



A COMPARATIVE STUDY OF HANDBALL AND FOOTBALL PLAYERS OF HARYANA IN RELATION TO THEIR OF PHYSICAL FITNESS

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ABSTRACT

The research paper is an effort to find out the difference in physical fitness level between Handball and football players. One hundred college athletes who have competed at the state level completions in handball and football were chosen on the basis of random sampling method. Mean, Standard Deviation and 't' test were used to analyse the data. Standardized metrics from the AAPHER Physical Fitness Test were used to collect the data. Findings of the study revealed that : (i) It was found that there is a significant difference between Handball and football players regarding 50-yard dash. It may therefore be concluded that Handball players took more time in 50-yard dash than football players; (ii) no significant difference between Handball and football players regarding standing broad jump; (iii) no significant difference in Pull-Ups between Handball and football players; (iv) no significant difference in Shuttle-run Handball and football players; (v) no significant difference in Sit-ups of Handball and football players; and (vi) there is a significant difference in six hundred yard run Handball and football players. Handball players took more time in six hundred yard run than football players.

INTRODUCTION

From ancient times forward, maintaining a physical body fitness has been an important goal for humans. It really was a case of "the strongest survive." Since the dawn of our species, man has occupied a variety of nomadic, hunter-gatherer, and agricultural roles. Whether he's walking, running, leaping, or throwing, his body can do everything. Individual's levels of physical fitness have dropped as a consequence of physical-day factors including industrialization, mechanisation, and motorization, which have drastically decreased the time people spend engaging in physically active pursuits. Because of this, it is crucial to increase people's physical fitness using a variety of scientific training methods, including weight training, circuit training, interval training, fartlek training, etc., and real involvement in games and sports. Taking part in sports is a great way to improve many aspects of your life, including your sense of who you are, how you connect with others, how much fun you have, how healthy you are, and how much you learn about yourself. When sports are recognised as an essential element of the culture and tradition of every community and every country, it encourages participation, integration, and responsibility in society and helps to society's progress.

The term "physical fitness" refers to a person's level of strength, speed, endurance, flexibility, and cooperation in their use of their five limbs. Fundamentally, all human motor activities depend on the full development of these five muter capacities. Therefore, these sports are crucial to



success in any sporting endeavour. One of the primary goals of sports training is the development and maintenance of physical fitness.

Strength, speed, power, agility, and endurance are all factors in an athlete's success. In addition to these purely material factors, physiological and physical factors also contribute significantly to the success of the performance. The most effective exercise and cutting-edge training techniques lead to stellar results. The current research aimed to differentiate between individual game and team game players on specified physical fitness variables.

Components of Physical Fitness

Unlike fitness, which refers to the capacity to satisfy the demands of a specific physical activity, health refers to a condition of whole mental, physical, and social well-being. There are four primary facets of physical fitness: strength, speed, stamina, and flexibility. But the concept of fitness as established by exercise experts includes these nine elements:

In order to perform at a high level for extended periods of time, cardiovascular endurance is required. Jogging, cycling, and swimming are just a few examples. The Cooper Run is the gold standard for testing endurance and heart health.

Muscle strength refers to the amount of force that can be generated by a muscle. The bench press, the leg press, and the bicep curl are all good examples. When evaluating upper-body strength, the standard test of choice is the push-up.

Muscular endurance refers to the body's musculature's capacity for repeated use without fatigue. Exercise bikes, steppers, and ellipticals are a few examples. The sit-up is a common endurance test because of its emphasis on using core muscles.

Flexibility is the capacity to use the full range of motion afforded to each joint. Muscle stretching and the capacity to do functional exercises like the lunge are two such examples. Flexibility is often evaluated using the sit and reach test.

The ratio of fat to lean muscle, bone, and organ mass is called a person's "body composition." This may be gauged using methods including underwater weighing, Skinfold measurements, and bioelectrical impedance. The "gold standard" for body fat measurement is underwater weighing, however due to the size and cost of the equipment required, this method is only available in a few number of locations.

Of all the five elements of fitness cardiac respiratory qualities are the most important to develop as they enhance all the other components of the conditioning equation.

REVIEW OF LITERATURE

When compared to handball players, Singh (2011) discovered that football players generally had higher levels of physical fitness. This research reveals that compared to handball players, football players benefit more from regular physical training. When compared to males from other districts, those in the Mysore area were shown to have higher levels of physical fitness in a number of different categories by Suresh and Prakash (2011). The boys in the Hassan area were second only to the lads from the Mysore district when it came to their level of physical fitness. After the districts of Mysore and Hassan, the lads from Mandya did the best in terms of physical fitness. A comparison of fitness levels amongst the four districts revealed that boys from



Chamarajanagar were the least fit. Among footballers and Handball players, Ghosh (2013) reported that the t-test was significant at the 0.05 level of confidence in the 50 yard sprint, 600 metre run and walk, standing wide jump, shuttle run, and medicine ball through, but no significant difference was identified in the sit-up. Pull-ups, sit-ups, the 50-meter sprint, and the 600-meter run did not change significantly between the two groups, as shown by Kohli, Singh, Singh, and Sharma (2014); however, the shuttle run did differ significantly. Results from a study by Karthi and Krishnakanthan (2014) indicate that Handball players had superior speed when compared to their counterparts in hockey and football. Comparing football players to Handball and hockey players, football players had greater cardiorespiratory endurance. According to Malik, Singh, and Rajesh (2015), while comparing football players from different districts (Rohtak vs. Rewari, Bhiwani, and Mohindergarh), the players from Rohtak scored higher on almost all measures of physical fitness. According to research by Rani and Kumar (2016) Girls who play Kho-Kho in Haryana are faster than girls who play Kabaddi in Haryana. In comparison to Haryana's female Kabaddi players, Kho-Kho players were shown to have more strength. Girls who played Kabaddi in Haryana were more nimble than their Kho-Kho counterparts. Malik & Malik (2018) found that body contact athletes had higher levels of cardio muscular endurance, muscular strength, and muscular endurance than non-body contact athletes. However, non-body contact athletes surpassed their body contact counterparts in terms of explosive strength and agility. Kumar (2018) found that among male volleyball players in Haryana and Delhi, there was a significant association between agility and speed but not between agility and the other components of physical fitness (explosive strength, endurance, and flexibility). Irshad and Pathak (2021) observed that the agility of football players and handball players is comparable. Both soccer and field hockey need players to have excellent flexibility, endurance, speed, and coordination since they are played on a field.

SIGNIFICANCE OF STUDY

- One possible benefit of the research is that it will educate the broader playing population by providing useful information about the physical fitness levels of handball and football players in different states.
- The results of this research will contribute to the expanding body of information on physical fitness, a field that has important implications for the training of sports and the development of coaches.
- Third, the research may help physical education instructors and coaches better prepare athletes and players for a variety of sports.

STATEMENT OF THE PROBLEM:

A STUDY OF PHYSICAL FITNESS VARIABLES BETWEEN HANDBALL AND FOOTBALL PLAYERS.

OBJECTIVES OF THE STUDY:

1. To find out the difference in 50 Yard Dash, Standing Broad Jump, Pulls-up, Shuttle, Sit-ups and 600 Yard dash/walk of Handball and football players of Punjab.

HYPOTHESIS:



1. There is no significant difference in 50 Yard Dash, Standing Broad Jump, Pulls-up, Shuttle, Sit-ups and 600 Yard dash/walk of Handball and football players of Punjab.

SAMPLE

One hundred Haryana sportspersons who have competed for their colleges at the state level in handball or football competitions were chosen at random to participate in the research.

TOOL USED

The Criterion measures from AAPHER Physical fitness test have been chosen for this study.

- 50 yard dash
- Shuttle run
- Sit ups
- Pull ups
- Standing broad jump
- 600 yard run/walk.

STATISTICAL TECHNIQUES

Mean, Standard deviation and 't' Test were used to analyse the data,

ANALYSIS OF DATA

The present study was conducted with the aim of examining the level of physical fitness Handball and football players of Haryana. The data of 150 (75 Handball and 75 football) players was analysed by calculating 't' test besides the descriptive statistics (mean and standard deviation).

Table 1 : Mean, Standard Deviation and 't' value for means scores of 50 yard dash of Handball and football players

Sr. No.	Variable	Group	N	Mean Score	S.D.'s	t-value
1.	50 yard dash	Handball players	50	6.85	0.41	3.141**
		Football players	50	6.41	0.43	
2	Standing Broad Jump	Handball Players	50	2.22	0.14	1.855 ^{NS}
		Football players	50	2.25	0.12	
3	Pull-Ups	Handball Players	50	12.33	1.62	0.912 ^{NS}
		Football players	50	11.88	2.53	
4	Shuttle-run	Handball Players	50	11.32	2.17	1.216 ^{NS}
		Football players	50	11.17	2.03	
5	Sit-ups	Handball Players	50	39.32	4.12	0.716 ^{NS}
		Football players	50	38.71	4.06	
6	Six Hundred Yard Run	Handball Players	50	1.41	0.18	2.784**
		Football players	50	1.22	0.15	

** Significant at 0.01 level; NS = Not significant

Tabulated Value : 1.96 at 0.05 level

2.58 at 0.01 level



The data in table reveals that the t-value (3.141) for the mean scores of 50 yard dash of Handball and football players is significant at 0.01 level of significance. So it was found that the mean scores of 50-yard dash of Handball players (6.85) is more than football players (6.41). It may therefore be concluded that Handball players took more time in 50-yard dash than football players. Hence, it be concluded that football players were far better than Handball players in 50 Yard dash.

The table further show that t-value (1.855) for the mean scores of Standing Broad Jump of Handball and football players is not significant. So it was found there is no significant difference in standing broad jump between handball and football players.

The next party of the table revealed that t-value (0.912) for the mean scores of pulls-up of Handball and football players showed that there is no significant difference in Pulls-up of Handball and football players.

The next section of table showed that t-value (1.216) for the mean scores of shuttle run of Handball and football players is not significant. So it was concluded that there is no significant difference in Pulls-up of Handball and football players.

The next part of the table revealed that t-value (1.216) for the mean scores of sit-ups of Handball and football players is not significant at any level of significance. So it was found that the mean score of sit-ups of Handball players (38.28) is slight less than football players (38.62), but do not differ significantly.

The last part of the table revealed that t-value (2.784) for the mean scores of six hundred yard run of Handball and football players is significant at 0.01 level of significance. So it was found that the mean scores of six hundred yard run of Handball players (1.41) is more than football players (1.22). It may therefore be concluded that Handball players took more time in six hundred yard run than football players. Hence, it be concluded that football players were far better than Handball players in six hundred yard dash.

FINDINGS

1. It was found that there is a significant difference between Handball and football players regarding 50-yard dash. It may therefore be concluded that Handball players took more time in 50-yard dash than football players.
2. It was found that there is no significant difference between Handball and football players regarding standing broad jump.
3. It was found that there is no significant difference in Pull-Ups between Handball and football players.
4. It was found that there is no significant difference in Shuttle-run Handball and football players.
5. It was found that there is no significant difference in Sit-ups of Handball and football players.



6. It was found that there is a significant difference in six hundred yard run Handball and football players. Handball players took more time in six hundred yard run than football players.

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