



ISSN: 2456-0057  
IJPNPE 2018; 3(2): 607-609  
© 2018 IJPNPE  
www.journalofsports.com  
Received: 16-05-2018  
Accepted: 18-06-2018

**Sheethal Mane**  
Research Scholar, Department of  
Studies in Physical Education  
and Sports Science, A. W.  
University, Vijayapura,  
Karnataka, India



**Dr. DM Jyoti**  
Research Guide, Department of  
Studies in Physical Education  
and Sports Science, A. W.  
University, Vijayapura,  
Karnataka, India

**Correspondence**  
**Sheethal Mane**  
Research Scholar, Department of  
Studies in Physical Education  
and Sports Science, A. W.  
University, Vijayapura,  
Karnataka, India

## Comparative study on explosive strength of basketball and volleyball players

**Sheethal Mane and Dr. DM Jyoti**

### Abstract

The purpose of the present study was to “Comparative Study on Explosive Strength of Basketball and Volleyball Players” To achieve the purpose of the study, Twenty Five (n=25) Basketball players and Twenty Five (n=25) Volleyball women players were selected, who participated in inter collegiate tournaments. All the subjects under study received regular training in their respective activities, the sample for the present study consisted of Fifty (n=50) inter collegiate level sports persons. The subjects were in the age group of 18 to 28 years.

**Keywords:** Explosive strength, basketball and volleyball players

### Introduction

Physical Education is "education through the physical". It aims to develop students' physical competence and knowledge of movement and safety, and their ability to use these to perform in a wide range of activities associated with the development of an active and healthy lifestyle. It also develops students' confidence and generic skills, especially those of collaboration, communication, creativity, critical thinking and aesthetic appreciation. These, together with the nurturing of positive values and attitudes in PE, provide a good foundation for students' lifelong and life-wide learning.

Explosive strength is the ability to exert maximal force in minimal time. To develop explosive strength and reactive ability you need to do two things. First, you must build your speed strength and second, in the same time frame, you must raise your absolute strength.

The history of basketball began with its invention in 1891 in Springfield, Massachusetts by Canadian physical education instructor James Naismith as a less injury-prone sport than football. The game became established fairly quickly and grew very popular as the 20th century progressed, first in America and then throughout the world. After basketball became established in American colleges, the professional game followed. The American National Basketball Association (NBA), established in 1946, grew to a multibillion-dollar enterprise by the end of the century, and basketball became an integral part of American culture.

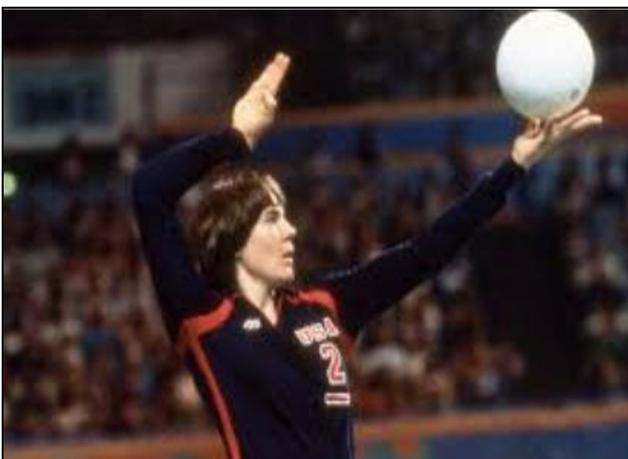


### Original rules

1. There were only thirteen rules of "basket ball":

2. The ball may be thrown in any direction with one or both hands.
3. The ball may be batted in any direction with one or both hands.
4. A player cannot run with the ball, the player must throw it from the spot on which he catches it, allowance to be made for a man who catches the ball when running at good speed.
5. The ball must be held in or between the hands, the arms or body must not be used for holding it.

Volleyball has come a long way from the dusty-old YMCA gymnasium of Holyoke, Massachusetts, USA, where the visionary William G. Morgan invented the sport back in 1895. It has seen the start of two centuries and the dawn of a new millennium. Volleyball is now one of the big five international sports, and the FIVB, with its 220 affiliated national federations, is the largest international sporting federation in the world. Volleyball has witnessed unprecedented growth over the last two decades. With the great success of world competitions such as the FIVB World Championships, the FIVB World League, the FIVB World Grand Prix, the FIVB World Cup and the FIVB Grand Champions Cup as well as the Olympic Games, the level of participation at all levels internationally continues to grow exponentially. The beach volleyball phenomenon also continues to amaze. The overwhelming spectator and television success of beach volleyball since its introduction to the Olympic Games at Atlanta 1996 and the stunning success of the FIVB World Tour, the World Championships and the Continental Cup has opened up volleyball to a completely new market.



### Statement of the problem

The purpose of the present study was to “Comparative Study on Explosive Strength of Basket Ball and Volley Ball Players”

### Methodology

The purpose of the present study was to “Comparative Study on Explosive Strength of Basket Ball and Volley Ball Players” To achieve the purpose of the study, Twenty Five (n=25) basketball players and Twenty Five (n=25) valley ball women players were selected, who participated in inter collegiate tournaments. All the subjects under study received regular training in their respective activities, the sample for the present study consisted of Fifty (n=50) inter collegiate level sports persons. The subjects were in the age group of 18 to 28 years.

### Analysis and Interpretation of Data

The purpose of the present study was to Comparative Study on Explosive Strength of Basket Ball and Volley Ball Players. In order to collect data for the study, there was a seed for certain reliable tests which would measure explosive strength. Literature search revealed several tests of explosive strength. Efforts were made by the investigator to identify and select suitable tests vertical jump (leg explosive strength), standing broad jump (leg explosive strength), Two hand medicine ball put (arm explosive strength) and cricket ball throw (arm explosive strength), tests on the selected subjects the reasons for such a choice of tests were.

- That these four tests were very commonly mentioned and suggested as a measure of explosive strength in most of the literature reviewed.
- That the tests were simple and easy to administer.

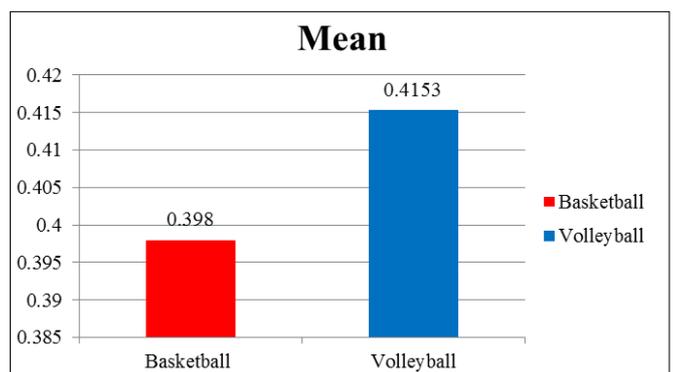
### Result and Discussion

The results obtained for basketball and volleyball groups are presented in

**Table 1:** Vertical Jump group statistics.

Vertical Jump	N	Mean	S D	Mean Difference	Df	t-value
Basketball	25	0.3980	.1055	1.633-02	58	.538
Volleyball	25	0.4153	.1265			

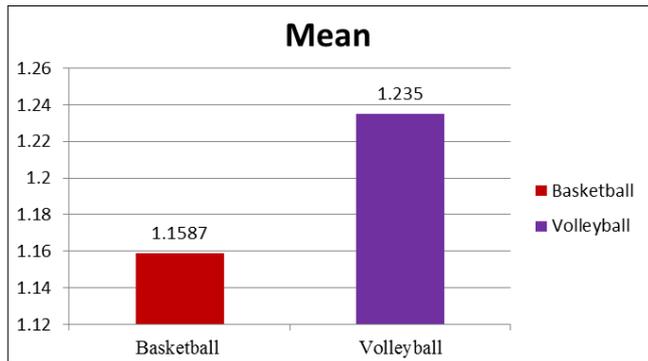
It may be seen from table 1 that the mean scores of Basketball and Volleyball groups in vertical jump test. Were.3980 and.4153 respectively. The mean difference was 1.633-02. The‘t’ value obtained was.538 for 58 degrees of freedom. The‘t’ value was not significant. The hypothesis formulated in the present study was therefore accepted. That means to say, that there was no significant difference in the mean scores of performance in vertical jump test between Basketball and Volleyball women players.



**Table 2:** Standing Broad Jump Group Statistics

Standing Broad jump	N	Mean	S D	Mean Difference	Df	t-value
Basketball	25	1.1587	.1606	7.533-02	58	2.071
Volleyball	25	1.2350	.1185			

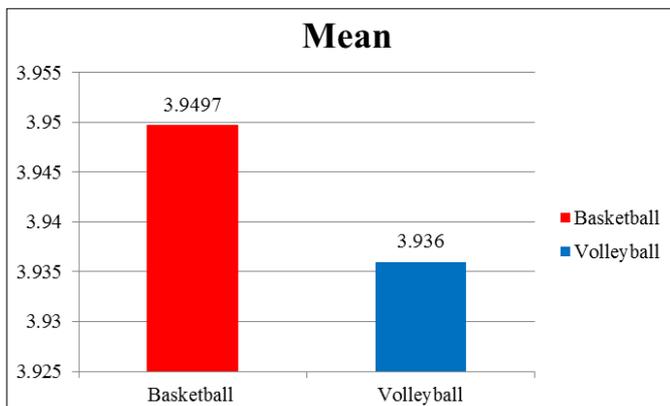
It may be seen from table 2 that the mean scores of Basketball and Volleyball groups in Standing Broad jump test. Were 1.1587 and 1.2350 respectively. The mean difference was 7.533-02. The 't' value obtained was 2.071 for 58 degrees of freedom. The 't' value was not significant. The hypothesis formulated in the present study was therefore rejected. That means to say, that there was no significant difference in the mean scores of performance in Standing Broad jump test between Basketball and Volleyball women players.



**Table 3:** Two Hand Medicine Ball Put Group Statistics

Two Hand Medicine Ball Put	N	Mean	S D	Mean Difference	Df	t-value
Basketball	25	3.9497	.2913	-1.266702	58	-.129
Volleyball	25	3.9360	.2720			

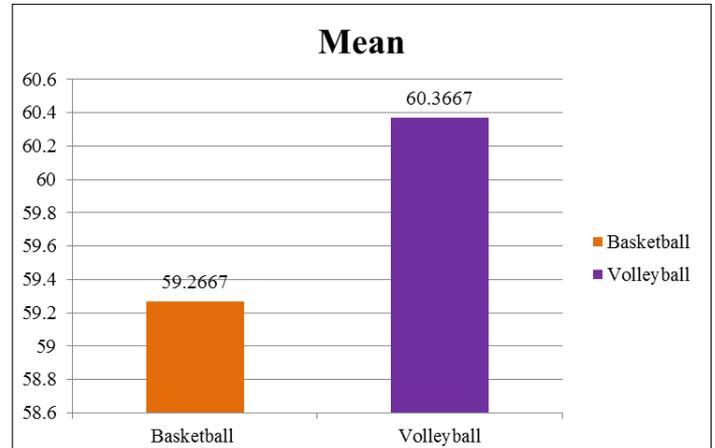
It may be seen from table 3 that the mean scores of Basketball and Volleyball groups in two hand medicine ball put test. Were 3.9497 and 3.9360 respectively? The mean difference was -1.266702. The 't' value obtained was -.129 for 58 degrees of freedom. The 't' value was not significant. The hypothesis formulated in the present study was therefore accepted. That means to say, that there was no significant difference in the mean scores of performance in two hand medicine ball put test between Basketball and Volleyball women players.



**Table 4:** Cricket Ball Throw Group Statistics

Cricket Ball Throw	N	Mean	S D	Mean Difference	Df	t-value
Basketball	25	59.2667	3.7265	1.1000	58	0.736
Volleyball	25	60.3667	4.4424			

It may be seen from table 4 that the mean scores of Basketball and Volleyball groups in cricket ball throw test. Were 59.2667 and 60.3667 respectively. The mean difference was 1.1000. The 't' value obtained was 0.736 for 58 degrees of freedom. The 't' value was not significant. The hypothesis formulated in the present study was therefore accepted. That means to say, that there was no significant difference in the mean scores of performance in cricket ball throw test between Basketball and Volleyball women players.



**Conclusion**

There was a significant difference in explosive strength between Basketball and Volleyball women player. This significant difference was evident in standing broad jump favoring the Volleyball women players. There were no significant difference in the mean performance scores of Basketball and Volleyball groups in vertical jump, two hand medicine ball put and cricket ball throw tests.

**References**

1. Devi KS. Relationship of selected strength and flexibility measure to playing ability in volleyball. Unpublished Master's Thesis Jiwaji University, Gwalior, 1985.
2. Duncan MJ, Woodfield L, Al-Nakeeb Y. Anthropometric and physiological characteristics of junior elite volleyball players. British Journal of Sports Medicin. 2006; 40: 649; 651.
3. Bandyopadhyay A. Anthropometry and body composition in soccer and volleyball players in West Bengal, India. J Physiol. Anthropol. 2007; 26(4):501505.
4. Barnes JL, Schilling BK, Falvo MJ, Weiss LW, Creasy AK, Fry AC. Relationship of jumping and agility performance in female volleyball athletes. Journal of Strength and Conditioning Research. 2007; 21(4):1192-1196.
5. Batista RG, Freire AR, Guerra OR. x Comparison between vertical jumps of high performance athletes on the Brazilian men's beach volleyball team. Journal of Sports Medicine and Physical Fitness. 2007; 48 (2):172-176.