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Jumping Ability Between Basketball And Volleyball Players

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Abstract:

The purpose of the research was to determine the jumping ability between basketball and volleyball players.

The 50 basketball and volleyball players from the colleges of Amravati were selected as subject for present study and their age ranged between 22-30 years. Exclusion criteria were the presence of chronic medical conditions such as asthma, heart disease or any other condition that would put the subjects at risk when performing the experimental tests. Jumping ability measured by using the Standing Broad Jump test and Vertical Jump test Mean score and standard deviation were taken and paired T-test was applied. The Mean Scores (S.Ds.) age of Basketball players was 23.45 (4.56) years, mean scores (S.Ds.) weight was 67.21 (7.89) Kg, mean scores (S.Ds.) height was 175.06 (15.45) cm. On other hand the Mean Score (S.Ds.) age of Volleyball players was 24.23 (4.79) years, mean score (S.Ds.) weight was 65.20 (7.81) kg., mean score (S.Ds.) height was 173.12 (15.11) cm. The result reveals that there significant difference on standing broad ($T = p < .05$) and vertical jump ($T = p < 0.05$) were found between basketball and volleyball players. It is found that volleyball players were more jumping ability as compare than basketball players.

Introduction

Basketball and Volleyball are highly competitive sports and the performance of Basketball and Volleyball depends on muscular strength, power and speed, local muscular endurance, motor performance, balance, and coordination (Aaberg, 1999; Starkey 1996). In Volleyball and Basketball jumping ability also a most important movement for attacking as well as defensive players. Volleyball in the front row must be blocking position ready to jump or move each time the opponent touches the ball. In the time of attack Horizontal and diagonal footwork normally fills this position and simultaneously a vertical jump also needed to hit or attack or smash the ball. In case of defensive position here also used the vertical jump to obstruct or defense the ball which is passed by the opponents. On the other hand in basketball also any type of attack or lay up shot horizontal and diagonal footwork are needed and simultaneously a vertical jump are required to push up the ball towards the basket. Similarly about defensive players

they are also used the vertical jump to obstructed or defense the ball which is played by the opponent.

Materials and Methods

The 50basketball and volleyball players form the colleges of Amravati were selected as subject for present study and their age ranged between 22-30years. Exclusion criteria were the presence of chronic medical conditions such as asthma, heart disease or any other condition that would put the subjects at risk when performing the experimental tests. Jumping ability measured by using the Standing Broad Jump test and Vertical Jump test Mean score and standard deviation were taken and paired T-test was applied.

Parameters measurements

Jumping ability measured by using the Standing Broad Jump test and Vertical Jump test.

Standing Broad Jump: This test measures the power of legs in jumping horizontal distance and may be applied to children of both sexes aged seven years above.

Equipment: Floor Mat or long jump pit may be used, measuring tape, marking tape.

Test Administration: A demonstration of the standing Broad jump is given to a group of Subjects to be tested. The Subject is then asked to stand behind the starting line with the feet parallel to each other. He is instructed to jump as farthest as possible by bending knees and swinging arms to take off for the broad jump in the forward direction. The subject is given three trials.

Scoring:The distance between the starting line and the nearest point of landing provides the score of the test. The best trial is used as the final score of the test.

B) Work Power : work power test measured by the Vertical Power Jump.

Vertical Jump: This test measures the power of legs in jumping vertically and can be applied to children of both sexes aged nine years and above.

Equipment: A Black board of 4.5 feet x 2 feet painted with green and red lines ,one inch apart and one feet apart respectively (The board is fixed firmly to a wall, preferably 6 a weighing

scale (optional). In case, the blackboard is not available, a smooth and plain wall may be painted black for use in this test.

Test Administration:

In the beginning a demonstration of the vertical jump, is given to a group of five to ten subject is asked to stand erect facing the board . His dominant hand's fingertips are marked with chalk powder and the subject is asked to raise the marked fingertips to a maximum height on the blackboard without lifting the heels so as to mark his maximum reach point. The fingertips are rechalked. With the chalked hand side towards the wall, a vertical jump is to be performed by the subject to make another mark at the maximal height of the jump. The subject is not allowed to run or hop. However, the subject is properly instructed to take a good jump by bending the knees and swinging the arms. The subject may be given three to five trials at his will and the best performance is considered.

Scoring:

The maximum distance between the reaching height and the jumping height provides the score the test. However, to get the power in foot-pound units, the above distance is multiplied by the subject's body weight. But majority of the testers routinely use directly the distance jumped irrespective of body weight as the score of the test.

Results Of The Study

The purpose of the research was to determine the jumping ability between basketball and volleyball players. With the help of mean Standard Deviations &T-ratio.

Table-1

Morphological characteristics of Basketball players

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	23.45	4.56
2.	Weight (Kg)	67.21	7.89
3.	Height (cm)	175.06	15.45

Table -1 depicted the morphological characteristics of Basketball players,the Mean Scores (S.Ds.) age of Basketball playerswas 23.45 (4.56) years, mean scores (S.Ds.) weight was 67.21 (7.89) Kg, mean scores (S.Ds.) height was 175.06 (15.45) cm.

Table-2
Morphological characteristics of the Volleyball players

Sr. No.	Components	Means Scores	Standard Deviation
1.	Age (Year)	24.23	4.79
2.	Weight (Kg)	66.20	7.81
3.	Height (cm)	173.12	15.11

Mean Score (S.Ds.) age of Volleyball players was 24.23 (4.79) years, mean score (S.Ds.) weight was 65.20 (7.81) kg., mean score (S.Ds.) height was 173.12 (15.11) cm.

Table-3
Comparison of vertical jump ability between Basketball and Volleyball players

Ability	Test	Number	Mean Scores	S. Ds	T-ratio
Vertical Jump	Basketball	50	42.4	3.68	
	Volleyball	50	47.3	4.41	

Table-3, illustrates the mean scores and standard deviations of vertical jump ability between Basketball and Volleyball players.

The mean scores obtained from Table 4, the mean score of basketball was 42.4 and the Volleyball was 47.30 respectively of vertical jump ability between Basketball and Volleyball players. Result reveals that there was significant difference found between vertical jump ability between Basketball and Volleyball players. Volleyball players were found to have got more vertical jumping ability as compare than basketball ball players. This may be due to the volleyball game involved smashing in the game.

Table-4**Comparison of Standing broad jump ability between Basketball and Volleyball players**

Ability	Test	Number	Mean Scores	S. Ds	T-Ratio
Standing Broad Jump	Basketball	50	229.82	12.50	
	Volleyball	50	250.95	12.56	

Table-4, illustrates the mean scores and standard deviations of Standing Broad Jump between Basketball and Volleyball players.

The mean scores obtained from Table 4, the mean score of basketball was 42.4 and the Volleyball was 47.30 respectively of Standing Broad Jump between Basketball and Volleyball players. Result reveals that there was significant difference found between Standing Broad Jump ability between Basketball and Volleyball players. Volleyball players were found to have got more vertical jumping ability as compare than basketball ball players.

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