



A COMPARATIVE STUDY OF PHYSICAL FITNESS OF HAND BALL AND VOLLEY BALL PLAYERS AT THE INTER COLLEGIATE LEVEL OF NAGPUR UNIVERSITY

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Abstract: The purpose of this present study as stated A Comparative study of Physical fitness of Hand Ball and Volley Ball players at the Inter Collegiate level of Nagpur University. Twenty players from different colleges were selected each from the handball and volleyball game as the subjects for the research who participated in the intercollegiate tournaments of Nagpur University. The subjects were in the peak performance at the time, when the test was conducted as the intercollegiate tournaments of handball and volleyball game were in progress. The average age of subjects was ranging from 18 to 25 years. The selected players were of intercollegiate level of Nagpur University, prior to the administering the test, the subjects were familiarized with the purpose of the study. There were two groups of 20 handball and 20 volleyball male players. AAHPERD youth fitness tests was taken for this study. The mean difference of these groups were tested for significance by 't' test and level of significance was set at 0.05 level.

Introduction:

“Physical Fitness is the ability to carry out daily tasks with vigour and alertness, without undue fatigue and with ample energy to engage in leisure pursuits and to meet emergency situations.”

The components of both health related and performance related Physical fitness is similar, for example, cardiovascular function, body composition, strength and flexibility. However, the degree of development to each varies with the two types of Physical Fitness. Performance related fitness is often associated with sport.

Methodology

The purpose of this present study as stated earlier was to list down the order and rank of components of physical fitness and to find out the most influential component in handball and volleyball. With a view to find out the physical fitness of players who participated in the intercollegiate tournaments of Nagpur University. The researcher followed the following procedure and collected the necessary data through experimental research. Procedure for administering the tests and statistical techniques for analyzing the data collected. This is stated as :-"A comparative study of

physical fitness of handball and volleyball players at the inter-collegiate level of Nagpur University". Agility, Speed, Arm/Shoulder muscular endurance, Explosive power of leg extensor muscles, Abdominal muscular endurance, Cardiovascular respiratory endurance. Twenty players from different colleges were selected each from the handball and volleyball game as the subjects for the research who participated in the intercollegiate tournaments of Nagpur University. when the test was conducted as the intercollegiate tournaments of handball and volleyball game were in progress. The average age of subjects was ranging from 18 to 25 years. There were two groups of 20 handball and 20 volleyball male players. AAHPERD youth fitness tests was taken for this study. In order to measure fitness variables such as agility, speed, explosive power of leg extensor muscles, arm/shoulder muscular endurance, abdominal muscular endurance and circulatory respiratory endurance of both the groups were identified.

Criterion measures

The criterion measures chosen for testing the hypothesis were AAHPERD Youth Fitness Test. AAHPERD youth fitness test

was administered to the subjects on the Nagpur University Play Ground, Nagpur.

Agility, Speed, Explosive power of leg extensor Muscles, Abdominal/Hips Muscular endurance .Arm/Shoulder Muscular endurance Circulatory, Respiratory Endurance.

This was a comparative study of two groups of team sports player for finding out difference in criterion measures. The mean difference of these groups were tested for significance by 't' test and level of significance was set at 0.05 level. The reliability of test was established by test retest method, For this purpose, ten subjects were randomly selected from each group and retest method was employed. The selected subjects were administered for shuttle run, fifty yard dash, pull ups, sit ups, standing broad jump and six hundred yard run walk. The retest was administered after the gap of one day on fifty yard dash,

shuttle run and six hundred yard run walk. The co-efficient V was computed by using the product movement method. The V value is given below.

TABLE – 1 Reliability of test score for testing speed, agility, circulatory and respiratory endurance,

		Co-efficient of cor relation'r'	
Sr.No.	Test Item	Handball	Volley ball
1.	Speed (50 yard dash)	0.9976784	0.95461 12
2.	Agility (shuttle run)	0.9469157	0.9652183
3.	Endurance (600 yard run)	0.9942734	0.9653251

For testing the difference between the means of two group, the level of confidence was set at 0.05

TABLE – 2 Group mean on shuttle run, fifty yard dash, standing board jump, sit ups, pull ups and six hundred yard run walk for hand ball and volley ball players.

Sr. No.	Test Items	Hand ball Mean	Volley ball Mean	Mean Difference	Standard Error	't'ratio
1	Shuttle Run	10.380	10.653	0.273	0.445	0.60
2	50 yard dash	6.738	6.091	0.153	0.321	0.476
3	Standing Broad Jump	6.558	6.983	0.425	0.469	0.906
4.	Sit ups	32.100	25.65	6.45	1.378	4.680*
5.	Pull ups	5.950	6.050	0.10	0.564	0.177
6.	600 yard	2.014	2.197	0.183	0.049	3.734*

The weather conditions were same on all the days. Two readings of shuttle run, three readings of standing broad jump, pull ups, sit ups, 50 yard dash and 600 yards run walk were taken. The data collected on all the test were statistically analyzed by using Y ratio at 0.05 level of confidence. By using *t' ratio, it was found statistically that there was significant difference in the abdominal muscular endurance and cardio respiratory endurance of volley ball and hand ball players.

Hand ball players were found superior than volley ball players and by using the *t'

ratio, it was found statistically that there was no significant difference in Physical fitness components such as agility, explosive leg power, arm / shoulder muscular endurance and speed of the hand ball and volley ball male players at 0.05 level of confidence.

Conclusions:

That there was significant difference in the circulatory respiratory endurance and abdominal muscular endurance of hand ball and volley ball players. Hand ball players were found statistically superior than that of

volley ball players. That there was no significant difference found statistically in the other selected Physical fitness variables such as agility, explosive leg power, arm / shoulder muscular endurance and speed between the hand ball and volley ball male players. Thus the hypothesis is rejected.

Recommendations:

A similar study can be undertaken in other games and sports also.

A similar study can be undertaken at higher level like state and national level by taking large number of subjects who belong to different

games. Also conducted on the female players of these games.

References:

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