

Comparative Study of Motor Fitness Components between Handball and Basketball Players

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Abstract

“Fitness is that state which characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. The study finds the depth perception between basketball & handball players and difference of arms strength & agility between basketball & handball players. This study provides the guide lines to the coaches, physical education teachers, trainers, players and sports administers to understand the role of motor fitness components in sports. It was observed that there was insignificant difference between basketball and handball players of school level at their respective schools for their Psychological Variable i.e. Depth Perception. There was insignificant difference between handball and basketball players of school level at their respective schools for their motor Fitness Variable i.e. Arm Strength and insignificant differences were observed between handball and basketball players of school level at their respective schools for their Physical Fitness Variable i.e. Agility.

Introduction:

In the present stream of life development and progress are two dynamic process in our society. Every individual in the society is engaged in surpassing others, to achieve higher standards of life. Scientific developments in the present century have added much more to this phenomenon of rapid development. After the start of modern Olympic Games a tremendous development has taken place in this discipline. In the present ere peoples interest towards games, sports & physical activity is increased & for that fitness is the basic need and base for the excellence in performance. Physiological fitness is specific to the activity. It may be said that the dominance of different fitness factor varies from game to game and from player to player, but does not include all essentials. So many things are required for high performance, in addition to physical and motor fitness. No doubt, a high degree of motor fitness is necessary for success in all games and sports, but the degree and order of its components may vary according to the nature and games and sports.

Tools

The subjects of the study were selected by simple random sampling method from the state level players of Nagpur. The total subject of the study were 40 i.e. 20 handball & 20 Basketball players. The criterion measures of selected motor fitness components of AAHPER test i.e. Shuttle Run, 50 yards dash, Standing broad jump, Modified Sit and reach test was adopted for the study. The test in all parameters were administered and subjects were made aware of the prescribed test. Subjects were tested before, during & after the game.

Analysis of data

A statistical analysis of data pertaining to sources of selected motor fitness components agility, speed, strength & Flexibility have been described. To compare motor fitness components between both the game players ‘t’ test was used and comparison were shown with the help of graphs and tables.

Different types of descriptive statistical such as mean and standard deviation was computed to describe each variable statistically. The level of significance was set of at 0.05.

TABLE 1
Shuttle Run (Agility) of Handball and Basketball Players

Group	Mean	S.D	M.D	‘t’
Handball	13.06	1.18	1.23	3.41
Basketball	11.83	1.21		

Table 1 shows that the Mean values with regard to Handball player 13.06 & 11.83 whereas in case of Basketball players respectively. Thus the difference in mean between these groups was 1.23. the obtained ‘t’ value of 3.41 was higher than the tabulated value 2.025 at 0.05 level of confidence for 38 degree of freedom.

Table 2
50- Yard dash (Speed) of Handball & Basketball Players

Group	Mean	S.D	M.D	‘t’
Handball	9.15	0.76	2.52	14.82
Basketball	6.63	0.52		

Table 2 shows that the Mean values with regard to Handball player 9.15 & 6.63 whereas in case of Basketball players respectively. Thus the difference in mean between these groups was 2.52. the obtained ‘t’ value of 14.82 was higher than the tabulated value 2.025 at 0.05 level of confidence for 38 degree of freedom.

Table 3
Standing Broad Jump(Srength) of Handball & Basketball Players

Group	Mean	S.D	M.D	‘t’
Handball	166.8	13.05	10.15	2.67
Basketball	176.95	10.87		

Table 3 shows that the Mean values with regard to Handball player 166.8 & 176.95 whereas in case of Basketball players respectively. Thus the difference in mean between this group was 10.15 the obtained ‘t’ value of 2.67 was higher than the tabulated value 2.025 at 0.05 level of confidence for 38 degree of freedom.

Table 4
Modified Sit and Reach(Flexibility) of Handball & Basketball Players

Group	Mean	S.D	M.D	‘t’
Handball	6.86	1.19		

			0.55	1.37
Basketball	7.41	1.39		

Table 3 shows that the Mean values with regard to Handball player 6.86 & 7.41 whereas in case of Basketball players respectively. Thus the difference in mean between this group was 0.55 the obtained ‘t’ value of 1.37 was lower than the tabulated value 2.025 at 0.05 level of confidence for 38 degree of freedom.

Discussion & Findings

1. Agility

According to table no-1 the Mean and SD of Handball players were 13.06 & 1.18 respectively & the mean & SD of Basketball players were 11.83 and 1.21 respectively. The ‘t’ ratio of agility was 3.41 and the degree of freedom was 38 at the significant level 0.05 and the tabulated value was 2.025. The conclusion was found that that there was significant difference of agility among the Handball and Basketball players.

2. Speed

According to table no-2 the Mean and SD of Handball players were 9.15 & 0.76 respectively & the mean & SD of Basketball players were 6.63 and 0.52 respectively. The ‘t’ ratio of Speed was 14.82 and the degree of freedom was 38 at the significant level 0.05 and the tabulated value was 2.025. The conclusion was found that that there was significant difference of speed among the Handball and Basketball players.

3. Strength

According to table no-3 the Mean and SD of Handball players were 166.8 & 13.05 respectively & the mean & SD of Basketball players were 176.95 and 10.87 respectively. The ‘t’ ratio of Strength was 2.67 and the degree of freedom was 38 at the significant level 0.05 and the tabulated value was 2.025. The conclusion was found that that there was significant difference of Strength among the Handball and Basketball players.

4. Flexibility

According to table no-4 the Mean and SD of Handball players were 6.86 & 1.19 respectively & the mean & SD of Basketball players were 7.41 and 1.39 respectively.

The ‘t’ ratio of Strength was 1.37 and the degree of freedom was 38 at the significant level 0.05 and the tabulated value was 2.025. The conclusion was found that that there was significant difference of Flexibility among the Handball and Basketball players

Discussion of Hypotheses

It was hypothesized that there may be significant difference among the Motor Fitness Components between Handball and Basketball State Level Players. It was found that there is a significant difference among the Motor Fitness Components between Handball and Basketball players. Thus in this case hypothesis is accepted.

CONCLUSION:

1. In selecting Motor Fitness components significant difference is found between Handball and Basketball players.
2. In agility performance the Basketball players showed better performance than Handball Players.
3. In Speed performance Basketball players showed better performance than Handball Players.
4. In Flexibility Basketball players showed better performance than Handball Players.
5. In Strength Basketball players showed better performance than Handball Players.

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