

A comparative study of selected motor fitness parameters between male basketball and volleyball players

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Abstract

The purpose of present study was to compare the selected motor fitness parameters between basketball and volleyball players. For present study the researcher selected 24 male (12 basketball and 12 volleyball players) from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G), as subjects and the age ranged from 18-25 years. The variables selected for the present study were basketball and volleyball players (independent variables) and selected motor fitness parameters (dependent variables). The data was collected through applying the tests; 10x4 meter shuttle run test for agility ability and 50 meter dash run test for speed ability. For comparing the means of selected motor fitness parameters, descriptive analysis and independent t-test were applied at 0.05 level of significant. All the statistical analysed was carried out using SPSS version 16.0. The result of the present study showed that there was significant difference found in agility ability ($t=3.048 < 2.07$) and speed ability ($t=2.665 > 2.07$) between basketball and volleyball players of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). On the basis of the findings it was concluded that the basketball players have more fitness ability in agility ability ($t=3.048 < 2.07$) and speed ability ($t=2.665 > 2.07$).

Keywords: Basketball, Volleyball and Motor Fitness Parameters

1. Introduction

“Physical fitness is the ability to carry out daily tasks with vigorous and alertness without undue fatigue, and with ample energy to engage in pursuits and to meet emergency situation.” Clarke (1957) ^[1]

Basketball and Volleyball is a unique sport that can improve overall fitness and confidence for players of all age groups. It requires upper and lower body speed, agility, flexibility and strength.

Basketball is one of the world’s most popular and widely viewed sports. Basketball was originally played with a soccer ball. The first balls made specifically for basketball were brown, and it was only in the late 1950s that Tony Hinkle, searching for a ball that would be more visible to players and spectators alike, introduced the orange ball that is now in common use. Basketball is a sport played by two teams of five players on a rectangular court. The objective is to shoot a ball into the ring for getting points. Daya Nand Singh (2014) ^[5]

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team’s court under organized rules. It has been a part of the official program of the Summer Olympic Games since 1964. Biswajit Malakar (2014) ^[3]

The famous Greek philosopher Aristotle stated “Every individual should be physically fit to enjoy the life fully. In intellectual as well as physical work, a sound heart and lungs, good digestion, well-developed physique, all are the great assets for living a happy and satisfying life.” Sunil Sen, Kamlesh Sen and K. R. Bhagat (2014) ^[4].

2. Methodology

2.1 Selection of Subjects

For present study the researcher selected 24 male (12 basketball and 12 volleyball players) from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G), as subjects and the age ranged from 18-25 years.

2.2 Selection of Variables

Independent Variable	Dependent Variable
Basketball players	Agility ability
Volleyball players	Speed ability

2.3 Criterion Measures

Selected variables and their criterion measures –

Variables	Test Items	Measurements
Speed	50 meter dash run	In seconds
Agility	10x4 meter shuttle run	In seconds

2.4 Statistical Analysis

To find out the significance difference of selected motor fitness parameters of basketball and volleyball players male players of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G) in comparison to agility and speed ability the data were analyzed by applying Descriptive statistics and Independent sample t-test. The level of significance was set at 0.05.

3. Result of the study

The scores were obtained by applying the 4x10 shuttle run test and 50 meter dash run test. All the individual 4x10 shuttle run test and 50 meter dash run test scores used to judge the level of agility and speed.

Table 1: Comparative and descriptive table of male basketball and volleyball players in relation to agility

Game	N	Mean	SD	MD	SED	t-value
Basketball	12	7.994	.136	.251	.082	3.048*
Volleyball	12	8.245	.251			

*Significant at 0.05 level (df 22 = 2.07)

Table 1 indicates that the calculated t-value 3.048 on agility observed “t” value is compared with the critical value 2.07, 22 degree of freedom. It was observed that the value 3.048 was found as higher than the table value 2.07. This confirms that

significant difference exists between the means of male basketball and volleyball players in relation to agility.

Table 2: Comparative and descriptive table of male basketball and volleyball players in relation to speed

Game	N	Mean	SD	MD	SED	t-value
Basketball	12	6.872	.144	.183	.068	2.665*
Volleyball	12	7.055	.189			

*Significant at 0.05 level (df 22 = 2.07)

Table 2 indicates that the calculated t-value 2.665 on agility observed “t” value is compared with the critical value 2.07, 22 degree of freedom. It was observed that the value 2.665 was found as higher than the table value 2.07. This confirms that significant difference exists between the means of male basketball and volleyball players in relation to speed.

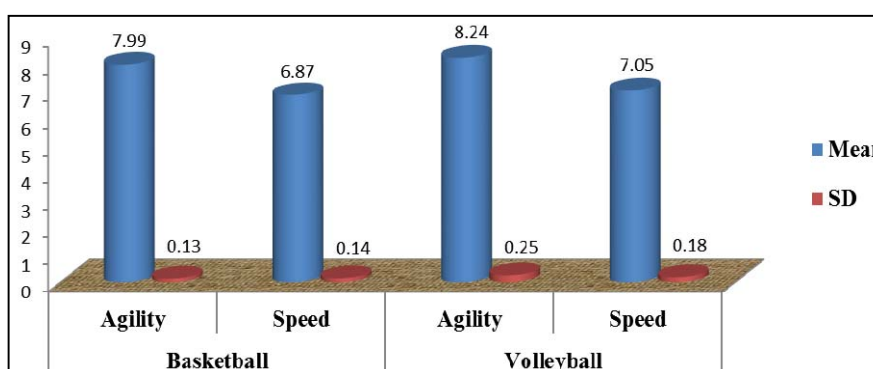


Fig 1: Graphical representation of Mean and SD of male basketball and volleyball players in relation to agility and speed

4. Discussion of Finding

The results of the study revealed that there was significant mean difference between the male basketball and volleyball players in the scores of agility and speed of the players from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). Further, it is revealed that the male basketball players were more agile and had better speed ability in comparison the male volleyball players. Therefore, the difference occurs between the male basketball and volleyball players in comparison to agility and speed abilities due to the basketball players move continuously in the court for attacking and defence but in the case of volleyball players move less and so have less agility and speed abilities in relation to the male basketball players. The above results are supported by (Vishnu Datt and Dr. Manohar Mane, 2013) [2].

5. Conclusion

On the basis of result following conclusions have been made –

1. Significant difference was found between the male basketball and volleyball players of Guru Ghasidas Vishwavidyalaya, Bilaspur in relation to agility ability.
2. Significant difference was found between the male basketball and volleyball players of Guru Ghasidas Vishwavidyalaya, Bilaspur in relation to speed ability.
3. The male basketball players were having greater agility and speed ability than the male volleyball players.

6. References

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