



LEG EXPLOSIVE STRENGTH BETWEEN FEMALE VOLLEYBALL AND BASKETBALL PLAYERS: A COMPARATIVE STUDY

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Abstract

This study was conducted on Leg Explosive Strength of Female Basketball and Volleyball Players of Karnataka State Akkamahadevi Women's University, Vijayapura, India. The main aim of the study was the comparison between Basketball and Volleyball Players with Leg Explosive Strength. The purpose of the study was to compare Leg Explosive Strength of Basketball and Volleyball Players. In present study investigator has taken a total of 30 samples. For analysis and interpretation of data, a comparative analysis of the selected variable, was statistically analyzed by 't' test. The data of both groups were calculated separately for both the variable. Types of descriptive statistic such as mean and standard deviation was computed to describe each variable statistically. The level of significance was set at 0.05. To know the difference in the selected variables the individual 't' test was used. It was found that Basketball and Volleyball Players do not have significant difference between the variable Leg Explosive Strength.

Keywords: Leg Explosive Strength, Volleyball and Basketball.

Introduction

Volleyball was invented in 1895 by William G. Morgan, physical director of the Young Men's Christian Association (YMCA) in Holyoke, Massachusetts. It was designed as an indoor sport for businessmen who found the new game of basketball too vigorous. Morgan called the sport "mintonette," until a professor from Springfield College in Massachusetts noted the volleying nature of play and proposed the name of "volleyball." The original rules were written by Morgan and printed in the first edition of the Official Handbook of the Athletic League of the Young Men's Christian Associations of North America

(1897). The game soon proved to have wide appeal for both sexes in schools, playgrounds, the armed forces, and other organizations in the United States, and it was subsequently introduced to other countries. In 1916 rules were issued jointly by the YMCA and the National Collegiate Athletic Association (NCAA).

Invented in 1891 by Canadian-American gym teacher James Naismith in Springfield, Massachusetts, United States, basketball has evolved to become one of the world's most popular and widely viewed sports. The National Basketball Association (NBA) is the most significant professional basketball league in the world in terms of popularity, salaries, talent, and level of competition.

Basketball is a team sport in which two teams, most commonly of five players each, opposing one another on a rectangular court, compete with the primary objective of shooting a basketball (approximately 9.4 inches (24 cm) in diameter) through the defender's hoop (a basket 18 inches (46 cm) in diameter mounted 10 feet (3.048 m) high to a backboard at each end of the court, while preventing the opposing team from shooting through their own hoop. A field goal is worth two points, unless made from behind the three-point line, when it is worth three. After a foul, timed play stops and the player fouled or designated to shoot a technical foul is given one, two or three one-point free throws. The team with the most points at the end of the game wins, but if regulation play expires with the score tied, an additional period of play (overtime) is mandated.

Players advance the ball by bouncing it while walking or running (dribbling) or by passing it to a teammate, both of which require considerable skill. On offense, players may use a variety of shots-the layup, the jump shot, or a dunk; on defense, they may steal the ball from a dribbler, intercept passes, or block shots; either offense or defense may collect a rebound, that is, a missed shot that bounces from rim or backboard. It is a violation to lift or drag one's pivot foot without dribbling the ball, to carry it, or to hold the ball with both hands then resume dribbling.

The five players on each side fall into five playing positions. The tallest player is usually the center, the second-tallest and strongest is the power forward, a slightly shorter but more agile player is the small forward, and the shortest players or the best ball handlers are the shooting guard and the point guard, who implements the coach's game plan by managing the execution of offensive and defensive plays (player positioning). Informally, players may play three-on-three, two-on-two, and one-on-one.

Hypothesis

There would be no significance difference of Leg Explosive Strength between Volleyball and Basketball players.

Objective of the Study

The study deals with immediate objectives and certain goals as follows:

- To compare the Leg Explosive Strength of volleyball and basketball player.

- To find out the dominance of Leg Explosive Strength between volleyball and basketball player.

Significance of the Study

The finding of this study is likely to provide criteria for transfer of training. It would help physical instructor to develop sound training programs. The study will help to know the better Leg Explosive Strength among the players. Present study will be helpful to know the relation in training between Volleyball and Basketball players.

Methodology

The sample for the present study consists of 15 Female Basketball players and 15 Female Volleyball players of Karnataka State Akkamahadevi Women's University, Vijayapura District between the age group of 20 to 22 Years of Karnataka State. To assess the Leg Explosive Strength the Standing Broad Jump Test is conducted.

Statistical Technique

The static group design was used as Descriptive design in this study. The collected data on selected criterion variables were statistically analyzed by using independent 't' ratio to find out the significant difference between volleyball and basketball players. In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate.

Results and Discussion

The results of the study shows that the Volleyball players are Similar in explosive strength compare to Basketball players.

Table- No.1 Significance of Mean difference between Volleyball and Basketball Players on the Leg Explosive Strength Variable

Group	Number	Mean	SD	DF	t
Volleyball	15	10.0667	2.31352	14	-1.784
Basketball	15	10.2333	2.55557		

* Significance at 0.05 Tab 't' at 0.05 = 2.76

Table 1 indicates the mean, standard deviation and 't' ratio of leg explosive strength in terms of vertical distance of volleyball players and basketball players. The means and standard deviation values were and 10.0667 ± 2.31352 for volleyball players and 10.2333 ± 2.55557 for basketball players respectively. The obtained t' ratio 1.784 is less than the required table values of 2.76 for degrees of freedom 14. The result of

the study was indicated that there was no significant difference was occurred between volleyball and basketball players on leg explosive strength.

Figure No.1: Mean and Standard values of leg explosive strength of Volleyball and Basketball players.

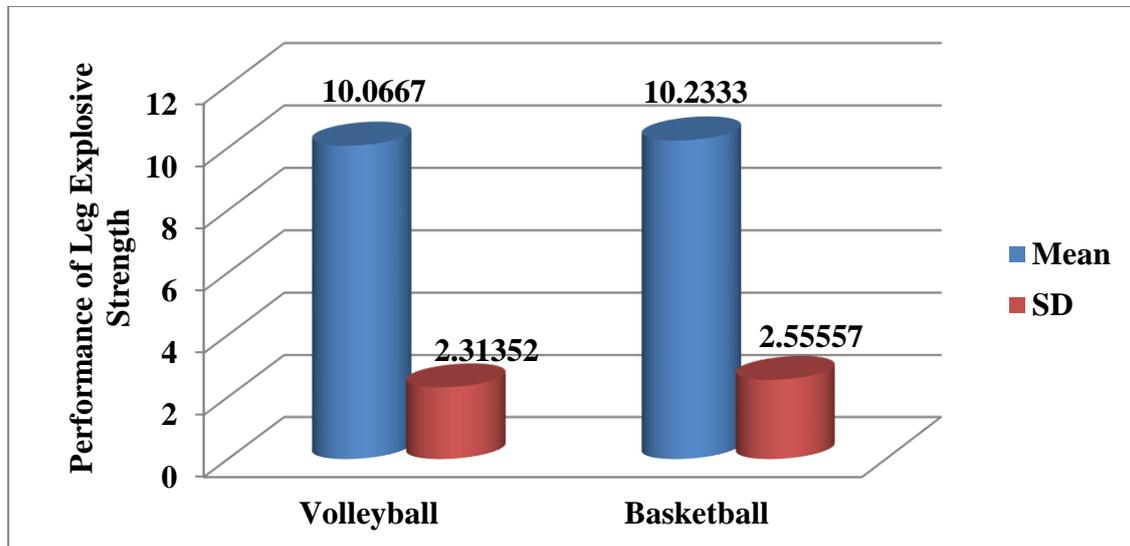


Figure No. 1: showing Mean Difference of leg explosive strength among the Volleyball and Basketball players. Mean score of Volleyball players is 10.0667 and Basketball player is 10.2333; mean difference value is 1.784 only. It shows that there is no significant difference between Volleyball and Basketball players.

Discussion

The present findings of the study showed no difference on leg explosive strength between volleyball and basketball Female players of Karnataka State Akkamahadevi Women's University. The game volleyball requires greater vertical jump performance for spiking, blocking and jump serve. Similarly basketball requires Standing Broad Jump performance for rebound, jump shot and dunking. So both games require greater degrees of Standing Broad Jump in terms of Standing Broad Jump. As a result there was no significant difference elicited between the groups on Standing Broad Jump.

Conclusion

The researcher had undertaken study titled as "Leg Explosive Strength between Female Volleyball and Basketball Players: A Comparative Study". There was no significant difference noticed. Therefore from the statistical analysis the following inferences were derived: No significant differences were observed in the Leg Explosive Strength variable of Volleyball and Basketball players. There were no significant differences noticed on the variable Leg Explosive Strength between Volleyball and Basketball players.

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