

# ANALYSIS OF SELECTED BIO MOTOR QUALITIES BETWEEN KABADDI AND KHO-KHO PLAYERS

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**Abstract:** The purpose of the study was to analysis of selected bio motor qualities between Kabaddi and Kho-Kho players. To achieve the purpose of the study 60 men Kabaddi (n=30) and Kho-Kho (n=30) players, who were participated intercollegiate tournament in the Manonmaniam Sundaranar University intercollegiate competitions, Tirunelveli during academic year of 2017-2018 were selected. The selected players' age were ranged from 18-25 years. The selected bio motor qualities variables for this study were speed, agility and muscular strength of Kabaddi and Kho-Kho players. The selected variables were tested with standardized test items. The speed was assessed by 50 meter dash, agility was assessed by 4X10m shuttle run and muscular strength was assessed by bent knee sit-ups. The static group comparison design was employed for the study. The collected data were statistically analyzed by using independent 't' test. In this case .05 level of significance was used to test the hypothesis. It is concluded that there was a significant differences exists between Kabaddi and Kho-Kho players on selected bio motor qualities such as speed, agility and muscular strength.

**Index Terms:** Speed, Agility, Muscular Strength, Kabaddi Players, Kho-Kho Players

## I. INTRODUCTION

Every individual on earth wants to be physically fit to carry out his day to day tasks or activities. These activities of Individuals vary from sedentary office work to competitive sports. Physical fitness levels of these individuals depend upon the nature of the task and vice-versa [1]

The criterion of physical fitness has also expanded to include the capacity to meet physical demands in an emergency situation. General motor ability has been considered as ones level of ability in midrange of activities. It has been thought of as an interacted composite of such individual trait as strength, endurance, power, speed, agility, reaction time and Co-ordination [2].

The game of Kabaddi and Kho-Kho are typical Indian major games and played throughout the country especially in rural area. Both Kabaddi and Kho-Kho can be played in a small area and practically no equipment is necessary. Kho-Kho is an outdoor strenuous but healthy and interesting game. Kabaddi is an aggressive and heavy contact game. Compare to Kabaddi, Kho-Kho is less aggressive and light contact game. Kho-Kho and Kabaddi players are differing with each other in their skills, techniques and strategies [3].

Kho-Kho is a game of Indian origin and is played outdoors. It requires well-developed biomotor abilities [4] such as speed, strength, coordination etc. along with intelligence and abilities to make quick decisions. The nature of the game demands that kho-kho players should be able to pick up speed as quickly as possible and perform the movement rapidly. Speed is the quickness with which one is able to move his body form one point to another [5].

Kabaddi players requires high amount of physical fitness to execute offensive push, falls, turns, sudden change of direction holding, bending, jumping, leg and hand touch, and maintaining hold and respiration. Kabaddi requires tremendous physical stamina, agility, individual proficiency, neuromuscular coordination, quick reflexes, intelligence, mental toughness and presence of mind on the part of both attackers and defenders [6].

Physical fitness is the fundamental necessity for any sporting activity. Motor qualities such as speed, strength, explosive power, endurance, and flexibility are essential for excellence in sports. Sports trainers lay heavy emphasis on improving the physical fitness and motor qualities of the players, which is also conditioning program [7].

## II. PURPOSE OF THE STUDY

The purpose of the study was to find out the analysis of selected bio motor qualities between Kabaddi and Kho-Kho players.

### III. METHODOLOGY

#### 3.1 Selection of the Subject

To achieve the purpose of the study 60 men Kabaddi (n=30) and Kho-Kho (n=30) players, who were participated intercollegiate tournament in the Manonmaniam Sundaranar University intercollegiate competitions, Tirunelveli during academic year of 2017-2018 were selected. The selected players' age were ranged from 18-25 years.

#### 3.2 Selection of the Variables

The bio motor qualities such as speed, agility and strength variables were selected for this study to analyze between Kabaddi and Kho-Kho players. The selected variables were tested with standardized test items. The speed was assessed by 50 meter dash and agility was assessed by 4X10m shuttle run and muscular strength was assessed by bent sit-ups.

#### 3.3 Statistical Procedure

The static group comparison design was employed for the study. The collected data were statistically analyzed by using independent 't' test. The level of significance was set at 0.05 and SPSS package was used for statistical analysis.

### IV. RESULTS AND DISCUSSIONS

#### 4.1. Speed

The mean and independent 't' test between Kabaddi and Kho-Kho players on speed were analyzed and presented in table 1

Table 1  
Summary of mean and independent 't' test between kabaddi and kho-kho players on speed

Groups	Number	Mean	Std. Deviation	't' Value
Kabaddi Players	30	7.84	0.08	7.14*
Kho-Kho Players	30	7.71	0.07	

\*Significant at 0.05 level. Speed was scored in seconds. (Table value required for significance at 0.05 levels for 't' test with df 58 is 2.00)

From the table 1, the mean values between kabaddi and kho-kho players were 7.84 and 7.71 respectively. The obtained 't' test value is 7.14 which is greater than the table value of 2.00 with df 58 at 0.05 level of significance. It was concluded that the kabaddi and kho-kho players had significant difference on speed.

The mean values between kabaddi and kho-kho players on speed were graphically presented in figure 1.



Figure 1: The mean value between kabaddi and kho-kho players on speed

#### 4.2 Agility

The mean and independent 't' test between Kabaddi and Kho-Kho players on agility were analyzed and presented in table 2

Table 2  
Summary of mean and independent 't' test between kadaddi and kho-kho players on agility

Groups	Number	Mean	Std. Deviation	't' Value
Kabaddi Players	30	17.49	0.56	4.96*
Kho-Kho Players	30	16.79	0.54	

\*Significant at 0.05 level. Agility was scored in seconds. (Table value required for significance at 0.05 levels for 't' test with df 58 is 2.00)

From the table 2, the mean values between kabaddi and kho-kho players were 17.49 and 16.79 respectively. The obtained 't' test value is 4.96 which is greater than the table value of 2.00 with df 58 at 0.05 level of significance. It was concluded that the kabaddi and kho-kho players had significant difference on agility.

The mean values between kabaddi and kho-kho players on agility were graphically presented in figure 2.

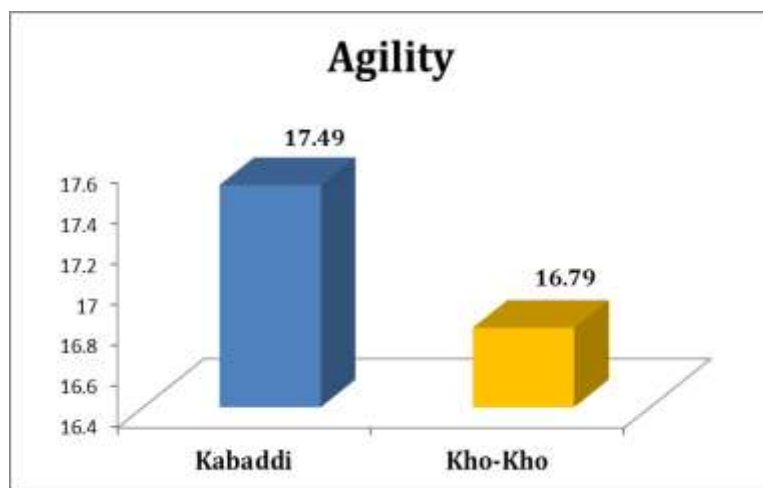


Figure 2: The mean value between kabaddi and kho-kho players on agility

### 4.3 Muscular Strength

The mean and independent ‘t’ test between Kabaddi and Kho-Kho players on strength were analyzed and presented in table 3

Table 3

Summary of mean and independent ‘t’ test between kadaddi and kho-kho players on muscular strength

Groups	Number	Mean	Std. Deviation	‘t’ Value
Kabaddi Players	30	39.18	3.74	5.83*
Kho-Kho Players	30	33.37	3.96	

\*Significant at 0.05 level. Muscular Strength was scored in numbers. (Table value required for significance at 0.05 levels for ‘t’ test with df 58 is 2.00)

From the table 3, the mean values for the kabaddi and kho-kho players were 39.18 and 33.37 respectively. The obtained ‘t’ test value is 5.83 which is greater than the table value of 2.00 with df 58 at 0.05 level of significance. It was concluded that the kabaddi and kho-kho players had significant difference on muscular strength.

The mean values between kabaddi and kho-kho players on muscular strength were graphically presented in figure 3.

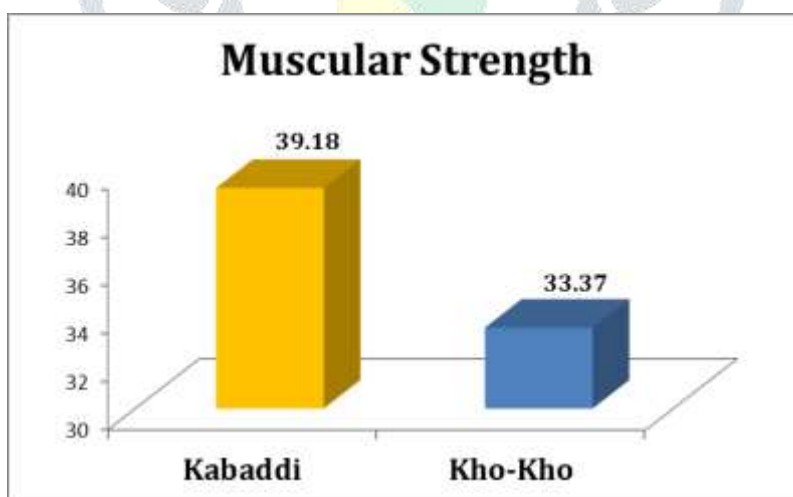


Figure 3: The mean value of kabaddi and kho-kho players on muscular strength

### V. DISCUSSION ON FINDINGS

Ruchika Sharma & Mandeep Singh Nathial (2016) can be said that from the findings that insignificant differences were found between Kabaddi and Kho Kho players on the variables of Motor Abilities, i.e. leg strength, speed and arm & shoulder strength. It was found that kabaddi players are better in leg strength and arm & shoulder strength whereas Khokho players are superior to kabaddi players in speed.

Arumugam, S. (2015) conducted a study on effect of plyometric training with yoga breathing exercises on speed, explosive power and cant ability among kabaddi players and he concluded his study significant improvement on speed, explosive power and cant ability due to the plyometric training with yoga breathing exercises.

## VI. CONCLUSION

Based on the results of the present study, we are highlighting the selected bio motor qualities between kabaddi and kho-kho players. The following Recommendations are made on the basis of the results from the study which may be useful for the future research work. The same study may be repeated on the other class of the society for different age groups.

The study can be carried on the basis of different regions. This study provided us with data from were participated intercollegiate tournament in the Manonmaniam Sundaranar University intercollegiate competitions kho-kho and kabaddi teams and allows to establishing reference values regarding physical characteristics of the selected athletes.

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