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THE EFFECT OF MOTOR GAMES IN IMPROVING MOTOR RESPONSE SPEED AND BLOCKING SKILL FOR VOLLEYBALL PLAYERS

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ABSTRACT

The research aims to prepare movement games and identify the extent of their effect in improving the speed of movement response and blocking. The researcher used the experimental method in a single-group design with two pre- and post-tests for a sample of (10) players from the Heat Sports Club in volleyball for ages (10-13) years. Pre-tests were conducted and then motor games were applied. They included (24) educational training units at a pace of three units each week spread over eight weeks. Motor games were used in the main section, with a duration of (40) minutes, and then the researcher used Appropriate statistical methods in order to reach results. The most important conclusion was that motor games have a positive effect in improving the speed of motor response and blocking.

Keywords: *Motor games, response and volleyball.*

INTRODUCTION

Due to the many training and educational methods and strategies that the coach must be familiar with and be interactive with the players and push them to interact with him so that the training is effective and effective according to movement games that are appropriate and simulate the actual performance with the age group that contributes to its effective employment. The various motor games are fun and beneficial games that build the body and benefit from them. Therefore, motor games should have lofty goals of strengthening the body, activity, getting along with the players and spreading fun in them, as the games highlight competition as a beneficial factor if used wisely and knowledgeably by the coach.

Movement games are also considered one of the important means used to improve the physical, motor and skill abilities of the game, because they are selected and directed according to the motor path of the skill and the motor task required to be carried out. The use of movement games within the educational training unit for those working in the sports field, especially in the field of sports training, is one of the basic matters based on sound scientific foundations due to their significant influence on accomplishing the goals set out, whether that is physical, skillful, tactical, psychological or educational. Late childhood, at the age of (10-13)years, is regarded as one of the most significant and fertile educational and training stages. This stage in physical education is considered the foundational stage in motor construction, and it is the richest stage for understanding motor tasks, in which sports skills develop and levels are built, and the ability to learn motor is very rapid. This stage It is the stage of preparation for the tournament, during which the player's ability to reach the highest level of motor qualities and physical qualities develop to serve the motor qualities.

Here, the importance of research into developing movement games that contribute to their effect by improving the speed of motor response and the blocking skill of volleyball players is highlighted, and the progression from easy to difficult, according to the stages of learning and training.

Researchproblem

The motor response's speed has a distinct place in implementing the skill performance of the blocking skill with volleyball and as a result of the legal amendments and changes to it and the accompanying change in the rhythm of the game, which is characterized by speed, as the change in the direction of the smash hit to get rid of the blocking skill or to catch the blocking skill with the smash hit, stop it, and defend the serve. Defending the court shows the necessary need for this motor ability and the focus on it in the game of volleyball, as it is one of the most important abilities that allows the player to advance in the level. Through the researcher watching many matches, he found that there is a weakness in the speed of the players' motor response, especially in the blocking skill, which the researcher saw that This problem can almost be investigated.

Research objectives

1. Preparing special action games for the target group for the research variables.
2. Knowing the effect of motor games in improving motor response speed and blocking skill for volleyball players aged (10-13) years.

Research hypothesis

- There are differences between the results of the pre- and post-tests in the speed of motor response and blocking skill for volleyball players aged (10-13) years, in favor of the post-tests.

Research field

- Human field: A sample from Heat Sports Club, volleyball for ages (10-13).
- Temporal scope: for the period from 9/1/2023 to 4/1/2024 AD.
- Spatial field: The sports hall of the Heat Volleyball Club.

Study design and research methods

In order to address the nature of the study topic, the researcher employed an experimental design with a single group and pre- and post-tests.

The scientific community and its representative sample

The research community consisted of sixteen volleyball players from Heat Sports Club, who were specifically chosen to represent them. Ten participants between the ages of 10 and 13 made up the study sample, which represented 62.5% of the research community. For the experimental trial, participants were chosen from outside the nation. The research community's research sample.

Table 1. Shows the research population and sample

Research community	Experimental research sample	Percentage of the research sample
16 players	10 players	**62.5%**

Devices, research tools, and means of collecting information

1. Volleyball court.
2. Volleyballs (12).
3. Stopwatch.
4. Tape measure and tape.
5. Jumping barriers (12).
6. International and Arab sources.
7. Exams conducted.
8. Supporting work group.
9. The Internet, or Worldwide Information Network.

Tests utilized in studies

1. **The first test: Nelson's transitional motor response test** (1: 244)

- Purpose of the test: to gauge one's capacity to react and move swiftly and precisely in response to a certain stimuli.
- Necessary tools: 20 meters long by 2 meters broad, a level place free of obstructions, an electronic timer, a measuring tape, and sticky tape.
- Procedures: As shown in Figure (1), the test area is laid up with three lines, each measuring one meter in length and six.40 meters in distance from one another.

  - Test description:
    - The player stands on the center line facing the arbitrator, who stands at the other end of the line.
    - The player prepares where the midline is between the feet and bends his body forward slightly.
    - The arbiter takes up a stopwatch in his hands, lifts it to the top, and simultaneously begins the watch and swings his arm left or right.
    - The player advances to the side line, which is 6.40 meters from the center line, by making the hand signal and sprinting as fast as they can in the designated direction.
    - The referee pauses the clock when the player crosses the right side line.
    - The referee will keep running the clock until the tester changes course and crosses the correct side line if the player runs in the incorrect direction.
    - The player has six chances, with twenty seconds elapsing between each try, and three chances per side.

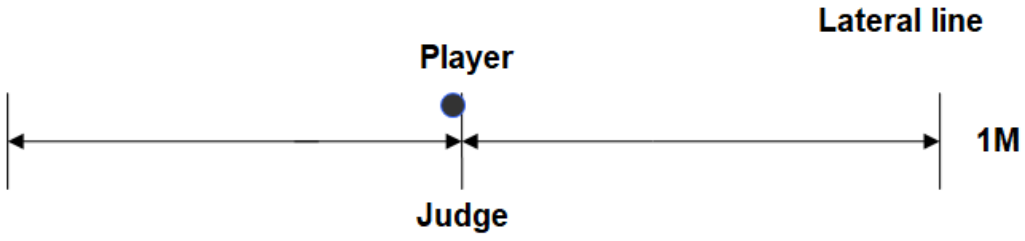

Figure 1. Demonstrates the Nelson motor response test

2. **Second test** (2: 321)

- A test to measure the accuracy of the individual blocking skill from the center (2)
- Purpose of the test: to measure the accuracy of the individual blocking skill from center (2)
- Performance requirements: The tester blocks from position (2) while the coach executes a smash hit from a distance of 25 cm.
- Tools: A volleyball court divided as in Figure (2), a tape for setting goals, a measuring tape, and volleyballs.

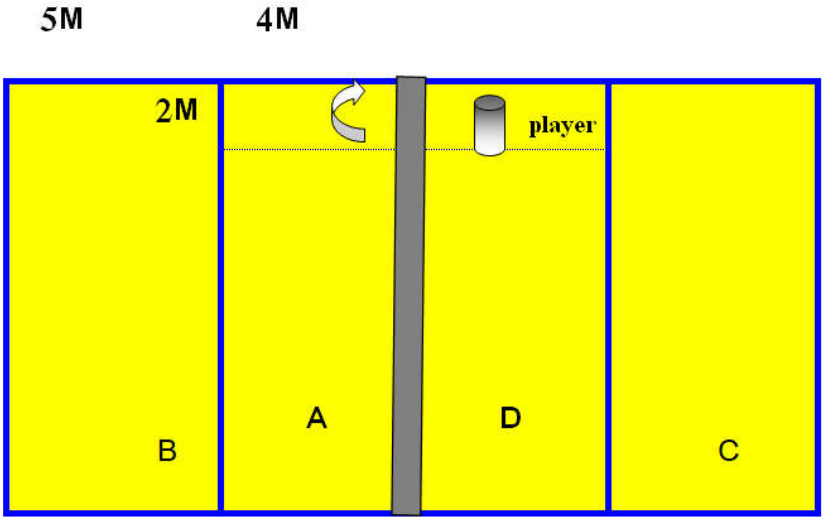

Figure 2. Demonstrates the accuracy of the retaining wall

- Registration conditions: The laboratory has three attempts
  - (4) points for each attempt inside area (A)
  - (3) points for each attempt inside area (B)
  - (2) points for each attempt inside area (C)
  - point for each attempt inside area (D)
  - Zero when the ball falls outside these areas.
  - When the ball falls between a common line between two regions, the higher region's score is counted.
  - The attempt will be canceled if the laboratory commits a legal error.
- Player score: It is the sum of the points of the three attempts.

Exploratory experiment

The exploratory experiment serves as a mini-role for the major investigation, and its findings must be considered under the same rules and conditions as the main experiment. Therefore, on Thursday, September 7, 2023, at four o'clock in the evening, the assistance work team carried out the exploratory experiment on a sample at the Heat Sports Club hall. It is made up of participants who are not part of the study sample, and the main objective of the experiment is to ascertain whether the tests are appropriate for the sample's level of population, the time period required to implement the tests, and the efficiency and adequacy of the supporting work team.

Field procedures

1. Pretests

The research sample's pre-test was carried out in the sports hall of the Heat Volleyball Club on Saturday, September 9, 2023, at four o'clock in the evening, and the researcher followed the same conditions (spatial and temporal), after which the conditions were fixed in terms of time, devices, tools, and the auxiliary work team. In order to create the same conditions for the research sample and control them when conducting post-tests.

2. The main experiment

The primary research experiment was then put into action following the conclusion of the exploratory experiment and the pre-tests. Since these units featured prepared games, the primary study experiment was implemented using movement games. It started on Sunday, September 10, 2023, and finished on Thursday, November 9, 2023. The research sample's members' motor reaction and volleyball-blocking skills have improved thanks to a training program the researcher developed and several scientific references that support it.

The training was then applied to the study sample by the assistant work team, consisting of twenty-four training units spread over eight weeks at a pace of three units per week. The research sample's training was conducted in the main portion and lasted for forty minutes.

3. Post-tests

The researcher used the same procedures that he used to conduct the pre-tests under the same conditions (spatial and temporal) and on Saturday, November 11, 2023, at precisely four o'clock in the evening. The post-test of the research

sample was conducted in the sports hall of the Heat Volleyball Club. Making use of previously installed tools, devices, and tests.

RESULTS

Table 2. Shows the statistical parameters of the research sample in the motor response speed test and the blocking skill test in the pre-post tests

Skills	Units	Tests	Mean	STD	Mean Diff.	STD Diff.	(T) Value*	Statistical significance
Speed of motor response	Time	Pre	1.821	0.154	-0.269	0.185	3.29	Sig.
		Post	1.552	0.109				
The blocking skill	Point	Pre	5.2	2.315	1.9	1.99	3.57	Sig.
		Post	7.1	1.135				

*Tabular value (2.26) with degree of freedom (9) with significance level (0.05)

From Table (2), it is clear that the arithmetic mean of motor response speed in the pre-test was (1.821) and the standard deviation was (0.154), while in the post-test the arithmetic mean was (1.552) and the standard deviation was (0.109), while it was The difference of the arithmetic means (F-) is (-0.269) and the standard deviation of the difference of means is (0.185). Upon statistical processing to determine In front of the degree of freedom (9) the estimated value of (T) is (3.29) and the value of the tabulated T is equal to (2.26) The computed value of (T) is more than the tabular value, indicating that the difference is significant and favors the post-test at the (0.05) level of significance.

Through the same table, it was found that the arithmetic mean of the retaining wall in the pre-test was (5.2) and the standard deviation (2.315), while in the post-test the arithmetic mean was (7.1) and the standard deviation (1.135), while the difference of the arithmetic means (F-) was (1.9). The standard deviation of the difference of means is (1.99), and upon statistical processing to find out the calculated (T) value is (3.57), and the tabular T value is (2.26) in front of a significance level (0.05) and a degree of freedom (9) and therefore the computed (T) value is higher than the tabular This indicates that there is a substantial difference favoring the posttest.

DISCUSSIONS

- **Discussing the results of the motor response speed and the repelling wall of the research sample**

It was shown through Table (2) that there are statistically significant differences between the results of the pre- and post-tests of the research sample in the speed of the motor response and the blocking skill, and in favor of the post-tests. This confirms the effectiveness of the motor games. The researcher attributes these statistically significant differences to the motor games prepared by the researcher whose content included games. It focused on improving physical and motor abilities, as the researcher believes that the effect of motor games during the given educational units showed adequacy and impact in terms of the time allocated with the organization of motor games from easy to difficult, and these games were at the level of ages and capabilities of the players, which helped in satisfying their desires as a result of releasing their negative emotions and transforming them into positive ones and the direction. Towards optimal performance during the application and mastery of the game. Also, the diversification of movement games in the style of their performance, which was relied upon to bring them to a state of joy and satisfaction due to the diverse and exciting movements they perform, helped in developing physical and motor abilities, and this is confirmed by (Alicia J. Luckey and Richard A. fabes. 2005).) to the fact that playing of all kinds is the prominent feature of young players in daily life and is beloved by them, and it suits their inclinations and maintains its status among them until they grow up (4: 67).

The researcher believes that this is not limited to improving the speed of motor response and blocking only, as these games improve muscular ability and will work on the player to possess the lightning instantaneous speed that the game of volleyball requires to score a point that changes the course of the match, because defensive skills require the player to have speed in Preparing, changing, and performing an effective momentum to obtain the highest possible height enables the athlete to perform while focusing on not making mistakes during the performance.

CONCLUSIONS

1. Motor games have a positive effect in improving the speed of motor response of volleyball players.
2. Motor games have a positive effect in improving the level of blocking for volleyball players.
3. Choosing motor games for this age group has proven successful in improving the level of physical and skill performance because of its psychological and recreational effects for the target group.

RECOMMENDATIONS

1. Using motor games to improve the physical and motor abilities of beginner age groups due to the aptitude and motivation of this group for such games and for the rest of the games.
2. Searching for new and other effective ways to improve physical, motor and skill abilities in the game of volleyball on the one hand and other games on the other hand.
3. Using movement games in the Heat Volleyball Club for small groups and drawing conclusions and research.

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