiving and serving abilities. By creating a group consisting of a pre-test and a post-test of the sample ten young volleyball players from the Heat Sports Club, the researcher employed the experimental technique. The exercises were administered once the pre-tests were completed. The 36 training units that made up the special training unit were spread out across 12 weeks, 3 sessions per week. After doing special exercises for 60 minutes in the main part, post-tests were administered. Following that, the researcher employed suitable statistical techniques to get at the most significant finding from the data is that particular workouts can improve the abilities of serving and receiving.

**KEYWORDS:** Exercises serving, receiving and volleyball

#### 1. INTRODUCTION

Scientific progress has become one of the features of life, as this progress included all aspects of life, which came as a result of extensive studies, research and experiments based on scientific foundations to reach scientific results to provide appropriate solutions in solving any problem. This progress included the mathematical aspect, which benefited a lot from the scientific results of this. Studies that focused on the intersection between the natural and human sciences in order to comprehensively prepare the individual athlete to achieve athletic achievement.

In recent years, sports Education has been influenced by the scientific and technological revolution, and the educational process has adopted a form, structure and organization that is consistent with the new developments in methods and means used in the educational process. Scientific developments have added many new methods line with the nature of the trainee's age group through the coaches' endeavor to choose the best and latest methods that are appropriate for the specialized activity, with the aim of achieving and investing in the specificity of training related to the type of activity in order to achieve a direct impact on improving the level of performance. From the above, the importance of research is evident in developing special exercises to develop the level of performance of the serving and reception skills, especially special exercises that play a fundamental and important role in training in order to develop the level of skill performance because it has a positive influence on accomplishing goals, the employment of physical exercises in the for those working in the sports industry, especially those interested in sports training, training is a fundamental concept backed by solid scientific evidence, whether it is physical, technical, tactical or psychological, or Educationally. Accordingly, in his work, the researcher deliberately chose

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special exercises, based on scientific principles and foundations, and based on the fact that these exercises are “the only means of absorbing the elements of play and repeating them and repeating them until they reach the desired goal and the required preparation.”<sup>[1]</sup>

### Research problem

The great development in the physical, skill and tactical aspects and the new training methods used, as well as benefiting from the intersection of sports sciences with each other, have helped to achieve the best performance, which is the distinctive feature of this era, in addition to the rapid development of most countries that have achieved great achievements, and through the researcher’s knowledge and observation. For the players of the Heat Youth Club in volleyball, a weakness and decline in the level of skill performance of serving and receiving was found, so the researcher decided to develop special exercises for the skills under study in order to reach the correct performance in implementing these skills to avoid the weakness in the accuracy of performance.

## 2. RESEARCH OBJECTIVES

1. Special exercises tailored to the target group for the research variables are being prepared.
2. Understand the impact of special exercises on the development of volleyball players' serve and receive skills.

### Research hypotheses

There are differences between the results of the pre- and post-tests for the serving and receiving skills of young volleyball players, For later testing.

### Field of research

- **The human field:** A young volleyball player from the Heat Sports Club.
- **Temporal scope:** from September 1, 2023, to April 1, 2024 AD.
- **Physical space:** The Heat Volleyball Club's sports hall.

## 3. RESEARCH METHODOLOGY AND FIELD PROCEDURES

### Research methodology and study design

To accommodate the nature of the research topic, the researchers used a single-group experimental design with a pre- and post-test.

### The research community and its sample

Heat volleyball players Youth Sports Club, consisting of fourteen players, was specifically selected to represent the research community. No players included in the research sample but where still part of the research community was chosen for the exploratory experiment. The research sample comprised ten players, or 71.42% of the research community.

**Table 1:** Displays the study sample and population

Research community	Experimental research sample	Percentage of the research sample
(14) Players	(10) Players	71.42%

### Devices, instruments for study, and methods for gathering data

1. Volleyball court.
2. Volleyballs (20).
3. Stopwatch number (4).
4. Measuring tape and colored tape.
5. Jumping barriers (10).
6. References.
7. Tests used.
8. Assistant work team.
9. Internet.

### Tests used in research

1. **The first test:** The serve test from above.<sup>[2]</sup>

**Test Purpose:** To measure the top serve.

**Tools:** Volleyball court divided as in Figure (1), net height 240 cm, ten volleyballs, measuring tape, and adhesive tape.

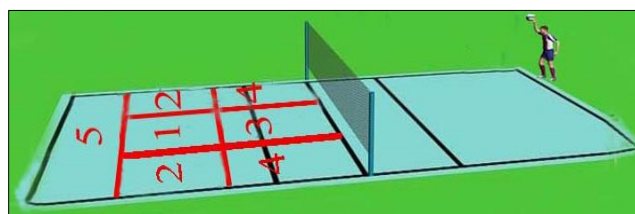
**Performance specifications:** The tester performs ten consecutive serves, trying to direct the ball to the area in which the highest score is written.

### The conditions

1. Points are calculated based on the ball falling in the designated area on the court, this way the lab can get the score for the area where the ball landed.
2. If the ball lands on the line, it is considered to have landed in the area defined by the line; if the ball lands on the line between two areas, the lab will include the highest score in that area.

### Registration

The laboratory records the grades it obtained in the ten attempts it made, noting that the final grade is 50 grades.



**Figure 1:** Shows the serving test from above

2. **The second test: Test of receiving servings from below.**<sup>[3]</sup>

**Purpose:** Knowing the player’s ability in reception skill.

### Tools:

1. Volleyball court, 10 balls, metric scale, net.
2. Dividing the area into three equal areas.

**Description of performance:** The test subjects form a circle (A) facing the ball site, and the coach must pass the ball to them. to receive the ball directed into area (1). He continues for five balls

and then heads to area (2), five balls, then to area (3) for five attempts and then from circle (B), the attempts are repeated.

- **The conditions:**
  1. The player has (15) attempts in circle (A), and (15) other attempts in circle (B).
  2. In attempts, follow the skill of receiving from below with the hands.
  3. The incorrect attempt sent by the coach to the laboratory in an incorrect manner or outside the circle in which the player is present will be deleted.
  4. Apply the sequence of attempts as required in:
- **(15) An attempt from Circuit A:**
  - Five for the region (1).
  - Five for region (2).
  - Five for region (3).
  - (15) Attempt from Circuit (B) in the same manner as before.
- **Register:** The player scores the points he obtains from the (30) attempts given to him (15 from each circle) according to the following method:
  - If the ball falls into the specified area, the player is given three marks.
  - If the ball falls outside what is specified and inside the adjacent area, the player is given 2 marks.
  - If the ball falls outside what is specified on the field, the player is given 1 score.
  - Otherwise, the player is given a zero.
  - The player's final score is 90.

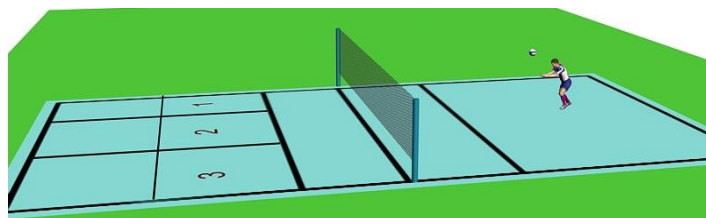


Figure 2: Shows the reception test

#### 4. RESULTS

Table 2: Displays the study sample's statistical characteristics in the pre- and post-test results for the serving and receiving skills

Skills	Units	Tests	Mean	STD	Mean Diff.	STD Diff.	(T) Value *	Indications
Serving from above	Degree	Pre	24.4	3.6	7.3	3.17	7.3	Sig.
		Post	31.7	4.12				
Receive serving from below	Degree	Pre	60	15.90	18.06	12.77	6.01	Sig.
		Post	78.06	10				

\* Tabular value: 2.26, Significance level: 0.05, Degree of freedom: 9

Table 2 makes it evident that the serving from above had a mean of 24.4 In the pretest, the standard deviation was 3.6 in the post-test, and that the mean and standard deviation in the latter were 31.7 and 4.12, respectively. The mean difference (F-) is (7.3) and the standard deviation of the mean difference is (3.17). In front of the degree of freedom (9) and the level of significance (0.05), the calculated value of (T) is (7.3) after statistical processing, The value of T in the table is equal to (2.26). Since the calculated value

#### Exploratory experiment

At 5 p.m. on Saturday, September 9, 2023, the assistant working group conducted an exploratory experiment on a sample of foreign players in the lobby of the Heat Sports Club. The results of this experiment will be considered in the main experiment, which must have the same terms Main experimental conditions and conditions. The study sample, to assess how well the tests fit the population level of the sample, how long it takes to administer the tests, and how effective and sufficient the supporting work team is.

#### Field procedures

1. **Pretests:** On Monday, September 11, 2023 at 5:00 PM, the researcher conducted a pre-test on the research sample at the Heat Volleyball Club gymnasium. The researcher followed the same conditions (space and time) and then set the conditions in terms of time, equipment, tools, and supporting work teams. The same situation must be arranged and provided for the research sample to be post-tested.
2. **The main experiment:** Implementation of the main research experiment began on Tuesday, 9/12/2023, and ended on Sunday, 12/3/2023, using special exercises. These units included special exercises according to the motor path of the skill and stomach according to the foundations of training by the researcher and from some sources. Scientific research that helps in its impact on the development of serving and receiving in volleyball among members of the research sample. Then the assistant work team applied the training to the research sample and included (36) training units distributed over (12) weeks at a rate of (3) units per week. The training for the research sample took place in the main section, with a time of (60) minutes.
3. **Post-tests:** On Tuesday, December 5, 2023, at five o'clock in the evening, the researcher conducted a post-test of the research sample in the Heat Volleyball Club's sports hall. The researcher used the same devices, tools, and tests that had previously been installed, and the same conditions (spatial and temporal) were followed.

of (T) is greater than the value in the table, it indicates that the difference is significant, which is conducive to post hoc testing. The mean and standard deviation for getting servings from below were found to be (60) and (15.90) in the pre-test and (78.06) and (10), respectively, in the post-test, according to the same table. Before degrees of freedom (9) and significance level (0.05), the calculated (T) value is (6.01), the tabulated T value is (2.26), and the mean difference between the mean (F) (18.06) and the

standard deviation is (12.77). Since the calculated value of (T) exceeds the tabulated value, the difference is statistically significant, which is conducive to post hoc testing.

## 5. DISCUSSION

Table (2) demonstrated that there are statistically significant differences, favoring the post-tests, in the serving and reception skills pre- and post-test results of the research population. This attests to the particular exercises' efficacy. The investigator ascribes these statistically significant variations to the fact that the unique workouts she created, which had tasks with the same According to the researcher's assessment of the impact of the unique exercises during the specified training units, the motor route of the skill demonstrated appropriateness and impact in terms of the allotted time and mastery.

The desire to perform these exercises, as well as repeating special exercises, helps in the process of mastering the movement and avoiding expected mistakes. [4] "that Repeating the problem of sporting movements is to stabilize the field and the mechanism of its progress, and in general, the direction is clear and purposeful, and to improve the ability to drive motor skills." Special exercises are the most important conditions for developing the level in volleyball.[5]

Since volleyball skills require the player to be quick in preparation, the researcher believes that this goes beyond just improving serving and receiving abilities. These exercises build muscular ability and help players develop the lightning-fast speed needed to score a point that can decide the outcome of a match. The way the skill and the game as a whole are played requires that the execution of the game alternates between attack and defense.

## 6. CONCLUSIONS

1. Special exercises have a positive impact on developing the serving and receiving skills of young volleyball players.
2. Choosing special exercises for this age group (youth), it has been shown to successfully improve physical and physical performance levels due to its impact on the motor pathways of performance skills.

## 7. RECOMMENDATIONS

1. Using special exercises to develop the skill performance of the rest of the skills in volleyball because of their impact, especially the motor path of the skill.
2. Using special exercises for physical, motor, and skill abilities in volleyball on the one hand and other games on the other hand.
3. Using special exercises in the Heat Volleyball Club and taking the conclusions and adopting them in the future.

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