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## Comparative study on motor fitness components among football and volleyball players of A.P.S University Rewa

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### Abstract

The purpose of this study was to find out the difference in motor fitness components among the football and volleyball players of A.P.S University Rewa. For this purposes the data were collected from 15 football and 15 volleyball male players of A.P.S.U Rewa randomly. The age of the subjects ranged from 18 to 28 years. The following motor fitness variables such as muscular endurance and speed were selected. The above selected variables were tested with for analysis was push-ups and bent knee sit-ups for muscular endurance, total body speed and speed of movement for speed. The collected data were statistically analyzed with 't' test. The result shows that there was significant difference in push-ups of muscular endurance and also the significant difference was found in total body speed of speed which showed that football players were better than the volleyball players.

**Keywords:** Motor fitness, football Players, volleyball Players

### Introduction

Motor fitness is gauged by performance and this performance is based on a composite of many factors. The most commonly mentioned fitness factors are strength, endurance, power, speed, agility, balance, flexibility and stamina. Some of these factors evidently are more dominant than others and thus have a higher relationship with motor fitness. Motor fitness is made up of factors that seem more dynamic such as strength and endurance. Minimum standards of motor fitness may be achieved over a short period of time. By the same token, fitness is lost unless it becomes a product of day to day living.

Motor fitness is more limited in scope, as distinguished from physical and total fitness. It has defined as a 'a readiness or preparedness for performance with special regard to big muscle activities without undue fatigue. It includes the capacity of the individual to move efficiently and with strength and force over a reasonable length of time. Motor fitness is, thus, only a limited phase of physical fitness. It is also a limited aspect of general motor ability, with emphasis placed on the underlying element of vigorous physical activity, but does not include neuromuscular co-ordination involved in motor skills.

Motor fitness is considered as the ability to perform movement tasks. Motor fitness depends on many factors known as motor fitness parameters i.e. strength, speed, endurance, balance, rhythm, agility, flexibility, coordination, reaction time etc.

Motor fitness is the final criterion through which all other elements of physical fitness are seen and measured in man. How continuously and efficiently he performs his daily work in industry, on the farm, in the armed forces, or in athletic performance was at one time the only criterion that man had of physical fitness. He might know little or nothing about scientific facts of body structure, physiology or functioning the organs, strength test on dynamometer, or organic efficiency tests. But he could understand an outstanding performance displaying power, speed and endurance.

### Hypothesis

It was hypothesized that there is no significant difference in motor fitness components among the football and volleyball players.

**Methodology**

For this purposes the data were collected from 15 football and 15 volleyball male players of A.P.S.U Rewa randomly. The age of the subjects ranged from 18 to 28 years. The following motor fitness variables such as muscular endurance and speed were selected. The above selected variables were tested with for analysis was push-ups and bent knee sit-ups for muscular endurance, total body speed and speed of movement for speed. The collected data were statistically analyzed with ‘t’

test. The level of significance was significant at 0.05 levels.

**Analysis of data**

**Muscular Endurance**

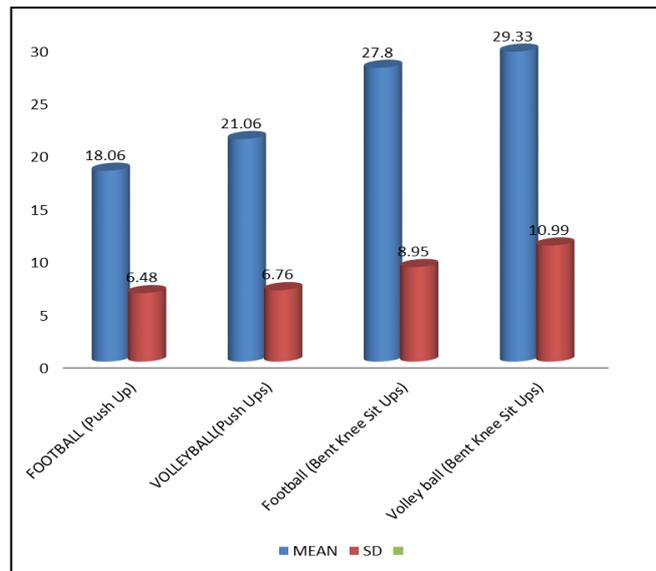
The mean difference and test of significance on muscular endurance of football and volleyball players shown in Table – Showing Mean, S.D, M.D, S.E and t-value of muscular endurance (Push-ups and Bent knee Sit-ups) between football and volleyball players

**Table 1**

Group	Variable	Mean	SD	MD	SE	Df	t-value
Football	Push-ups	18.06	6.48	3.00	2.42	28	1.24 P>0.5
Volleyball	Push-ups	21.06	6.76				
Football	Bent knee Sit-ups	27.80	8.95	1.53	3.66	28	0.41 P>0.5
Volleyball	Bent knee Sit -ups	29.33	10.99				

Table-1 shows the mean, SD, MD and t value of Push-ups and Bent knee Sit-ups of football and volleyball players. The obtained scores shows no significant difference in case of Push-ups as the obtained mean of football players was found 18.06 SD 6.48; similarly mean of volleyball players was found 21.06, SD 6.76. MD was found 3.00 and t-value was found 1.24 which is less than table value (2.048) at 0.05 level

of significance with 28 df. Similarly there is no significant difference in case of Bent knee Sit-ups of football and volleyball players as the obtained mean of football players was found 27.80 SD 8.95; similarly mean of volleyball players was found 29.33, SD 10.99. MD was found 1.53 and t-value was found 0.41 which is less than table value (2.048) at 0.05 level of significance with 28 df.



**Graph 1:** Showing mean scores and SD of muscular endurance (Push-ups and Bent knee Sit-ups) between football and volleyball players

**Speed**

The mean difference and test of significance on Speed of football and volleyball players shown in Table-2. Showing

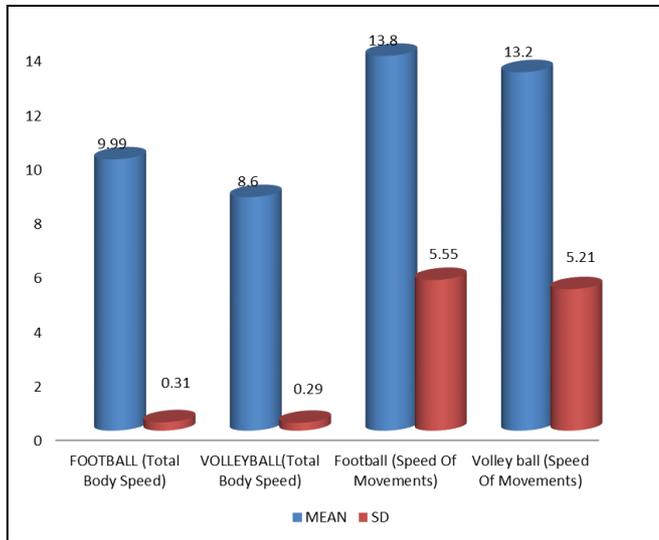
Mean, S.D, M.D, S.E and t-value of Speed (Total Body Speed and Speed of Movement) of football and volleyball players

**Table 2**

Group	variable	Mean	SD	MD	SE	Df	t-value
Football	Total Body Speed	8.99	0.31	.019	0.11	28	1.73 P>0.5
Volleyball	Total Body Speed	8.80	0.29				
Football	Speed of Movement	13.80	5.55	0.60	1.96	28	0.30 P>0.5
Volleyball	Speed of Movement	13.20	5.21				

Table-2 shows the mean, SD, MD and t value of Total Body Speed Speed of Movement of football and volleyball players. The obtained scores shows no significant difference in case of Total Body Speed as the obtained mean of football players was found 8.99 SD 0.31; similarly mean of volleyball players was found 8.60, SD 0.29. MD was found 0.19 and t-value was found 1.73 which is less than table value (2.048) at 0.05 level

of significance with 28 df. Similarly there is no significant difference in case of Speed of Movement of football and volleyball players as the obtained mean of football players was found 13.80 SD 5.55; similarly mean of volleyball players was found 13.20, SD 5.21. MD was found 0.60 and t-value was found 0.30 which is less than table value (2.048) at 0.05 level of significance with 28 df.



**Graph 2:** Showing mean scores and SD of speed (Total Body Speed and Speed of Movement) between football and volleyball players

### Conclusion

Within the limitations of the study and on the basis of the results of the study, the following conclusions may be drawn:

There was significant difference in push-ups of muscular endurance which showed that volleyball players were better than the football players. In case of bent knee sit-ups, there was no significant difference.

There was significant difference in total body speed of speed which showed that football players were better than the volleyball players. In case of speed of movement, there was no significant difference.

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