



COMPARISON OF EXPLOSIVE POWER BETWEEN MALE VOLLEYBALL AND BASKETBALL PLAYERS

B. Ramkumar^{a,*}

^aDepartment of Physical Education and Sports Sciences, Annamalai University,
Chidambaram- 608002, Tamilnadu, India

*Corresponding Author Ph: +(91) - 9442284433; Email: b.ramkumar77@gmail.com

DOI: 10.26524/14110

ABSTRACT

The purpose of this study is to compare explosive power between male volleyball and basketball players of Annamalai University. To achieve the purpose of this study, thirty male players, that is fifteen basketball players and fifteen volleyball players were selected as subjects from various departments of Annamalai University, and their age ranged from 19 to 25 years. These subjects were tested on explosive power by vertical jump test. The collected data was analysed using independent 't' ratio to find out the significant difference between volleyball and basketball players. The result of the study showed that there was no significant difference on explosive power ($t = 0.136, p > 0.05$) between volleyball and basketball players. It is concluded that both games demands greater explosive power for better performance. The nature of both games varies, although the skills like spiking and jump shot require explosive power as a result of this no difference is elicited between the groups.

Keywords: Volleyball, Basketball, Explosive power, t ratio, Vertical jump test.

Introduction

'Sports' is a popular spectacle and a mass social movement of contemporary times. In the process of historical development sports has occupied a prominent place both in the moral culture of a society. Its social significance continues to soar. In the modern days 'sports for all' become a very popular slogan. Participation in sports will yield optimum physical fitness and positive health for all. In the hurry scenario of modern life people need more exercise to keep their body and mind fit to execute the day-to-day activities effectively.

Human being is an active creature. He possesses capacities for movement. He has all the necessary neuromuscular mechanisms that make movement possible

and encourage gross motor activity of the entire being. Without this basis there is not life physiologically, while man is alive, he must move in some way.

Physical education experts and leaders in India feel that measures should be taken to develop a positive attitude among people towards sports to achieve international standards. It is a myth that foreign coaches would be able to perform miracle in our sports concern. It is stated that, better performance can be attained only through the introduction of scientific methods and techniques through systematically adopted training. Basketball is also played as a highly competitive game in school and colleges throughout the world. Fast starting, stopping, dodging, darting and



acceleration are the fundamental requirements to a good court play since court game often involve at a vigorous rate a high level of anaerobic endurance and also good jumping ability is of great importance [1].

Court games are unique in the same that they are played in the relatively small area and involve the handling of a ball or similar object and often an implement. It requires a high degree of running, manoeuvre ability and total body agility in order to gain good court position and compete with one's opponent on both offensive and defensive manoeuvres [2]. Volleyball is the fast game in term of changing pace, which

requires certain motor qualities such as speed, explosive power, agility, quickness (reaction) co-ordination and muscular endurance as fitness qualities in complex playing situation. Involvement in systematic and scientific programmes of conducting the training will bring about desirable changes in physical and physiological variables, contributing to the development of strength, speed and endurance, besides marked changes in resting pulse rate, blood pressured, haemoglobin and such other physiological variables. The purpose of this study is to compare explosive power between male volleyball and basketball players of Annamalai University.

Method

Subjects and Variables

To achieve the purpose of this study, thirty male players, that is fifteen basketball players and fifteen volleyball players, were selected as subjects from various departments of Annamalai University, and their age ranged from 19 to 25 years. Before conducting the tests, all the subjects were oriented and purpose of the test procedures clearly explained to the subjects. The research scholars of the department of physical education, helped to collect the data for the investigator. In the present study explosive power was measured by vertical jump test. They were provided with three trials among best was selected.

Statistical technique

The static group design was used as experimental 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.

Result

Table 1 indicates the mean, standard deviation and 't' ratio of explosive power in terms of vertical distance of volleyball players and basketball players. The means and standard deviation values were and 56.93 ± 1.486 for volleyball players and 56.87 ± 1.187 for basketball players respectively. The obtained 't' ratio 0.136 is less than the required table values of 2.05 for degrees of freedom 28. The result of the study was indicated that there was no significant difference was occurred between volleyball and basketball players on explosive power in terms of vertical distances.



Table 1

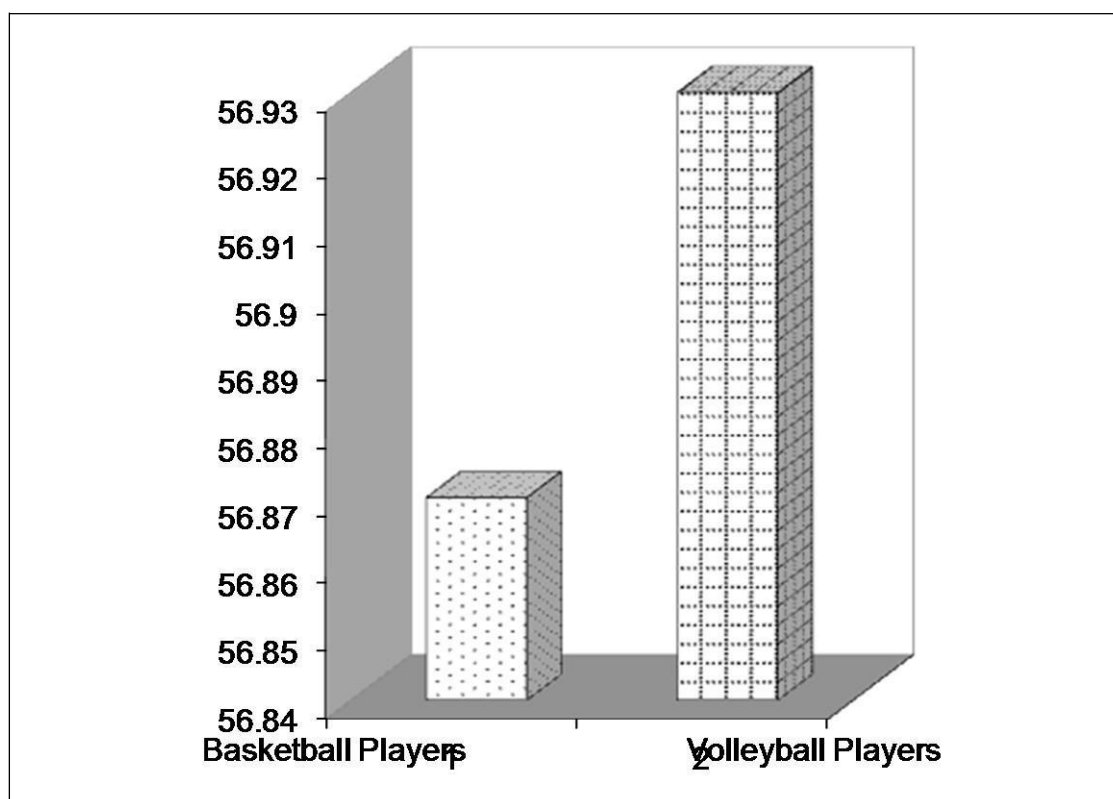
MEAN STANDARD DEVIATION AND 't' RATIO OF EXPLOSIVE POWER ON VOLLEYBALL AND BASKETBALL PLAYERS

Group	Mean	Standard Deviation	't' ratio	Level of significance
Volleyball Players	56.93	1.486	0.136	0.05
Basketball Players	56.87	1.187		

The mean values on explosive power of volleyball players and basketball players were presented in Figure 1.

Figure 1

BAR DIAGRAM SHOWING THE MEAN DIFFERENCE BETWEEN BASKETBALL PLAYERS AND VOLLEYBALL PLAYERS ON EXPLOSIVE POWER IN TERMS OF VERTICAL DISTANCE





Discussion

The present findings of the study showed no difference on explosive power between volleyball and basketball male players of Annamalai university. The game volleyball requires greater vertical jump performance [3-6] for spiking, blocking and jump serve. Similarly basketball requires vertical jump performance [7,8] for rebound, jump shot and dunking. So both games require greater

degrees of explosive power in terms of vertical jump. As a result there was no significant difference elicited between the groups on explosive power.

Conclusion

It is concluded that no difference was noticed between male volleyball and basketball players on explosive power. Since, both the game demands equal amount of explosive power for performing their respective skills during the game.

References

1. Ambler, V. Herbert (1979) Basketball the basic for coach and players, London UK: Faber.
2. V. Thomas (1972) Basketball techniques and tactics, Champaign Illinois, USA: Human kinetic publisher.
3. L. B. Gladden, D. Colacino, Characteristics of volleyball players and success in a national tournament, *The Journal of Sports Medicine and Physical Fitness*, 18 (1978) 57-64.
4. S. J. Fleck, S. Case, J. Puhl, P. Van-Handle, Physical and physiological characteristics of elite women volleyball players, *Canadian Journal of Applied Sport Science*, 10 (1985) 122-126.
5. M. C. Marques, R. Tillaar, J. Vescovi, J. J. González-Badillo, Changes in strength and power performance in elite senior female professional volleyball players during the in-season: a case study, *The Journal of Strength & Conditioning Research*, 22 (2008) 1147-1155.
6. M. C. Marques, J. J. González-Badillo, D. Kluka, In-Season Resistance Training for Professional Male Volleyball Players, *The Journal of Strength & Conditioning Research*, 28 (2006) 16-27.
7. J. R. Hoffman, G. Tennenbaum, C. M. Maresh, W. J. Kraemer, Relationship between athletic performance tests and playing time in elite college basketball players, *Journal of Strength and Conditioning Research*, 10 (1996) 67-71.
8. J.R. Hoffman, C.M. Maresh (2000) Physiology of Basketball. In Exercise and sport science, edited by W.E. Garrett and D.T. Kirkendall, Philadelphia: Lippincott Williams and Wilkins.