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Hussein Abdualkareem Jaafar
College of Physical and Education Sport Sciences, Misan University, Iraq

Corresponding Author:
Hussein Abdualkareem Jaafar
College of Physical and Education Sport Sciences, Misan University, Iraq

The impact of utilizing suggested weightlifting exercises on enhancing certain types of speed, performance, and basic skills in youth volleyball

Hussein Abdualkareem Jaafar

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Abstract
The importance of the research comes in raising the important and necessary physical level, especially the types of speed and skillful performance, by raising the level of force by weighting necessary to raise the required speed, through which the force mixed with the necessary speed is produced in the required skillful performance. The research objectives were: 1- Preparing proposed weighting exercises in developing some types of speed, performance and basic skills in youth volleyball. The most important conclusions were: 1- The use of weighting exercises is necessary in developing some types of speed and offensive skill performance in volleyball for youth. It was recommended:
Adopting weight exercises as they are necessary in developing some types of speed and offensive skill performance for young volleyball players. 2- Emphasizing training on weight exercises and various resistances as they play a role in raising the level of required strength, which works to improve speed and thus reflects an image of increasing speed performance. Skillful.

Keywords: Speed, performance, basic skills, volleyball, youth

Introduction
Scientific research plays a major role in the advancement of societies and works to improve them for the better in all different fields. Scientific research also plays an important role in the sports aspect to obtain good results in various sports events through practical sports innovation and finding appropriate exercises and training methods in training, in addition to finding the appropriate specialized exercises for technical performance and the specificity of the game is also an important factor in achieving sporting achievements. Concerning the game of volleyball, it is one of the team games that requires specificity in training, especially when performing skills and executing them with the required speed corresponding to the match. Therefore, there must be exercises that work to develop the physical abilities necessary for the game, including speed. Concerning speed and its types, you need muscular strength training, which in turn works to implement Motor duty with the required speed, as it is known that strength works to improve all the different physical abilities, including the speed necessary for skill performance, especially the attack, which requires serving, preparation, and crushing strikes. Hence comes the importance of research in raising the important and necessary physical level, especially the types of speed and skill performance by raising the level of force with weight necessary to raise the required speed, through which the force mixed with the speed necessary for the required skill performance is produced.

Research problem
Basic skills and technical performance in the game of volleyball require speed in performance during the match, and through this speed the required points are obtained. Therefore, developing speed requires building muscles mixed with the required speed, and here comes the role of the correct and suggested exercises that mix strength with speed. Through the researcher's experience, as he specializes in the training aspect and the game of volleyball, he found that not providing the necessary requirements for volleyball players, including speed of various types, as well as the speed of skill performance associated with it, will weaken the players and cause them to fail to perform any tactical aspect during the match. Therefore, the researcher decided to try muscular strength exercises. With weighting, which he finds necessary and increases some types of speed and skill performance necessary during training units, especially for volleyball players.

Research aims

1. Preparing suggested exercises for developing some types of speed, performance and basic skills in youth volleyball.
2. To identify the effect of using suggested weighting exercises in developing some types of speed, performance and basic skills in youth volleyball.
3. Identifying the results of the differences between the pre- and post-tests for the control and experimental groups in developing some types of speed, performance, and basic skills in volleyball for youth.
4. Identify the results of the differences in the post-tests between the control and experimental groups in developing some types of speed, performance and basic skills in youth volleyball

Research hypotheses

1. There is a positive effect using suggested exercises by weighting in developing some types of speed, performance and basic skills in youth volleyball.
2. There are significant differences between the pre and post tests and in favor of the post tests for the control and experimental groups in developing some types of speed, performance and basic skills in youth volleyball.
3. There are significant differences in the post-tests between the control and experimental groups and in favor of the experimental group in developing some types of speed, performance and basic skills in volleyball for youth.

Research areas

Human field: Players of the Martyr Saad Khalaf Suef Club in youth volleyball

Spatial area: Martyr Wissam Oreibi Olympic Hall

Time period: From 1/15/2022 to 3/29/2022.

Research Methodology and Field Procedures

Research Methodology

The nature of the research problem is what determines the appropriate approach that the researcher relies on to achieve his goals, so the researcher used the experimental approach in the manner of two equal groups with two pre and post tests for its suitability to the nature of the research problem.

The research community and its sample

The research community was determined by the intentional method with the players of the Martyr Saad Khalaf Suef club for the season (2021-2022), which numbered (15) players. The main players, who numbered (12) players, were selected and divided into two control and experimental groups, each group numbering (6) players, and the two groups were homogenized and equalized as in Table (1).

Table 1: It shows the homogeneity of the two samples (The control and the experimental) and their equivalence in the research variables

Search variables	The control group			Experimental group			Calculated (v) value	Significance level
	S	A	Coefficient of difference	S	A	Coefficient of difference		
weight (kg)	65.86	2,578	3,914	65,675	2,985	4,545	0.104	Insignificant
length (cm)	170,841	3,547	2,076	170, 687	3,684	2,158	0.067	Insignificant
Arm speed (Number)	36.89	0.689	1,867	36,995	0.745	2,013	0.231	Insignificant
Motor speed of legs (Number)	40.68	0.745	1.831	40.887	0.625	1.528	0.476	Insignificant
Response speed of the arms (Seconds)	3.221	0.234	7.264	3.124	0.274	8.77	0.602	Insignificant
Transmission accuracy/degree	12.054	0.357	2.961	12.281	0.412	3.354	0.934	Insignificant
Setting accuracy/degree	5.451	0.237	4,347	5.551	0.365	6.575	0.515	Insignificant
Scrolling accuracy/degree	10.562	0.574	5.434	10.654	0.498	4.674	0.271	Insignificant

The value of the tabular T at the degree of freedom (10) and under a probability of error of 0.05 was = 2.23.

Means of collecting information

Data collection methods

1. Arab and foreign sources.
2. The tests used.
3. The Internet.

Tools and methods used

- Volleyballs
- Regular volleyball court
- ruler
- Measuring tape
- Medical scale
- whistle

Field research procedures

Define search parameters

The researcher, depending on the sources and references, determined the research variables in terms of types of speed and offensive skills in volleyball.

Tests used in the research

Physical exams

- Nelson test for the transitional motor response (Mohammed, 1994) [8]
- Arm motor speed test (Ali, 2013) [2]
- Testing the motor speed of the two legs (Ali, 2013) [2]
- Skill tests (Iman, 2010) [4]
- Casting skill test
- Close setting test
- Top pass test

Exploratory experience

The researcher conducted an exploratory experiment on 15/1/2022 on some members of the original sample to find out the appropriateness of the exercises for the sample members, by applying some exercises and rationing the exercises used to know the intensity, volume and comfort required for their performance.

Main experience

Pre-tests

Pre-tests were conducted on the two research groups (experimental and control) before starting the implementation of the training units, in order to determine

the skill and physical level of football in the research sample. The tests were conducted on 1/30/2022.

Training units

The exercises used: Suggested exercises were prepared using different resistances for a period of (8) weeks, taking into account the conditions for training types of speed (in terms of intensity, size and comfort) for the purpose of developing them.

The exercises were applied in the main section of the main trainer program for the experimental group, while the control group relied on the trainer's exercises in developing types of speed during the same period specified for the experimental group. The number of training units during one week was (2) two units. As for the nature of the exercises used, they were skillful using the ball and related to volleyball, with the addition of resistances such as sandbags for the arms and legs and rubber ropes.

The intensity ranged from (80-90%) using the high-intensity interval training method, and the volume was dependent on the intensity according to time and rest according to the pulse. The exercises were applied from the period 1/31/2022 to 3/28/2022.

Posttests

The post-tests were applied, as the researcher took into account that they should be at the same time and place in which the pre-tests were conducted to ensure correct scientific results and on 3/29/2022.

Statistical means

The researcher used the statistical package (17 SPSS.Ver) on the electronic computer to process the results to achieve the research objectives and hypotheses.

Presentation, analysis and discussion of results

Presentation and analysis of the results of the pre and post-tests of the control group in the research variables:

After emptying the data of the pre and post-tests of the control group from the researcher, and processing them statistically, it is shown as in Table (2).

Table 2: It shows the arithmetic mean and the calculated and tabulated (t) values for the pre and post physical variables of the control group

Variables	The control group			
	S Tribal	S after me	Standard error	Calculated (v) value
Arm speed (number)	36.89	38,947	0.742	2,772
Movement speed of the legs (number)	40.68	42,568	0.532	3,548
Response speed of arms (sec)	3,221	2,795	0.156	2.73
Transmission accuracy/degree	12,054	14,867	0.647	4,347
Setting accuracy/degree	5,451	6,875	0.447	3,185
Pass accuracy/degree	10,562	12,689	0.712	2,987

Tabular t-value at (5) degrees of freedom and below the significance level (0.05) = 2.57

Presenting, analyzing and discussing the results of the experimental group in the research variables:

Table 3: It shows the arithmetic mean and the calculated and tabulated (t) values for the pre and post physical variables of the experimental group

Variables	Experimental group			
	S Tribal	S after me	standard error	Calculated (v) value
Arm speed (number)	36,995	40,895	0.867	4,498
Movement speed of the two legs (number)	40,887	44,678	1,051	3,607
Response speed of arms (sec)	3,124	2,113	0.247	4,093
Transmission accuracy/degree	12,281	18.745	1.479	4.37
Setting accuracy/degree	5.551	8.667	0.966	3.225
Pass accuracy/degree	10.654	14.865	1.332	3.161

The value of the tabular T has a degree of freedom of 4 and a probability of error of 0.05 = 2.132.

Presenting, analyzing and discussing the results of the post physical tests between the control and experimental groups.

Table 4: It shows the results of the post-tests between the control and experimental groups regarding the research variables

Search variables	The control group		Experimental group		Calculated (v) value	significance level
	S	A	S	A		
Arm speed (Number)	38.947	0.745	40.895	0.678	4.328	moral
Movement speed of the legs (Number)	42.568	0.578	44.678	0.674	5.314	moral
Response speed of arms (Sec)	2.795	0.234	2,113	0.325	3.81	moral
Transmission accuracy/Degree	14,867	1,874	18,745	1,365	3,743	moral
Setting accuracy/Degree	6,875	0.745	8.667	0.674	3.991	moral
Pass accuracy/Degree	12.689	0.659	14.865	0.746	4,889	moral

The tabular value of (t) at a degree of freedom (10) and under the probability of error 0.05 was = 2.23.

By observing the results above, we found that there are significant differences between the pre-tests and the post-tests, and for the control and experimental groups, in favor of the post-tests with the types of speed used as well as the basic skills of volleyball, that is, there is a development in the research variables using any exercises for the control group or suggested for the experimental group. The reason for the development of the group is due The female control indicates that she continues training and is regular in it, and this certainly helps to develop the element of speed and

basic skills among them, and this is one of the characteristics and principles of the science of sports training, as (Muhammad Hassan Allawi) (Muhammad, 1986) [9] states that "training works to improve the physical attributes and the level of skillful performance equally." Whether." And as mentioned by Marwan Abdel-Majeed and Muhammad Jassim Al-Yasiri (2010) [6] "The goal of the sports training process is to reach the individual athlete to the highest level of athletic achievement in the event or activity in which the player specializes" (Marwan, 2010) [6]. Its development of the variables into the proposed exercises and using the different weighting exercises that are codified by the researcher and applied correctly by the research sample, taking into account all the conditions and principles of training, and this was confirmed by Muhannad Abdel Sattar, "that there is a scientific fact that must be considered, which is that the exercises used in the training curricula lead to Performance development, as it was built on scientific bases in organizing the training process, using the appropriate load, noticing individual differences, under good training conditions and under the supervision of specialized trainers, where the training programs that are regulated and organized according to scientific foundations work to develop the physical and skill level of the players" (Muhannad, 2001) [10]. By using the scientific method, including rationing the best repetition, it has a significant impact in the small and medium training circuit to raise the physical capabilities towards excellence, especially those with speed and strength, because it is one of the capabilities that requires a certain strength with high speed and for several repetitions, and this is confirmed by (Majid Ali Mousa) (2003) [5]. "The success of The training program depends on the good organization and distribution of physical loads within the small training circle, which is the starting point for practical application based on the rule of switching in the training weight between the minimum and the maximum and actual rest" (Majid, 2003) [5]. In terms of motor speed and response speed, we find that the maximum effort used In strength exercises by weighting, he achieved the required goal to develop these necessary physical abilities for volleyball players, and this is confirmed by (Abu El-Ela Ahmed Abdel-Fattah, Ahmed Nasr El-Din) (2003) [5]. "It is during speed training that the player must perform the exercises with maximum effort, and speed must be developed in Decision-making that turns into a motor response, so speed exercises and training must be performed using balls, and a correct scientific methodology must be followed in speed training that works to develop the player's ability to sense, pay attention, and anticipate the different game stimuli and his positions or the speed of decision-making based on the opponent's movement and reactions and his responses" (Abu El-Ela, 1993) [1].

Conclusions

1. Using weighting exercises necessary to develop some types of speed and offensive skill performance in youth volleyball.
2. Weighting exercises and various resistances play a role in raising the level of required strength, which works to improve speed and thus reflects an image of increasing speed and skillful performance.

Recommendations

1. Adopting weight-bearing exercises as they are necessary in developing some types of speed and offensive skill performance for young volleyball players.
2. Emphasis on training in weight exercises and various resistance exercises as they play a role in raising the level of required strength, which works to improve speed and thus reflects an image of increased speed and skill performance.

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Accessory (1)

Example of suggested exercises

First week intensity: 80%

Module 1, 2: Total time: 27-29 minutes

Sections of the training unit	Time	Exercises and events	The size	Comforts	
				Between iterations	Between aggregates
Main section	50 sec 90 seconds 50 sec 90 seconds	-Put a weight on the arms (20 grams) for each arm and then perform the wall pass -Put weight on the legs (25 grams) for each leg and then perform the numbers while walking. -Put a rubber rope on the torso and then perform the serve. -Put weight on the arms, then throw the ball up and jump to perform a smash.	15s x 3 20 sec x 4 20s x 3 20 sec x 4	Pulse back 120-130 zd/min	Pulse back 110-120 zd/min