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Comparison of physical fitness between handball and volleyball players of Jammu and Kashmir

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Abstract

The purpose of the present study was to compare the physical fitness of handball and volleyball male players. Total forty subjects were randomly selected (20 from handball and 20 from volleyball) from various schools of Jammu District of Jammu and Kashmir was taken as a sample. The data was collected during interschool competition organized by department of youth services and sports, Jammu and Kashmir. The age of subject ranged between 15-18 years. Physical fitness tests were used to measure the selected physical fitness variables of players. All the subjects were informed about aim and methodology of the study and they volunteered to participate in this study. 'T' test independent was used to analysis the data, level of confidence was set at 0.05 level. Study concluded that insignificant difference found between the means of selected physical fitness variables such as speed, agility, and flexibility and significant differences found in the variable of endurance between handball and volleyball players.

Keywords: Physical fitness, speed, agility, endurance and flexibility

Introduction

Physical fitness is the most important thing in life. This is true whether we want it to be or not. As humanity has developed throughout history, physical fitness has become less critical to our daily existence, but no less important to our lives. Our physical fitness, more than any other thing we possess, still determines the quality and the quantity of our time here in these bodies. Whereas previously our physical fitness determined how much food we ate and how warm and dry we stayed, it now merely determines how well we function in these new surroundings we have crafted for ourselves as our culture has accumulated. But we are still animals – our physical existence is, in the final analysis, the only one that actually matters. A fragile man is not as happy as that same man would be if he were strong. This reality is offensive to some people who would like the intellectual or spiritual to take precedence. Physical fitness plays a very important role in normal individual as well as in an individual who is there participating in some kind of sports events^[2] Volleyball is an Olympic sport which is played at all around in the world. This game made of movements like sprinting for short distance, change of direction, jumping, diving and hitting. Different people have different view regarding physical fitness. For a common man to have a good physique is a symbol of physical fitness. According to doctor, the proper functioning of physiological systems is physical fitness. In fact, physical fitness is a simple term with a wide meaning. For physical educationist Physical fitness means the capacity to do the routine work without any fatigue or exertion and after doing his work he has also energy to do some more work and the recovery is quicker. Physical fitness is more than the possession of strength and endurance. It means to maintain good physical fitness with the capacity to do ones everyday task to engage in recreational pursuits and to meet emergencies, when they arise. In fact, physical fitness is possessed by the individual with enthusiast with vigorous^[8]. Extensive evidence signifies that physical fitness levels in children and adolescents are indicators of their standard of living and their cardio-metabolic health status and are the predictors of the potential threat of chronic ailments such as obesity, cardio-metabolic problems, physiological and mental health^[3]. The physical fitness was the sum of five motor abilities namely; speed, strength, endurance, flexibility and co-ordination abilities and their complex form like strength, endurance, maximum strength, explosive strength, maximum speed, and agility that are necessary for motor action^[1].

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Methodology

Selection of Subjects

Total forty male subjects were randomly selected (20 Handball players and 20 Volleyball players) from various schools of Jammu District of Jammu and Kashmir were taken as a sample. The age of subjects were ranged between 15-18 years.

Selection of Variables

For the present study the investigator selected physical fitness variables.

- Speed
- Agility
- Endurance
- Flexibility

Criterion measures

The criterion measures were used to collect the data and record in a correct unit for each test item.

- Speed was assessed by 50 meter dash run test and scores were recorded in second.
- Agility was assessed by 10x4 meter shuttle run and scores were recorded in second.
- Endurance was assessed by 600 yards run/walk test and score were recorded in minutes.
- Flexibility was assessed by sit-and-reach test and score were recorded in centimeters.

Results

Table 1: Show the results of comparison of selected physical fitness variables of school level handball and volleyball players

Variables	Handball players(N=20)		Volleyball players(N=20)		t-value
	Mean	S.D.	Mean	S.D.	
Speed	7.58	.20	7.68	.40	1.00
Agility	13.88	.52	14.85	.80	4.54
Endurance	2.55	.26	2.30	.24	4.42
Flexibility	12.23	.32	12.30	.20	0.82

**Insignificant at 0.05 level, t.05 (df 38, 2.02)

Table-1 shows the results of selected physical fitness variables of school level handball and volleyball players. Analysis of data revealed that group differences for the variables of speed 't' value 1.00 and flexibility 't' value 0.82 are not considered statistically significant whereas, there are statistically significant group differences found for the variables of agility 't' value 4.54 and flexibility 't' value 0.82. It means those handball players are better than volleyball players in the components of agility and endurance.

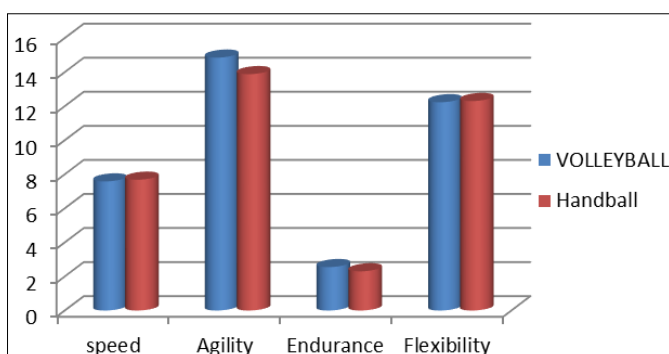


Fig 1: Show mean of handball and volleyball players

Conclusion

The investigator analyzed the collected data as per the purpose of study. The statistical analysis of physical fitness components showed that in the parameters such as speed, Flexibility, there were no significant difference between volleyball and handball players of Jammu district and there were significant difference in the component of agility and endurance between volleyball and handball players. The study also revealed that the handball players are better in agility and endurance as compare to volleyball players. Similar results were founded in the study carried out by Sravan Kumar (2016) [7] and Kumar, V. (2016) [8] Comparison of Physical Fitness between Handball and Volleyball male Players of Uttar Pradesh state. The differences in physical fitness parameters between volleyball and handball players may be due to difference in skills, nature of game, and movement's pattern etc.

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