



**A COMPARATIVE STUDY ON SELECTED PHYSICAL FITNESS COMPONENTS  
BETWEEN KABADDI AND KHO-KHO PLAYERS**

Manish Kumar<sup>1</sup>

**Affiliation:**

<sup>1</sup> Assistant Professor, Indra Gandhi University, Meerpur Rewari Mobile- 9215543002  
manishbadhwar1985@gmail.com

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**ABSTRACT**

The present study has been designed to investigate the difference of selected physical fitness components between Kabaddi and Kho-Kho players. For accomplish the study total 100 players (50 of Kabaddi & 50 of Kho-Kho) of both games were selected through random sampling as subjects of this study. The age of the sample were ranged from 18 to 25. Body mass index (BMI) for obesity, 40 meter sprint for speed, standing broad jump for strength and sit and reach test for flexibility were used as criterion measure. SPSS version 17 was used to apply all statistical terms and t test was applied to compare the results. The level of significance was set at 0.05. Results of the study revealed that the significant difference found between Kabaddi and Kho-Kho players in there body mass index. It was also evident that Kho-Kho players have more speed than Kabaddi players. But in the strength, the mean of Kabaddi players was high than the Kho-Kho players. Kho-Kho players have more flexibility than the Kabaddi players.

**Key words:** Physical fitness, speed, strength, flexibility

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## 1. INTRODUCTION

Today's lifestyles have changed the average Indian into increasingly sedentary existence. Humans, however, are designed and built for movement. Physiologically, we have not adapted well to this active lifestyle. In fact, during what appeared to be a boom in fitness in the 1970s and 1980s, less than 20% of American adults exercised levels that could increase or maintain their aerobic capacity and strength. However, research has clearly established that, for almost everything, an active lifestyle is important for optimum health.

Sport plays a vital and important role for the social and cultural benefit of each individual. In the last decades sports have gained great popularity all over the world. The popularity of this sport continues to increase at a rapid pace and this happy trend will continue into the future. The contribution of sport to the general welfare of human society can be capsule in the following points:

- Sport helps in the integral development of the human personality.
- Provide great and healthy means of recreation and relaxation of the mind and the human body.
- are effective for the rehabilitation and social adaptation of the wounded, sick and disabled.
- Provide opportunities for social interaction, promoting peace and understanding between different people, nations, races, religion, etc.
- Perform preventive and curative functions for different diseases and ailments inflicted by the human body and mind.

The year 1990 will be remembered as the decade in which the medical profession formally recognized the fact that physical activity is essential for the health of the body. In other words, it seems rather ironic that it has taken this time for doctors and scientists to come to this conclusion, as Hippocrates (460-377 BC), a prominent physician and sportsman, had firmly supported physical activities and adequate nutrition as essential for Health more than 2,000 years ago. Physical fitness is a general state of health and well-being and, more in particular, the ability to perform sports aspects, professions and daily activities. Physical fitness is usually achieved through proper nutrition, moderate to vigorous exercise, and sufficient rest. Before the industrial revolution, fitness was defined as the ability to carry out the day's activities and without excessive fatigue. However, with automation and lifestyle changes of physical form is now considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases and To deal with emergency situations.

Barrow and Gee (1999) have recognized that physical form is a complex phenomenon that consists of several factors such as speed, strength, flexibility, agility, cardiovascular resistance and so on.

Jenson and Fisher (1999) demonstrated how physical characteristics are considered important parameters for athletes (Sprinter) of such strength, power, speed, agility, coordination, muscle strength, reaction time, cardiovascular respiratory resistance and flexibility. Due to the speed, agility, power, coordination and reaction time are the characteristics of the specific engine. These characteristics are best developed by repeated practice of a series of training courses for which they are needed. Strength, speed, agility, coordination, strength, flexibility contribute to these engine characteristics.

## 2. METHODOLOGY

### 2.1 Selection of the subject

A total 100 players were selected as selected through random sampling technique. Out of the total sample 50 subjects were from Kabaddi and 50 subjects were from Kho-Kho were selected respectively. The age of the sample were ranged from 18 to 25.

### 2.2 Selection of the variable

For the present study, the research scholar has gone through the various literatures to finalize the variables. The selection of the variables was utmost important as the total procedure and administration was dependent upon the nature of selection of variables. The variables are the key direction for the nature of the findings and outcomes from the present study. The experts were also consulted to get appropriate and rational suggestions to finalize the variables. The following variables were selected for the study:

| Sr. No | Test                  | Measure     |
|--------|-----------------------|-------------|
| 1      | Body Mass Index (BMI) | Obesity     |
| 2      | 40 meter Sprint       | Speed       |
| 3      | Standing Broad Jump   | Strength    |
| 4      | Sit and Reach         | Flexibility |

### 2.3 Instrument Reliability

For the purpose of the test all the instruments were used of high standard and reputed companies and were calibrated by the respective companies. The stop watches were used from Casio Company make. All the instruments were calibrated prior to the actual testing procedure with the help of experts and also gone through the several practice trials with Instruments and testing.

### 2.4 Statistical Tool Used

To explore the difference between obtained results't' test was used as statistical tool. SPSS version 17.0 was used to apply all calculation. Mean, standard deviation and standard error of mean was used as descriptive statistics. The level of significance was set at 0.05.

## 3. RESULTS AND DISCUSSION

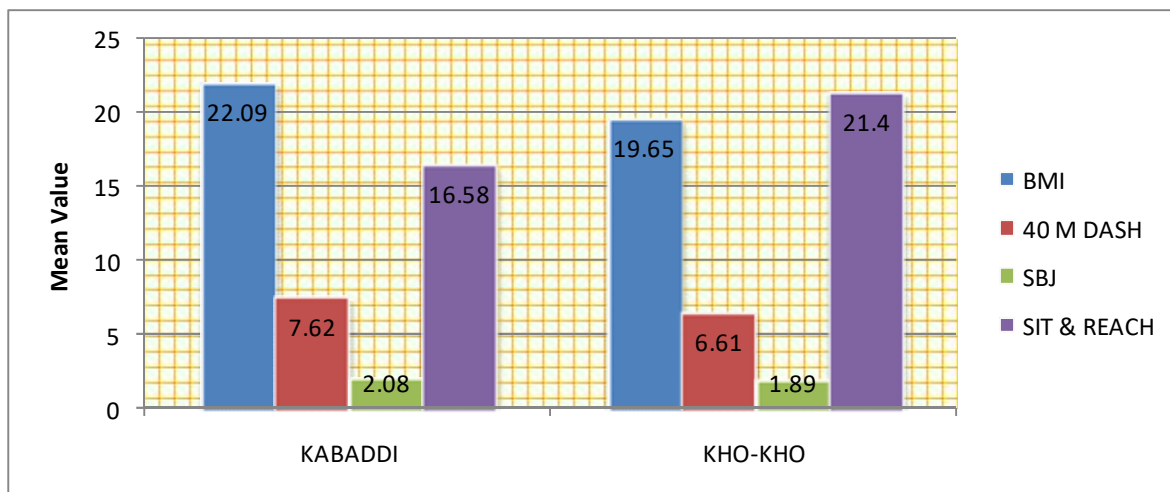
**TABLE. 1**  
**DESCRIPTIVE STATISTICS OF SELECTED VARIABLES FOR**  
**KABADDI AND KHO-KHO PLAYERS**

| S.NO | Variables                    | Mean Kabaddi | Mean Kho-Kho | Mean Difference |
|------|------------------------------|--------------|--------------|-----------------|
| 1    | Body mass index              | 22.09        | 19.65        | 02.44           |
| 2    | 40 M dash (in sec)           | 7.62         | 6.61         | 01.01           |
| 3    | Standing broad jump (in mtr) | 2.08         | 1.89         | 0.19            |
| 4    | Sit & reach test (in cms)    | 16.58        | 21.40        | 04.82           |

N=100 (50 Kabaddi 50 Kho-Kho)

The Table - 3 highlight the mean values of Kabaddi and Kho-Kho players for the selected variables. The Body Mass Index for Kabaddi players depicts 22.09 and Kho-Kho players 19.65 with a mean difference of 02.44. It shows that Kabaddi players have more BMI score or they were fatter than the Kho-Kho players. The mean value for 40 M Dash for

Kabaddi and Kho-Kho players were 7.62 and 6.61 seconds respectively with a difference of 1.01 seconds, signifying that Kho-Kho players were reported faster than the Kabaddi players. The mean value of standing broad jump of Kabaddi players is higher than the Kho-Kho players with the mean difference of 0.19. Kho-Kho players were reported higher flexibility with the mean difference of 04.82 respectively



**Fig.1:** GRAPHICAL PRESENTATION OF COMPARATIVE MEAN VALUE OF SELECTED VARIABLES OF KABADDI AND KHO-KHO PLAYERS

**TABLE.2**  
**SIGNIFICANCE OF MEAN COMPARISON OF SELECTED VARIABLES**

| S.NO. | Variables           | Mean difference | S.D. Difference | 't' Value |
|-------|---------------------|-----------------|-----------------|-----------|
| 1     | Body mass index     | 2.45            | 2.43            | 7.11*     |
| 2     | 40m Dash            | 1.01            | 1.21            | 5.89*     |
| 3     | Standing broad jump | .19             | .311            | 4.24*     |
| 4     | Sit and reach test  | 4.86            | 6.94            | 4.96*     |

\*significance at 0.05 level (df=49) 2.01

The results mentions in table 2 in which it was found that for the body mass index mean and S.D difference is 2.45±2.43 and t value is 7.11 which was highly significant at 0.05 level of confidence as the tabulated value depicted as 2.01 respectively. It may be observed from the results that there is a significant difference between Kabaddi and Kho-Kho players in reference to body mass index component.

A test for measuring speed was selected as 40 M Dash for which the values of paired mean difference were 1.01, paired S.D. difference was 1.21 and 't' value was 5.89 was significant at both 0.05 and 0.01 levels of confidence against the tabulated value 2.01 and 2.68 respectively. It may also be observed that the speed component has significant difference between Kabaddi and Kho-Kho Players.

The paired mean difference for Standing Broad Jump was 0.19, paired S.D. difference was 0.31 and 't' value was 4.24, which was found significant at both 0.05 and 0.01 levels of confidence. The Sit & Reach Test was computed for the paired mean difference

which were 4.86, paired S.D. difference 6.94 and 't' value was 4.96 was significant at both 0.05 and 0.01 levels of confidence against the tabulated value 2.01 and 2.68 respectively. The table no. 2 also evident that there was a significant difference found between Kabaddi and kho-Kho players in their flexibility with t value of 4.96, which was highly significant at 0.05 level of confidence.

#### 4. CONCLUSION

After analysis and basis of the obtained results there is significant difference found between Kabaddi and Kho-Kho players in there body mass index with the t value of 7.11, it means Kabaddi players have higher percentage of body fat than Kho-Kho players. It was also evident that Kho-Kho players have more speed than Kabaddi players. But in the strength, the mean of Kabaddi players was high than the Kho-Kho players and t value of sit and reach was 4.96. it means Kho-Kho players have more flexibility than the Kabaddi players.

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