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Motor fitness variables among inter university football and volleyball players: a comparative study

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Abstract

The purpose of this study was to compare the selected motor fitness variables among Volleyball Players and Football Players. A Sample of 30 male (15 Football Players and 15 Volleyball Players) was selected through purposive sampling technique from SGGS Khalsa College, Mahilpur, Hoshiarpur (Punjab). The different criteria measured were used speed, Agility, Power, Flexibility, Endurance were measured by 50 meter dash test, 10 meter shuttle run, Standing Broad Jump, Modified Sit And Reach Test and 9 min run/ walk test respectively. Collected data were analysed by computing the 't' test to see the significance mean difference between 15 Volleyball Players and 15 Football players on selected motor fitness variables. The results indicated that there were insignificant differences with regard to Motor fitness variables of speed, agility and flexibility between Volleyball Players and Football Players whereas the significant difference were found with regard to Motor fitness variables power and endurance between Volleyball Players and Football Players. The outcome of study shows that Football players were more power and endurance than Volleyball Players.

Keywords: Motor fitness, Speed, Agility, Power, Flexibility, Endurance.

Introduction

Performance of the players depends upon the motor fitness, Physiological and Psychological variables. More specifically, motor fitness referred to as efficient performance in such basic requirements as running, jumping, dodging, falling, climbing, swimming, lifting, weighing, carrying load, and enduring sustained effort in a variety of situations. Movement in the games and sports are highly specific and are the result of training an experience for successful performance of a skill, the components of motor fitness contribute independently and interdependently. Strength, endurance, flexibility, speed, balance and coordination abilities are the prerequisites for motor action in any events. General motor skills are developed from the child hood onward when the children run, jump or play. They are gradually converted to specific motor skills, when advanced training take place in a particular events and it goes a long way in making a person proficient in that particular field or sports. There are so many method of training to improve fitness and components such as strength, endurance, flexibility. Training provides the athlete with the basic means to adapt to his particular stressors, through controlled exercise, Motor fitness of a player depends on the nature of his game and also external conditions. Volleyball and Football both are almost similar games in term of motor fitness level. A complete Volleyball Players should possess that agility of an acrobat, the power of a race horse, the killer instinct of a panther as well as like a Football player. Some of the standards the fit player attain to meet the demands of the games are speed, power, agility, flexibility and endurance of motor fitness component.

Procedure and Methodology

A Sample of 30 male (15 Volleyball Players, 15 Football players) who had represented the Inter University from the Panjab University were selected by employing Purposive sampling technique. All players were selected from different SGGS Khalsa College, Mahilpur. The speed of subjects was measured by 50 meter dash test, Agility was measured by 10 mtr shuttle run, power was measured by Standing Broad Jump, Flexibility was measured by Modified Sit And Reach Test and cardiovascular endurance was measured by 9 min run/ walk

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Results and Discussion

The significance of mean difference between Volleyball Players and Football Players on motor fitness variables of

speed has been given in table 1 and their mean are depicted in figure 1.

Table1: Significance of mean difference of speed between Volleyball Players and Football Players.

Variable	Groups	N	Mean	SD	MD	SEDM	't'
Speed	Volleyball Players	15	8.60	.96	.50	.29	1.74
	Football Players	15	8.19	.57			

Table -1 Explain that the mean value of Volleyball Players were found to be 8.69 with standard deviation of 0.96 where as mean value of Football Players were recorded 8.19 with standard deviation of 0.57.The mean difference was observed .50.The standard error difference of mean was found .29.The

obtained 't' value was 1.74.Results showed insignificant mean differences between Volleyball Players and Football Players with regard to speed as the obtained 't' value of 1.74 was not found to be statistically significant at .05 level.

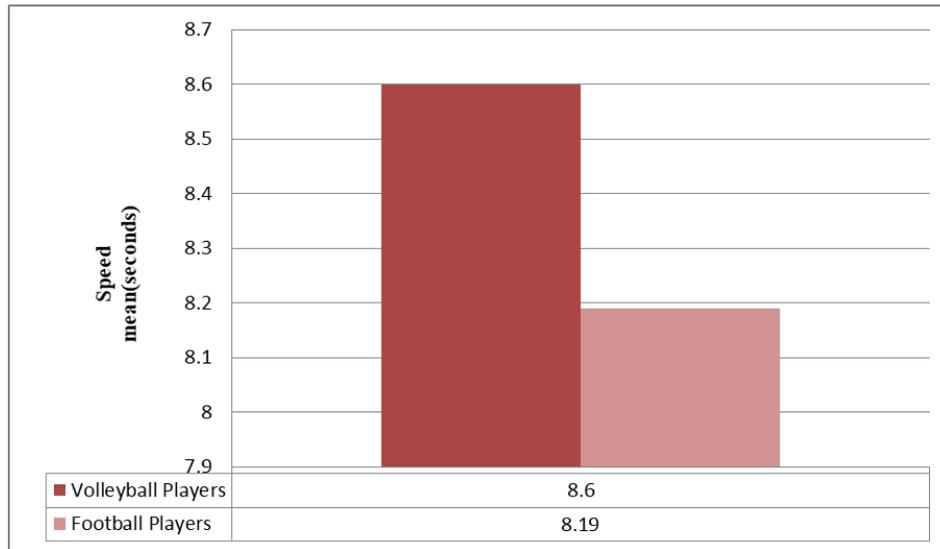


Fig 1: Mean scores of speed between Volleyball Players and Football Players

The significance of mean difference between Volleyball Players and Football Players on motor fitness variables of agility has been given in table 2 and their mean are depicted in figure 2.

Table 2: Significance of mean difference of agility between Volleyball Players and Football Players.

Variable	Groups	N	Mean	SD	MD	SEMD	't'
Agility	Volleyball	15	10.76	.93	.32	.28	1.46
	Football	15	10.46	.55			

$t_{0.05}(28) = 2.05$

Table -2 Explain that the mean value of Volleyball Players were found to be 10.76 with standard deviation of 0.93 where as mean value of Football Players were recorded 10.46 with standard deviation of .55.The mean difference was observed .32.The standard error difference of mean was found .28.The obtained 't' value was 1.46. Results showed insignificant mean differences between Volleyball Players and Football Players with regard to agility as the obtained't' value of 1.46 was not found to be statistically significant at .05 level.

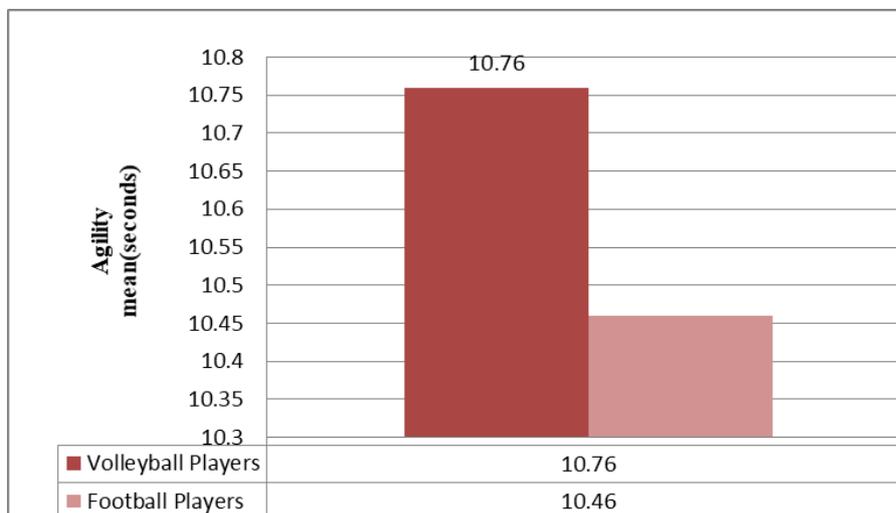


Fig 2: Mean scores of agility between Volleyball Players and Football Players.

The significance of mean difference between Volleyball Players and Football Players on motor fitness variables of power has been given in table 3 and their mean are depicted in figure 3.

Table 3: Significance of mean difference of power between Volleyball Players and Football Players.

Variable	Groups	N	Mean	SD	MD	SEMD	't'
Power	Volleyball	15	1.84	.33	.22	.10	2.1
	Football	15	2.06	.22			

$t_{0.05}(28) = 2.05$

Table-3 Explain that the mean value of Volleyball Players were found to be 1.84 with standard deviation of 0.33 where as mean value of Football Players were recorded 2.06 with standard deviation of 0.22. The mean difference was observed 0.22. The standard error difference of mean was found 0.10. The obtained 't' value was 2.1. Results showed significant mean differences between Volleyball Players and Football Players with regard to power as the obtained 't' value of 2.1 was found to be statistically significant at .05 level.

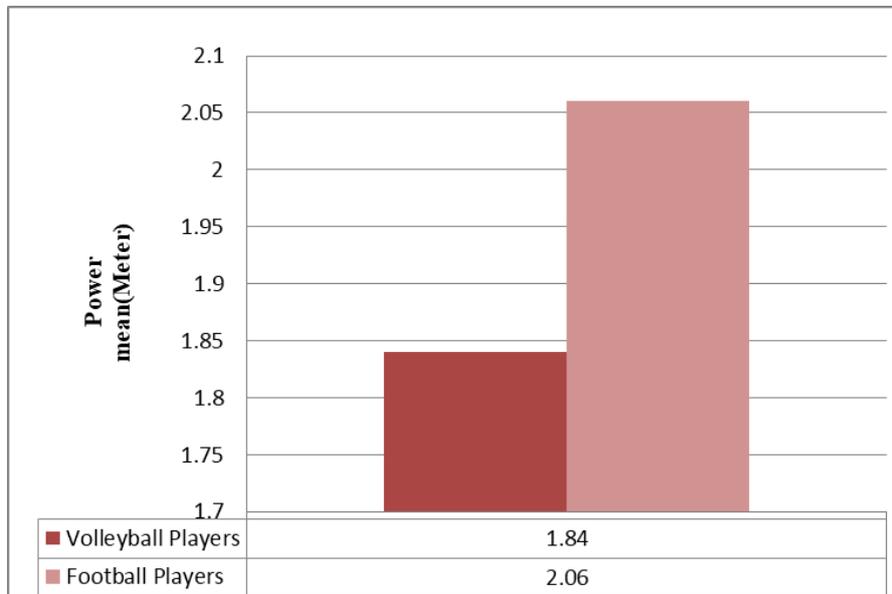


Fig 3: Mean scores of Power between Volleyball Players and Football Players.

The significance of mean difference between Volleyball Players and Football Players on motor fitness variables of flexibility has been given in table 4 and their mean are depicted in figure 4.

Table 4: Significance of mean difference of flexibility between Volleyball Players and Football Players.

Variable	Groups	N	Mean	SD	MD	SEMD	't'
flexibility	Volleyball	15	6.32	6.34	1.06	2.17	.656
	Football	15	5.26	5.52			

$t_{0.05}(28) = 2.05$

Table - 4 Explain that the mean value of Volleyball Players were found to be 6.33 with standard deviation of 6.34 where as mean value of Football Players were recorded 5.26 with standard deviation of 5.52. The mean difference was observed 1.06. The standard error difference of mean was found 2.17. The obtained 't' value was .656. Results showed insignificant mean differences between Volleyball Players and Football Players with regard to flexibility as the obtained 't' value of .656 was not found to be statistically significant at .05 level.

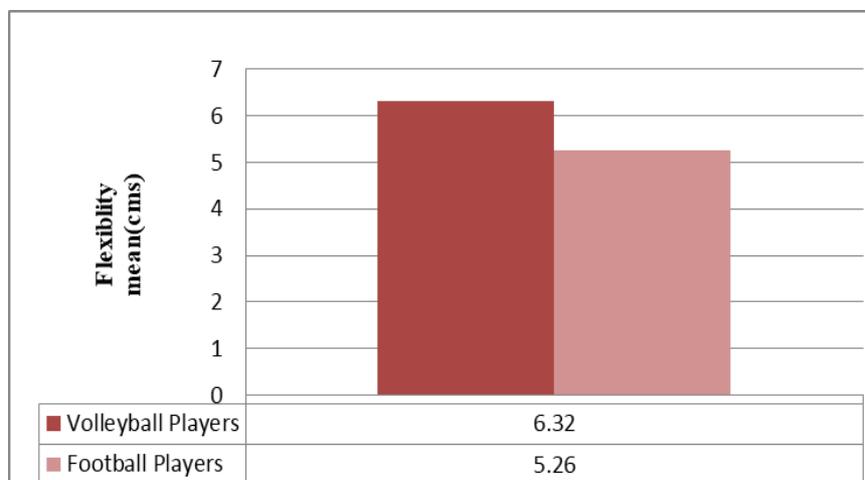


Fig 4: Mean scores of Flexibility between Volleyball Players and Football Players.

The significance of mean difference between Volleyball Players and Football Players on motor fitness variables of

endurance has been given in table 5 and their mean are depicted in figure 5.

Table 5: Significance of mean difference of endurance between Volleyball Players and Football Players.

Variable	Groups	N	Mean	SD	MD	SEMD	't'
Endurance	Volleyball	15	1570	153.90	151.33	51.17	2.95
	Football	15	1721	124.89			

$t_{0.05}(28) = 2.05$

Table -5 Explain that the mean value of Volleyball Players were found to be 1.57 with standard deviation of 153.90

where as mean value of Football Players were recorded 1.72 with standard deviation of 124.89. The mean difference was observed 151.33. The standard error difference of mean was found 51.17. The obtained 't' value was 2.95. Results showed significant mean differences between Volleyball Players and Football Players with regard to endurance as the obtained 't' value of 2.95 was found to be statistically significant at .05 level.

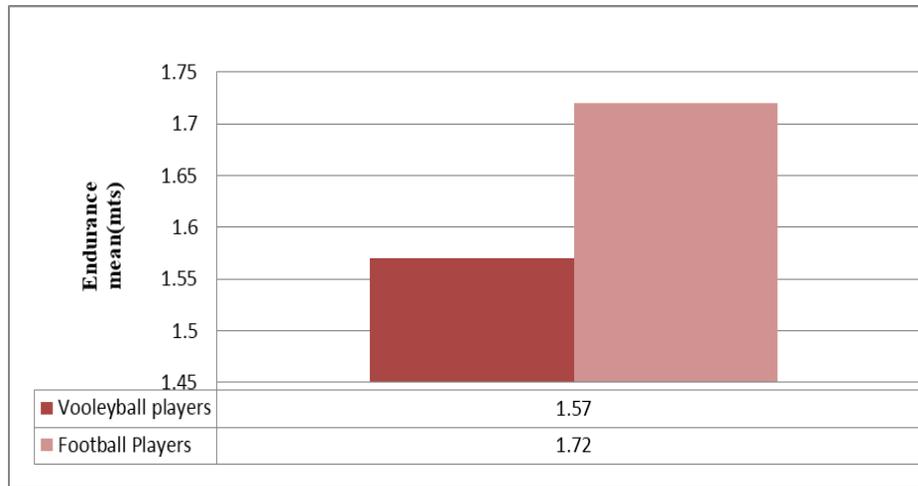


Fig 5: Mean scores of Endurance between Volleyball Players and Football Players.

Discussion

It is evident from the results that there were insignificant differences found with regard to speed, agility and flexibility between Volleyball Players and Football Players and significant differences found with regard to power and endurance between Volleyball Players and Football Players. Sharma. M.P. (2004) studied that endurance and power is significant related to Football players.

Conclusion

To summarize, present result indicate that there was markedly difference among Volleyball Players and Football Players in relation to power and endurance. There were insignificant differences found with regard to speed, agility and flexibility between Volleyball Players and Football Players

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