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Test design for measuring the kinematic velocity of the lower extremities of volleyball

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Abstract:

Volleyball game is one of the group games with different changing positions with a fast and changing rhythm, which requires players physical and motor capabilities commensurate with the changes witnessed in the matches, especially the decisive and converging results, so kinetic speed is an important motor characteristic of the volleyball player, especially during play as a result The player needs to perform repeated and rapid movements and frequencies to reach the location of the ball before it falls to the ground, which requires the player to have a correct rapid movement speed at the appropriate time appropriate to the playing situations.

Therefore, the importance of the research lies in adopting the correct scientific method to design a specialized test that measures the kinematic speed of the lower sides of the volleyball to measure the kinetic speed of volleyball players to advance the level of volleyball and to create a good and accurate vision of the kinetic state of the player in order to provide appropriate solutions that serve the coach to modify the progress path according to What is needed in the team's training process.

So the aim of the research was to: Design a test to measure the kinematic velocity of the lower extremities in volleyball, and the descriptive approach was used on students of the fourth stage of the Faculty of Physical Education and Sports Science for girls, who are (91) students, and the raw grades were converted to modified standard degrees, and the researchers concluded that the designed test proved valid To measure the kinetic velocity of the lower extremities of volleyball, researchers recommend using a test designed to measure the kinetic velocity of the lower volleyball.

Keywords: *kinematic velocity, volleyball players, training process*

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I. Introduction:

The game of volleyball is in continuous progress and development, thanks to knowledge of various sciences and reliance on scientific research in research and investigation to reach important and honest results in a way that guarantees the upgrading of this game, and physical and mobility capabilities are important requirements in the game of volleyball being a collective game characterized by many situations and vocabulary Mobility with a fast and changing rhythm, and this is what forces players to adapt and prepare for these situations, including having physical and mobility abilities that are appropriate for the changes witnessed in the matches, especially the decisive and converging results. Matches "[1] (So the importance of kinetic capabilities, especially kinetic speed, has emerged because modern play has become more difficult and complicated compared to previous playing methods, and its importance is evident with the changes and developments that have occurred in the volleyball game that allows the presence of (a free defender player) to enhance the defensive capabilities of the offensive capabilities as well (Points Sequence System) which increased the speed of the fast rhythm of play, as well It is a game that is not limited to time, and one of the two teams must win three games, adding a physical and dynamic burden to the player, as it requires alertness, attention and speed of movement for the purpose of moving with the surprises that the opposing team causes throughout the match so that he can overcome the situations that occur during the match and continue playing effectively Without leveling down.

The kinetic speed is one of the important kinetic characteristics of the volleyball player, especially during play, as a result of the player's need to perform repeated movements and frequencies to reach the location of the ball before it falls to the ground, which requires a fast and correct kinetic response at the appropriate time compatible with different situations, as the kinetic speed plays a role Prominent and important in the game of volleyball, as its law requires the player not to retain the ball, which increases the difficulty of performance. Often the performance is quick and lightning, so it requires the player to have a kinetic speed in defensive technique in pursuing balls and in offensive technique when participating in different play vehicles.

The tests and the scale in the team games are the most effective and exciting evaluation means for the players towards learning and training to bring the players to a good level to achieve positive results for the team, and from all of the above the importance of research, which revolves around the importance of the kinetic speed of the volleyball player to perform its technical skills, is noteworthy. Playing in volleyball is based on kinematic speed, and the importance of research is not limited to this aspect, but the importance of finding new specialized tests in measuring the kinematic speed of lower volleyball.

Research problem:

The research problem lies in the necessity that the volleyball player possesses a high level of kinetic abilities and the kinetic speed occupies a distinguished position in the implementation of the skills of the volleyball game, and as a result of the lack of specialized tests that measure the kinetic speed of the lower sides of the volleyball, so researchers found the need to design a test to measure the kinetic speed of the lower ends of the ball The Plane.

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Research objectives:

1- Design a test to measure the kinematic velocity of the lower extremities of the volleyball.

2- Setting standard scores to test the kinematic velocity of the lower extremities in volleyball.

Research hypothesis:

1- The designed test is suitable for measuring the kinetic velocity of the lower ends of the volleyball.

II. Research Methodology:

The researchers used the descriptive method in the survey study method, because it is the most appropriate approach to the research requirements and its field procedures, and because it contributes scientifically to achieving the goals set out in the research, and the surgeon refers here. Qualitative or quantitative expression.

Research community and sample:

The research community was identified by the fourth stage students in the College of Physical Education and Sports Science for Girls - University of Baghdad, and they are (91) students. As for the research sample, it was completely chosen, and the percentage formed 100% of the research community.

Tools:

-Volleyball court

-Flex for testing

-Wooden rulers

-Iron frame in a circle

-stopwatch

-Whistle

-Registration forms and pens

The Test: The kinetic speed test for the lower extremities of volleyball.

The main experience:

After conducting the exploratory experiment and verifying the validity of the test and the availability of scientific specifications, the test was applied to the research sample of (80) students on November 4, 2018 taking into account all legal procedures and providing all requirements during the implementation of the final test and then the results were collected and emptied and statistically processed.

III. Test results and discussion:

After conducting the test and collecting data, the raw scores for the kinetic velocity of the lower extremities in the volleyball were converted to standard and modified standard scores and percentages were found.

Table (1) shows a description of the statistical parameters of the individuals in the research sample in the kinetic velocity test

The kinetic speed test for the lower extremities of volleyball.	A	Std	Mediator	Range	highest value	less value	Coefficient of torsion
	9.9	1.67	10	9	14	5	0.44

Table (2) shows raw, standard, average, percentages, and repetition grades for testing the kinematic velocity of lower volleyball

Raw scores	Standard	Modified grades	Number of testers	percentage	Range	level
14.00	74.50	2.45	3	3,75%	14- And above	Excellent
13.00	68.53	1.85	5	6,25%	12-13	very good
12.00	62.55	1.25	7	8,75%		good
11.00	56.57	.66	1	1,25%	10-11	Average
10.00	50.60	.06	29	36,25%		Acceptable
9.00	44.62	-.54-	26	32,5%	8-9	Weak
8.00	38.65	-1.14-	6	7,5%		Excellent
7.00	32.67	1.73-	1	1,25%	6-7	very good

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6.00	26.69	-2.33-	1	1,25%		good
5.00	20.72	-2.93-	1	1,25%	5- Below	Average

The kinetic velocity test for the lower extremities in volleyball has obtained the level (excellence) (3) of the iterations, while the level (very good) has got (12) iterations and the level (good) has (30) iterations, while the level (medium) On (32) of iterations and (acceptable) level on (2) of iterations while the (weak) level got (1) of iterations from the total sample consisting of (80) students and they represent 88% of the research community. Through what was presented above, we find that the members of the research sample achieved the highest percentage in an average level in the kinetic velocity test of the lower ends of the volleyball, which achieved (32) repetitions, and then the good level, which achieved (30) repetitions. A weak level came with the lowest frequency of (1) only.

[2] emphasizes the importance of evaluation in sports training, its effective role in programs, the extent to which it achieves the goals set, its importance in knowing the weaknesses of individuals or programs, and determining progress, the individual's training status, and its motor and mental characteristics and characteristics, And social. [3] As [4]indicates that the tests that are built and codified on samples represent the beneficiary community, they are more suitable than others that were built and codified on samples representing another society, regardless of the degree of similarity between the two societies. [5] The researchers also confirm that the codified tests are a means of evaluation in the sports field, which are of great benefit to the coaches, enabling them to raise the efficiency of the training process, by identifying the raw values and standard scores.

IV. Conclusions and recommendations

Conclusions:

1- The test that was designed proved to be valid to measure the kinematic velocity of the lower ends of the volleyball.

2- Finding standardized levels for the designed test.

3- Most of the students of the research sample were in a good intermediate level to test the kinetic velocity test for the lower extremities in volleyball

Recommendations:

1- Using the test designed to measure the kinetic velocity test of the lower ends of the volleyball.

2- Using the grades and standard levels shown by the results of that study in evaluating students of the College of Physical Education and Sports Science for Girls - University of Baghdad in volleyball.

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