

**Comparison of Selected Physical Fitness Variables of School Level Handball and Basketball Players**

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**Abstract**

*The study was design to investigate the comparative analysis of selected fitness variable of handball and basketball players. For the purpose of this study thirty school boys 14 to 16 years from private sectors of Allahabad district were selected as participant. All participants were assessed and compared on agility, abdominal strength endurance and speed with the help of shuttle run, sit- ups and 50yrds. dash test respectively. t-test was used to find the significant difference at the .05 level. The findings of the study revealed that there is significant difference in speed and abdominal strength between the handball and basketball players. Gaurav and Singh (2011) study also concluded and found significant difference between the means of selected physical fitness variables such as speed, Coordinative ability and endurance between school level basketball and football players.*

**Key** **word**- Speed, abdominal strength, Shuttle run

**Introduction:**

Physical fitness is ability to dispose routine work efficiently and to meet unforeseen emergence very effectively. Physical fitness is the capacity to carry out reasonably well various forms of physical activities without being unduly tired and includes qualities important to the individual’s health and well-being. Physical fitness of a player depends on the nature of his game and also external conditions. There are a number of fitness elements that need to be developed such as speed, endurance, agility and strength to correct and maintenance of body weight. The general definition of physical fitness is “a set of attributes that people have or achieve relating to their ability to perform physical activity” (U.S. Department of Health and Human Services , 1996). Agility can be improved with agility training drills but also by improving the specific individual fitness elements of speed, balance, power and co-ordination ( Benetti, Schneider, & Meyer, 2005) . Exercise is an important key for a total fitness, regular exercise is necessary to develop and maintain an optimal health. The origin of basketball can be found in every corner of geography and history. In England basketball really began to take step. It all started England. The plays of basketball need highest level of cardio respiratory endurance. Physical and Physiological characteristics that have been reported as essential for basketball players are aerobic fitness, muscle strength, high level of speed, explosive jumping power and agility ( Arnason A. et.al. 2004). The purpose of study was to find out basketball and handball players of agility, abdominal strength endurance and speed.

**Methodology:**

To achieve the purpose 15 basketball players and 15 handball players were selected from various convent and public schools of Allahabad city.

**Selection of participants:**

The boys handball and basketball players age group of 14 to 16 years of Allahabad district were selected as participant for this study. The participants were selected by simple random method.

**Selection of variable:**

The following variables and test were selected for the study.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Test items** | **Criterion measures** |
| Agility | Shuttle run | Score recorded nearest 1/10th of seconds |
| Abdominal strength endurance | Sit-up | Count 1min sit-ups |
| Speed | 50m. yards dash | Score recorded nearest 1/10th of seconds |

**Administration of test :**

The test was administrated at the sports complex of APS public school The data was collected for each variable by administrating their respective test.

**Statistical technique used for analysis of data:**

To compare the selected physical fitness component of boys handball and basketball players t-test was applied . The criterion for statistical significance was set at 0.05level of confidence.

**Result and analysis of data:**

The findings of the study of each variable are given below:-

Mean and slandered deviation values on score of agility and the t ratio computed to compare the handball and basketball players are given below

Table 1

Mean, Standard Deviation and ‘t’ value for means scores of agility of Handball and basketball players

| Agility | N | Mean | Std. Deviation | Mean difference | t-ratio |
| --- | --- | --- | --- | --- | --- |
| Handball players | 15 | 12.81 | 2.02 | .11 | 0.55 |
| Basketball players | 15 | 12.70 | 2.57 |  |  |

It is evident from table 1 that mean and standered deviation score of handball and basketball players in agility were 12.81 and 12.70 respectively. The mean differences between the both groups of calculated t value .550 is less than the tabulated value 2.048. This indicated that there is no difference in the between the agility of handball and basketball players.

Table 2

Mean, Standard Deviation and ‘t’ value for means scores of abdominal strength endurance of Handball and basketball players

| Strength Endurance | N | Mean | Std. Deviation | Mean difference | t-ratio |
| --- | --- | --- | --- | --- | --- |
| Handball players | 15 | 49.50 | 9.10 | 2.50 | .761 |
| Basketball players | 15 | 47.00 | 8.5 |  |  |

It is evident from tables 2 that mean and slandered deviation score of handball and basketball players in strength endurance were 49.5 and 47 respectively. The calculated t value .776 is less than the tabulated value 2.048. This indicated that there is no difference in the between the abdominal Strength Endurance of handball and basketball players.

| Table3  Mean, Standard Deviation and ‘t’ value for means scores of speed of Handball and basketball players | | | | |  |
| --- | --- | --- | --- | --- | --- |
| Speed | N | Mean | Std. Deviation | Mean difference | t-ratio |
| Handball players | 15 | 24.06 | 2.71 | 8.2 | 2.20 |
| Basketball players | 15 | 15.86 | 3.18 |  |  |

It is evident from table 3 that means and slandered deviation score of handball and basketball players in speed were 24.06 and 15.86 respectively. The obtained value is greater than the tabulated value 2.04. This indicated that there is difference between the speed of handball and basketball players.

**Discussion and conclusion:**

Findings of the present study pertaining to the agility and abdominal Strength Endurance were found to be similar. There is no difference between the handball and basketball players in relation to the agility and abdominal Strength Endurance ability of junior level players. In related to the speed both handball and basketball players were found difference and handball players were found more efficient then the basketball players. Results were found that junior handball players were more efficient in speed ability. The above results conformity with that Jakovlijevic (2011), Harrison AJ (2009) and Castagna (2008).

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