

The Effect of Competitive Training Games on Developing Some Physical Abilities and Basic Skills in Volleyball for Youth.

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Abstract

The purpose of this paper is to study the competitive training games in some physiological variables and physical and skill abilities in volleyball for young people, which contribute to the development and raising of players' abilities in proportion to the high physical abilities required by this effectiveness, so the researchers found the need to conduct this study . The researchers used the experimental method with two experimental and control groups with two tests, before and after, and the research community was identified as the players of the Kufa Youth Volleyball Club in Najaf Governorate, aged (16-18) years for the sports season (2020-2021), and their number is (16) players. The researcher chose his sample in a random way, and their number is (12) players from the research community. The sample was divided into two groups, experimental and control, using the lottery method, and each group consisted of (6) players. The training curriculum lasted for (8) weeks, at an average of (3) training units per week, with (24) training units and days (Sunday, Tuesday, Thursday), which are the training dates for the research sample, and with the same number of training units, the control group will implement the training units so that the team coach is the one who trains the experimental group, and the intensity was high (90-100%). the data were treated statistically so that the most important conclusions were that the competitive training games prepared by the researchers affected the development of the physical abilities and basic skills of youth volleyball players, as the researchers recommended the use of competitive training games in various training programs and in the general and private preparation period and to identify their development.

Keywords: competitive training games, physical abilities, basic volleyball skills.

Introduction:

The achievements made at the level of all events and games are the result of the scientific research movement to solve the problems facing the progress of the players, which made the specialists and scientists in this field strive and search in order to find the latest appropriate training methods and methods to obtain the highest results and maintain them in order to reach higher levels.

As the competitive training games are considered a new entry point for their connection to the type of game or the formation of a solid and solid base and the provision of all the requirements that take them towards the better, to develop the level of the players by developing some physical abilities and basic skills, as well as giving them the appropriate opportunity to express their needs, inclinations and needs It is considered an important part of the training activity, as it represents a prominent place among the

various games and multiple activities, as it has become one of the ingredients needed by the training program, and an appropriate training curriculum can be developed based on competitive training games that are legalized to reach better to perform.

Physical abilities are of great importance in most sports activities and events, most of them because they are one of the components of physical preparation that characterize sports such as volleyball, and the principle of developing physical qualities through training and according to modern scientific foundations is important, especially in games that need to develop these abilities.

Not to mention that it needs to perform different and fast movements that require the player to move from offensive to defensive skills in harmony and super smoothness because they are closely related to each other and the fact that volleyball skills require players to possess high physical qualities that help them perform various skills of the game, including crushing and Blocking and defending the stadium, which is one of the volleyball skills and they have a fundamental impact on the results of matches and is one of the most powerful offensive and defensive means, so coaches must pay attention to these skills by focusing on developing them according to competitive training games based on correct foundations and working on Directing the attention of the players to the accuracy in performing the smash hits and the blocking wall and defending the stadium because the correct technical and economic performance in performing the skills achieves ensuring the accuracy of the smash hits and the blocks and defending the stadium in an optimal way to score points for the team.

Hence the importance of the research was able to use competitive training games in some physiological variables and physical and skill abilities in volleyball for youth, which contributes to developing and raising the players' abilities commensurate with the high physical abilities required by this effectiveness, so the researcher found the necessity of conducting this study.

Research problem:

Defining the problem and standing on it is part of the solution and correcting the training process by addressing that problem is the other part in improving and developing the level and addressing the shortcomings in sports performance. What is required is according to the required or international level, especially if the ball continues to circulate continuously in intense competition, as their performance decreases rapidly during the match, which shows weakness in the physical, skill and physiological aspect, as well as the weight of young players from exercises and the weakness of the element of suspense for exercises, which is very important for the ages of young players in a volleyball game , as it did not take enough time in training, which gives motivation for training, so the researcher wanted to develop the level of physical performance and skill and improve some physiological indicators of vital organs and through the development of exercises in the form of competitive training games to increase the interaction of the players and their reactions and responses, believing that it will be part of solving the above problems.

Research objective:

- Identifying the impact of competitive training games on some of the physical abilities and basic skills of volleyball for youth.

- Identifying the differences in the research variables (physical abilities and basic skills) between the experimental and control groups in the post-test.

Research hypotheses:

- There are statistically significant differences between the tribal and remote tests in the development of some physical abilities and basic skills of the two research groups.
- There are significant statistically significant differences between the post-tests of some physical abilities and basic skills for the experimental and control groups, in favor of the experimental group.

Research fields:

- Human field: Al-Kufa volleyball club youth players for the 2020/2021 season.
- Time field: from 20/1/2021 to 10/4/2021.
- Spatial field: the closed sports hall of the Kufa Club and the closed hall of the College of Physical Education and Sports Sciences - University of Kufa.

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method by designing the two equal groups (experimental and control) as a method to implement his research, due to its relevance to the nature of the problem to be investigated.

Community and sample research:

The research community was identified as the players of the Kufa Volleyball Club for youth in Najaf Governorate at ages (16-18) years and registered in the Iraqi Volleyball Federation, Najaf Branch for the sports season (2020-2021), and their number is (16) players, and the researcher chose sample The research was conducted randomly and numbered (12) players from the research community, and the sample was divided into two groups, experimental and control using the lottery method, and each group consisted of (6) players, and the exploratory experiment sample amounted to (4) players from the research community as show in the table (1). Then the researcher performed homogeneity, equivalence and normal distribution of the research sample.

Table (1) shows the preparation of the research sample on which the tests and measurements were conducted.

Sample split	Groups	Count	Percent
Research sample	Experimental	6	37.5%
	Control	6	37.5%
Experimental sample		4	25%
Total		16	100%

Exploratory experiments:

After determining the research sample, the researcher conducted two exploratory experiments on the pilot experiment sample consisting of (4) players from the research community on Sunday and Monday on (15/16) of November 2020 at nine o'clock in the morning in the boiler room of the College of Physical Education and

Science Sports University of Kufa, and the researcher's goal of the exploratory experiments was to identify the obstacles that accompany the conduct of tests to bypass or avoid them and to ensure accurate and honest results.

- First exploratory experiment: physical tests and tests for basic skills
- Second exploratory experiment: a training unit of competitive training games prepared by the researchers.

Determining physical abilities and basic skills and their tests:

For the purpose of determining some of the physical abilities and basic skills that must be available to young players, the researcher briefed him on many Arab and foreign sources that were concerned with the subject of these abilities, and the researcher met with experts and specialists in volleyball, sports training and training physiology, and after taking the opinion of the supervisor Which were determined to suit the nature of the study and its goal in the game of volleyball. The physical abilities and basic skills appropriate with the research (explosive force of the two legs, the distinctive strength of the arms, the accuracy of the skill of the blocking and the accuracy of the skill of defending the stadium).

For the purpose of determining the tests of the research and their relevance with the specific physical abilities and basic skills, the researcher briefed him on many sources and the researcher and the supervisor reached him by formulating some tests of physical abilities and basic skills for their importance in the game of volleyball. The researcher met with some experts and specialists in volleyball and Sports training and training physiology and after taking the opinion of the supervisor, which tests of physical abilities and basic skills were determined. As the tests were appropriate and appropriate to the nature of the study and its goal in the game of volleyball, the tests were determined for the physical abilities and basic skills appropriate with the research, and they were (Vertical jump test from stability, flexion and extension of the arms test from the prone position (10) seconds, the accuracy of the skill of blocking and the accuracy of the skill of defending the stadium.)

Main experience:

The researcher prepared competitive training games and presented them to the experts specialized in the sciences of (sports training and volleyball) to express their opinions and suggestions and the appropriateness of competitive training games for the sample members and to take notes and directions received from them and then work within the main experiment conducted on the sample members, they were divided Into two groups, control and experimental, as the independent variable was entered on the experimental group only.

Pre-tests:

The two researchers conducted the tribal tests of the physical abilities and basic skills of the research sample, the players of the Kufa Volleyball Club for youth in the Najaf Governorate on Sunday, 29/11/2020, of the month of November, and in the closed hall of the College of Physical Education and Sports Sciences, University of Kufa, At nine o'clock in the morning, the test method was explained, the appropriate equipment and tools were provided for the tests, and the appropriate method for the tests was developed it started with the following:

- Test the explosive ability for the legs.
- Test strength characteristic of speed for arms
- Test accuracy blocking
- Test accuracy of defending the stadium

Competitive training games:

- Objectives:

- Knowing the legalization of training loads according to the method of training.
- Development of muscular strength in all its forms (explosive ability and strength characteristic of speed).
- Develop basic skills (accuracy of crushing strikes, accuracy of blocking , accuracy of defending the field)

- Standards:

Test the content of the proposed training games:

- The training units were applied in the special preparation stage by (3) units per week and include (training units for volleyball on Sundays, Tuesdays and Thursdays), which contribute to achieving the goals of the special preparation stage (physical and skill) for young volleyball players.

- Training modalities:

- These competitive training games included the game of volleyball and the number of units for the game was (24) units so that the intensity was 90-100%.

- Training application:

- The experimental method was applied on Sunday (6/12/2020) until (28/1/2021) on Thursday, and the researcher worked on applying the exercises for a period of (8) weeks, at a rate of (3) training units per week, at a rate of (24) training units. On the days (Sunday, Tuesday, Thursday), which are the training dates of the research sample, and with the same number of training units, the control group will implement the training units so that the team coach is the one who trains the experimental group.

- Post-tests:

- The researchers currency after completing the implementation of all the competitive training games used in the research for the training units on the research sample for the experimental and control groups by conducting post-tests on Sunday and on 01/31/2021 on the closed hall in the College of Physical Education and Sports Sciences, University of Kufa, and the researcher's currency by installing The conditions of the tests in order to achieve the same or similar conditions as possible to the atmosphere of the pre-test for the research sample.

Statistical methods: - The search data was processed through the Statistical Package for the Social Sciences (SPSS) version (21).

Presentation, analysis and discussion of test results:

Presenting the results of the arithmetic means, standard deviations, the value of (t), and the statistical significance between the results of the pre and post-tests in the physical abilities and basic skills tests under study for the experimental and control groups and their analysis:

Table (2) shows the arithmetic means, standard deviations, the calculated (t) value, and the significance of the differences between the results of the pre and post-tests in the motor abilities tests of the experimental group.

Variables	Measuring unit	Pre-test		Post-test		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
Test the explosive ability for the legs.	Watt	473.564	24.193	689.825	28.501	10.468	0.000	sig
Test strength characteristic of speed for arms	Count	10.833	1.169	14	1.095	3.997	0.000	sig
Test accuracy blocking	degree	6.833	1.834	12.166	0.752	7.344	0.000	sig
Test accuracy of defending the stadium	degree	12	1.673	18.5	2.167	8	0.001	sig

In the test the explosive ability for the legs :The arithmetic mean of the pre-test for the experimental group was (473.564) with a standard deviation of (24.193), and the arithmetic mean of the post-test was (689.825) and with a standard deviation of (28.506) and the calculated (t) value was (10,468), While the level of significance was (0.000), which indicates the significant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favour of the post-test as shown in table (2).

In the test strength characteristic of speed for arms :The arithmetic mean of the pre-test for the experimental group was (10.833) with a standard deviation of (1.169), and the arithmetic mean of the post-test was (14) and with a standard deviation of (1.095), and the calculated (t) value was (3.997), while the level of significance was (0.010), which indicates the significant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the post-test as shown in table (2).

In the test accuracy blocking: The arithmetic mean of the post-test for the experimental group was (12.166) with a standard deviation of (0.752), and the arithmetic mean of the pre-test was (6.833) and with a standard deviation of (1.834) and the calculated (t) value was (8), while the level of significance was (0.000), which indicates the significant differences between the pre and post-tests at the level of error (0.05) and in front of the degree of freedom (5) and in favour of the post-test as shown in table (2)..

In the test accuracy of defending the stadium :The arithmetic mean of the post-test for the experimental group was (18.5) with a standard deviation of (2.167), and the arithmetic mean of the pre-test was (12) and with a standard deviation of (1.673), and the calculated (t) value was (7.344), while the level of significance was (0.001), which indicates the significant differences between the pre and post-tests at the level of error (0.05) and in front of the degree of freedom (5) and in favour of the post-test as shown in table (2)..

Table (3) shows the arithmetic means, standard deviations, the calculated (t) value, and the differences between the results of the pre and post-tests in the physical abilities tests of the control group.

Variables	Measuring unit	Pre-test		Post-test		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
Test the explosive ability for the legs.	Watt	456.781	39.63	611.785	50.332	12.526	0.000	sig
Test strength characteristic of speed for arms	Count	11	0.894	12.333	0.816	8.521	0.000	sig
Test accuracy blocking	degree	7.166	1.940	10	0.632	3.4	0.019	sig
Test accuracy of defending the stadium	degree	12.5	0.836	15.166	2.136	2.457	0.057	Non sig

In the test the explosive ability for the legs: The arithmetic mean of the pre-test for the control group was (456.781) with a standard deviation of (39.63), and the arithmetic mean of the post-test reached (611.785) and with a standard deviation of (50.332) and the calculated (t) value was (12,526), while the level of significance was (0.000)), which indicates the significant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the post-test as shown in table (3).

In the test strength characteristic of speed for arms: The arithmetic mean of the pre-test for the control group was (11) with a standard deviation of (0.894), and the arithmetic mean of the post-test was (12.333) and with a standard deviation of (0.816), and the

calculated (t) value was (2), while the level of significance was (0.102).), which indicates insignificant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the post-test as shown in table (3).

In the test accuracy blocking: The arithmetic mean of the post-test for the control group was (10) with a standard deviation of (0.632), and the arithmetic mean of the pre-test was (7.166) and with a standard deviation of (1.940) and the calculated (t) value was (3.4), while the level of significance was (0.019)), which indicates the significant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the post-test as shown in table (3).

In the test accuracy of defending the stadium: The arithmetic mean of the post-test for the control group was (15.166) with a standard deviation of (2.136), and the arithmetic mean of the pre-test was (12.5) with a standard deviation of (0.836) and the calculated t-value was (2.457), while the level of significance was (0.057). Which indicates insignificant differences between the pre and post-tests at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the post-test as shown in table (3).

Presentation of the results of physical abilities tests, arithmetic means, standard deviations, and (t) value of the differences between the results of the experimental and control groups in the post-tests and their analysis:

Table (4) shows the arithmetic means, standard deviations, the calculated (t) value and the differences between the two research groups in the tests of physical abilities under discussion in the post-test.

Variables	Measuring unit	experimental		control		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
Test the explosive ability for the legs.	Watt	689.825	28.501	611.785	50.332	3.305	0.008	sig
Test strength characteristic of speed for arms	Count	14	1.095	12.333	0.816	2.988	0.044	sig
Test accuracy blocking	degree	12.166	0.752	10	0.632	5.398	0.000	sig
Test accuracy of defending the stadium	degree	18.5	2.167	15.5	2.36	2.632	0.023	Non sig

In the test the explosive ability for the legs: The arithmetic mean of the post-test for the experimental group was (689.825) with a standard deviation of (28.501), and the

arithmetic mean of the control group was (611.785) and with a standard deviation of (50.332) and the calculated (t) value was (3.305), while the level of significance was (0.008), which indicates the significant differences between the experimental and control groups at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the experimental group as shown in table (4).

In the test strength characteristic of speed for arms: The arithmetic mean of the post-test for the experimental group was (14) with a standard deviation of (1.095), and the arithmetic mean of the control group was (12.333) and with a standard deviation of (0.816), and the calculated (t) value was (2.988), while the level of significance was (0.014)), which indicates the significant differences between the experimental and control groups at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the experimental group as shown in table (4).

In the test accuracy blocking: The arithmetic mean of the post-test for the experimental group was (12.166) with a standard deviation of (0.752), and the arithmetic mean of the control group was (10) and with a standard deviation of (0.632), and the calculated (t) value was (5.398), while the level of significance was (0.000)), which indicates the significant differences between the control and experimental groups at the level of significance (0.05) and before the degree of freedom (5) and in favor of the experimental group as shown in table (4).

In the test accuracy of defending the stadium: The arithmetic mean of the post-test for the experimental group was (18.5) with a standard deviation of (2.167), and the arithmetic mean for the control group was (15.5) and with a standard deviation of (2.136), and the calculated (t) value was (2.638), while the level of significance was (0.023), which indicates the significant differences between the control and experimental groups at the level of significance (0.05) and in front of the degree of freedom (5) and in favor of the experimental group as shown in table (4).

Discussing the results of physical tests and basic skills for the experimental and control groups, and for the two pre and post-tests:

By presenting the results of tests of physical abilities and basic skills (explosive ability of the legs, strength characteristic of speed for arms, accuracy blocking, and accuracy of defending the field), which are shown in Table (2, 3, 4), if the (t) test was used, there was a significant difference in the level of explosive ability of the legs, strength characteristic of speed for arms between the experimental and control groups and in favor of the experimental and control group.

The researchers attributes this to the fact that all the exercises that the players underwent during a certain period of time lead to a development in skill performance, accuracy of performance and physical abilities, but in different proportions and in favor of the experimental group. Communicating the physical skills of the player at this stage through the games used, and this was confirmed ((each of the methods, when used during a certain period of time, leads to the arrival and achievement of a certain set of goals)) ⁽¹⁾.

The researchers attribute these differences to the effect of competitive training games, which were characterized by the spirit of competition between players that the researcher applied to the members of the experimental group. The development of the speed characteristic of the muscles of the arms, as contributed to the development of the muscles participating in the motor performance due to the improvement of the phenomenon of motor transport, which serves the skill performance, which contributes greatly to an attempt to repel the ball and hit the ball in the appropriate direction. 90%-100% contributed to the development of more than the groups as a result of the development of the explosive ability that led to the development of the muscles of the legs, as confirms (Singer.1990). "Motor skill is only achieved in the presence of special physical abilities" ⁽²⁾.

This means that there is a correlation between the development of special abilities and the success in performing the motor skill, which was reflected in the improvement of the development of this test, and the use of competitive training games also contributed to the accuracy of the test. Skills blocking and defending the field through repetitions, which led to the improvement of the flow of movement, which eliminates periods of stress and relaxation, as well as with the scope and time of movement, "and since the flow reflects the characteristic of compatibility" ⁽³⁾. As confirms (Abdul Razzaq). "However, the development of some forms of force, such as explosive force, is accompanied by an improvement in the degree of skill performance" ⁽⁴⁾.

As for the control group, the tests of basic skills showed (accuracy of blocking and the accuracy of the skill of defending the field), which is shown in Table (3). If the (t) test was used, there was a significant effect in the level of all these skills between the pre and post-tests and in favor of the post-test, and the researcher attributes These results reflect the quality of the exercises provided by the coach, who relies on tactical exercises mixed with real performance during matches and focuses on developing special qualities or abilities, and this is what (Hara) indicated to him that "modern sports training depends on science to get good results, and the time has passed when some coaches were able to bring their athletes to a high level based on scientific experiments" ⁽⁵⁾.

As for the accuracy of the skill of defending the stadium, it did not achieve a significant effect between the two tests, the pre and post-tests, due to the shortcomings of the approach used in training the control group. The researcher attributes this to the fact that the program followed by the coach achieves an improvement, not to the required level in the accuracy of the skill of defending the stadium, as a result of the exercises that the coach used with the control group.

The researchers attributes the reason for these differences to the training games specially prepared for these skills and the focus on them by the researcher and the gradation from easy to difficult, as the special games prepared by the researcher had an impact on the development of physical abilities that contributed to the development of basic skills so that the development of the distinctive strength characteristic of speed and the explosive ability of the experimental group greatly contributed to the development of the skill of the blocking and the defence of the stadium, and this is what (Essam Abdel-Khaleq) indicated to him "that the motor performance of the skill depends on its own physical abilities" ⁽⁶⁾, as the researcher considers that the skill of defending the stadium

increased in relation to the control group because of the training games that were characterized by games that help the player to anticipate and react through the rebounding balls to him and thus there is a difficulty in anticipating the ball where the balls were bouncing to unexpected directions and heights, and the player's attempt on these balls to defend the stadium from flying, and his success in saving many of them increased the speed of reaction and expectation of the player and the perseverance in training and preparing to defend such balls and this was confirmed by (Hussein Sabhan Sakhi, 2011) The success of defense depends on anticipation and a sense of the offensive reality⁽⁷⁾.

Conclusions and Recommendations:

Conclusions:

- The competitive training games prepared by the researcher affected the development of the physical abilities and basic skills of young volleyball players.
- The competitive training games worked on developing the explosive ability of the legs and the speed characteristic of the arms, which in turn had an impact on developing the accuracy of the skill of the blocking and the accuracy of the skill of defending the stadium.

Recommendations:

- The use of competitive training games in the various training programs and during the general and private preparation period, and to identify the development that they have.
- Urging coaches and players on the importance of using competitive training games and for the training program for juniors to contain various activities in order to provoke the players' motives and not to injure players

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Appendix

Saturday 26/12/2020 First week / unit (1) / intensity 95% main part time / 35 min

The goal / to develop the skill of defending the stadium, and blocking skill.

Code exercise	intensity	Count group	Count repeat	tenses			Notes
				Rest between repetitions	Rest between groups	Rest between exercises	The training method used
E1	%95	2	4	40 sec	90 sec	120 sec	The repetition ranges from 85-90 and is possible 100% and with repetitions of 3-6 repetitions in one group and the number of groups is 1-3 groups
E11	%100	1	3	60 sec	-	150 sec	
E21	%90	1	5	50 sec	-	150 sec	
E2	%100	1	3	120 sec	-	180 sec	
E12	%90	1	5	60sec	-		