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Comparison of motor fitness components of volleyball and handball players

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Abstract

The purpose of the study is to compare the motor fitness components of Volleyball and Handball players. Researcher hypothesized that, there might be significant differences in motor fitness components of Volleyball and Handball players. The present study is delimited to the 15 male Volleyball and 15 male Handball players of inter-collegiate level only. The age of the subjects ranged between 18-25 years. The study was delimited to the motor fitness components i. e. by using J.C.R. test. The sources for data, inter-collegiate Volleyball and Handball players, who participated in inter-collegiate tournaments and who appeared in the Sant Gadge Baba Amravati University, Amravati respective team trials. Simple Random Sampling (SRS) method was adopted for the selection of players. For collecting data the researcher administrated J. C. R. test i. e. jumping measured by using standing broad jump for leg strength and recorded in inches, chin-ups measured by using chin-ups for shoulder strength and recorded in numbers, running measured by using 50 meter dash for speed and recorded in seconds. The data were collected on the selected subjects by administering the appropriate tests. The test was successfully administered with the help of assistants and under the supervision of guide. 'T' test was employed to determine the difference of volleyball and handball players for each variable independently. Significant difference observed in standing broad jump ($t=2.763$), 50 meter dash ($t=2.292$) of volleyball and football players but insignificant in chin-ups ($t=0.250$) in tabulated t-value of 2.048 at 0.05 level of confidence of 28 degree of freedom.

Keywords: motor fitness variables, volleyball, handball

Introduction

Motor fitness is regarded as the preparedness for performance with special regard for big muscle activity, is a more general phase of physical fitness. Motor fitness is judged by performance and its common factors are strength, endurance, power, speed, agility, balance, flexibility and stamina. Motor fitness, as a limited phase of physical fitness, would seem to be the aspect that most fitness tests actually measure. It does not assess the factors of physical fitness directly, but does reflect them to a degree. It is the final criterion through which all the other element of physical fitness are seen and measured. One might not know little or nothing about scientific facts of body structure, physiology, functioning of the organs, strength test on the dynamometer or organic efficiency tests. But he could understand on outstanding performance displaying power, speed and endurance. Though, motor ability is the present acquired and innate ability to perform motor skill of a general or fundamental nature. It represents, present or developed status and is subject to change in relation to the amount of practice and training. Motor fitness includes these three physical fitness components plus for additional factors. India is vast country with unique cultural, social, geographical and climatic differences. The motor fitness of National and State level athletes various according to regional variation of the county. The anthropometric also various from one region to another which ultimately affect the physical growth and development. The importance of motor fitness for the proper growth and development of an individual is never questioned. The organic system of a totally fit person function well. Motor fitness permits a greater freedom of body movements and is helpful for the maintenance of working capacity for a longer duration/time. It helps in preventing injuries, increasing coordination of movements and shortening the place for acquiring and perfecting movements. It contributes to the formation of concepts and ideas and development of confidence.

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Statement of the problem

The problem is stated as, Comparison of Motor Fitness Variables of Volleyball and Handball Players.

Purpose of the study

The purpose of the study is to compare the motor fitness variables of Volleyball and Handball players.

Hypothesis

Researcher hypothesized that, there might be significant differences in motor fitness variables of Volleyball and Handball players.

Delimitations

1. The study was delimited to the male students only.
2. The age of the subjects ranged between 18-25 years.
3. The study was also delimited to 15 Volleyball and 15 Handball players of inter-collegiate level.

4. To collect the data J.C.R. test was administrated

Methodology

15 Volleyball and 15 Handball male players were selected as subjects. The subjects selected for the study was from those who represented inter-collegiate tournaments and inter-university trials of SGB Amravati University by using simple random sampling method. For collecting data the researcher administrated J.C.R. test i.e jumping measured by using standing broad jump for leg strength and recorded in inches, chin-ups measured by using chin-ups for shoulder strength and recorded in numbers, running measured by using 50 meter dash for speed and recorded in seconds.

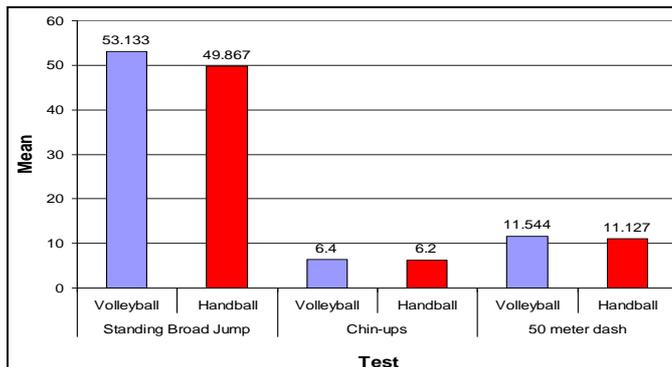
Statistical analysis

To find out the significant difference 't' test was employed on each variable independently. To test the hypothesis, the level of significance was set at 0.05 level of confidence.

Table 1: Summary of mean, standard deviation and t-ratio for the data on motor fitness variables between the means of volleyball and handball players

	Players	Mean	S.D.	Mean Difference	S.E.	't'-ratio
Standing Broad Jump	Volleyball	53.133	3.335	3.267	1.182	2.763*
	Handball	49.867	3.137			
Chin-ups	Volleyball	6.400	1.957	0.200	0.799	0.250@
	Handball	6.200	2.396			
50 meter dash	Volleyball	11.544	0.508	0.417	0.182	2.292*
	Handball	11.127	0.487			

Significant at 0.05 level Tabulated $t_{0.05 (28)} = 2.04$ @ Not significant at 0.05 level



Graph 1: Means of motor fitness variables between volleyball and handball players

Findings

- Volleyball players having good leg strength than the handball players
- Handball players having good speed than the volleyball players
- The chin-ups i.e. shoulder strength of both the players are same

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