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## Comparative analysis of selected physical variables among college men Kabaddi and kho-kho players

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### Abstract

The purpose of the study was to find out the significant differences on selected physical fitness variables among college men kabaddi and kho kho players. To achieve this purpose of the study, fifteen kabaddi players and fifteen kho kho players were selected as subjects. The selected subjects were tested on selected criterion variables such as speed, agility, explosive power, strength endurance. They were tested by 50 mts dash, shuttle run, standing broad jump, sit-ups respectively. The collected data were analysed statistically by using t-ratio to find out the significant differences if any.

**Keywords:** Physical fitness, speed, agility, Kho- Kho, Kabbadi

### 1.1 Introduction

Introduction Sports and physical activity have been considered an integral part of human life since its inception. Physical activity is an indispensable condition of human life. It is universally accepted that sports and games fulfill the requirements of human activities. Revolutionary achievements of electronic media have made it all the more important not only the lives of participants but also among the millions of spectators, viewers and listeners. Sports is now popularly conceived as both socially and personally beneficial activity. In modern times, the spirit of extreme competition has changed the complexion or scenario of sports. The craze for winning medals in the Olympics and other international competitions has catalyzed the sports scientists to take interest in exploring all the aspects and possibilities which can contribute to enhance high level sport performance. Today, a growing emphasis on pretty well and have a long life. Gradually more and more scientific evidence tells us the keys to fitness and exercises to achieve these principles because it is a challenge to move. There are many small jobs that require physical exertion. Depending on the muscles than the machines we get around, mechanically mobile society has changed. In total, we continued the rest of the total spending their leisure time (including children) and more people have become a national audience. Accordingly, the point of obesity and excess weight, etc., to show that the problem increases. But statistics vaccine that pays off, so his / her doctor will have to wait until the final returns. The idea is to get everyone to take action now. Quality Physical is the human body what fine tuning the engine. It helps us to present to ourselves. Exercise is the best appearance, pleasurable sensation who described the situation that helps us do our best. More specifically, it's leisure time activities enjoyed and urgent demands of the energy, excitement and alertly daily tasks to do. "It's an unfit person could not continue the scenario process, stress tolerant, stand up, stand is capable of, and being of good health and it is based on a key." For achieving excellence in the field of Kho-Kho and Kabaddi, various components of physical fitness must be possessed by the of Kho-Kho and Kabaddi players.

### 1.2 Objectives

The present research study focuses the following objectives regarding physical variables among college men kabaddi and Kho-Kho players are:

1. To suggest ways and means for improving better fitness through special type of physical exercises.
2. To identify the physical capacities of Kabaddi and Kho-Kho players.
3. To find out which players may be better in the selected physical variables.

4. The study was give an additional knowledge to the area of study.
5. To find out the significant differences on such as speed, agility, strength between college men Kabaddi and Kho Kho players.
6. To find out the significant differences on selected physical parameters such as breath holding time between college men Kabaddi and Kho-Kho players.
7. To compare the physical fitness among college men Kabaddi and Kho-Kho players.
8. To develop physical profile of Kabaddi players.
9. To find out the significant differences, if any the independent 't' ratio was a be used.

### 1.3 Statement of the problem

The purpose of the study was to comparative analysis of selected physical variables among college men kabaddi and kho-kho players.

### 1.4 Delimitations

1. The subject for this study each 15 college men kabaddi and kho kho players were selected as subjects between the age group of 18 to 25 years.
2. The physical variables selected for the present study speed, agility, strength endurance and explosive strength (horizontally).
3. The physiological variables selected for the present study the resting pulse rate, breath holding time and Vo2 max.
4. Years of experience in the play court regular activities pertaining to their day today activities were not considered.
5. The tests were conducted randomly in the college permises.

### 1.5 Hypotheses

1. It was hypothesised that kho kho players may have the better speed, explosive power than the kabaddi players.
2. It was hypothesised that kabaddi players may have the better agility, strength endurance than the kho kho player.

### 1.6 Significance of the study

1. This research may helpful to suggest ways and means for improving better fitness through special type of physical exercises.
2. The results of the study may help the teacher and physical educator to find out which players may be better in the selected physical variables.
3. The study given additional knowledge to the area of research.

## 2. Selection of subjects

The purpose of the study was to compare the selected physical fitness variables among college men kabaddi and kho-kho players. To achieve the purpose of the study 15 college men kabaddi and kho- kho players were selected as subjects age ranged between 18-25 years.

### 2.1 Selection of variables

In the present study, the investigator selected the following variables.

1. Speed
2. Agility
3. Explosive strength
4. Strength endurance

## 3. Selection of tests

The present study was undertaken to find out the significant difference, if any, between university Kho-Kho and kabaddi players winners of south zone inter University tournament on selected physical fitness variables such as speed, agility, strength endurance, explosive power. The investigator analysed various literatures, and consulted the experts in physical education and selected the following test items which were standardized and almost suitable for the purpose of this study and they are presented in Table I.

**Table 1:** Selection of test

Sr. No.	Variables	Tests
1.	Speed	50 mtr dash
2.	Agility	Shuttle run
3.	Strength endurance	Bent knee sit ups
4.	Explosive power	Standing broad jump

The investigator has learnt the procedure and method of administering the tests and had a number of practice session in order to familiarize the testing procedure.

## 4. Test Administration

### ▪ 50 Meters Run

**Purpose:** To measures the speed.

**Equipment:** Stop watch with a split

### Administration

It is advised that two subjects run at the same time. Both start form a standing position. The commands "Are you ready" and "Go" are given. At the command to go the starter drop his arm so that the timer at the finishing line car start the timing. The subjects run as fast as possible across the finishing line.

### Scoring

The elapsed time from the starting signal until the runner crosses the finishing lines is measures to the nearest tenth of a second.

### ▪ Shuttle Run

**Purpose:** To measures the agility.

**Equipments:** Two blocks of wood 2x2x4 inches) behind one of the lines.

The pupil starts form behind of other line. On signal, the pupil runs to the blocks, picks one up, runs back to the starting line and places the block behind the line; he then runs back and picks up the second blocks, which he carries across the starting line. To eliminate the necessity for returning the block after each race, start the race alternately, first from behind one line and then from behind the other. Two trials are permitted.

**Scoring:** Record the time of the better of the two trials to the nearest tenth of a second.

### ▪ SIT-UPS

**Purpose:** To measure the abdominal strength endurance.

**Procedure:** The subject took a supine position on clean floor. The knees

OS were bent, feet parallel to each other. The angle between knees was kept below 90°. The students hands were clasped behind the neck and elbows were placed squarely on the mat. The ankle was firmly holded by a partner.

To perform the bent knee sit-up the subject raised his upper body forward to curl opposition and touched his knees with elbows and then returned to the supine position. This producer was reputed continuously for one minute as many times as possible. The fingers remained clasped behind the neck throughout the exercise.

**Scoring:** Number of sit-ups done in one minute is record as the individuals score.

▪ **Standing board jump**

**Purpose:** To measure explosive power in horizontal direction.

**Equipment:** Steel Measuring Tape.

**Procedure:** The subjects were taught, the method to perform standing board jump perfectly by the investigator. Before the execution of standing board jump test, subjects were directed to practice for a few minutes. A horizontal line was marked in the long jump pit. The subject stood behind the line facing the pit, feet parallel and then swung their arm forward and backward assuming a crouched position with knees bent at the right ankles. He then jumped forward as far as possible.

**Scoring:** The distance between the nearest break point to the horizontal line was recorded as the subject's performance in the nearest centimeter. The best of the three trials was recorded as the test score.

**4.1. Statistical procedure**

The purpose of the study was to find out the significant difference, if any, between college men kabaddi and kho-kho players on selected criterion variables. The subjects were tested on selected criterion variables and they were analysed statistically by using t-ratio to find out the significant difference. In all cases .05 level of confidence was fixed to be the significance.

**5. Analysis of the data**

The analysis of the data for physical and physiological variable among college men kabaddi and kho kho players have been analysed and presented separately.

**Speed**

The data collected on speed were analysed and presented in Table II.

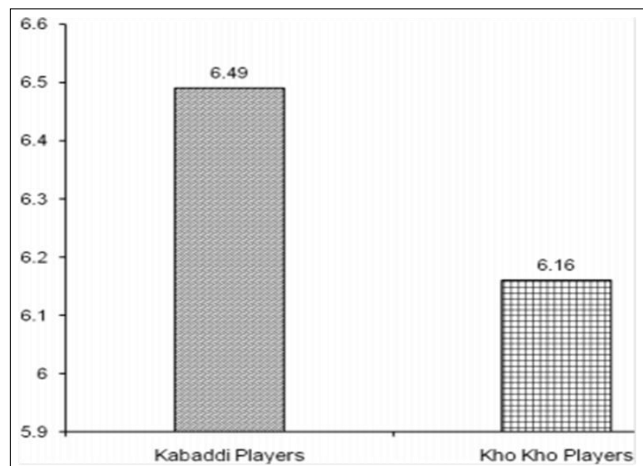
**Table 2:** The mean, standard deviation, and 't' ratio value of college men kabaddi and kho kho player son speed

Group	Mean	Standard Deviation	t-ratio 5.78*
Kabaddi Players	6.49	0.21	
Khokho Players	6.16	0.08	

\*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with d f1,28 was at 2.02).

Table II indicated that theme an values of college men kabaddi and kho kho players on speed were 6.49 and 6.16 respectively. The obtained t ratio value of 5.78 was greater than required table value 2.02 for significance at 0.05 level of confidence withdf1, 28. There sults of the study shows that there was a significant difference that exist among college men kabaddi and kho kho players on speed.

Theme an value of college men kabaddi and kho kho players on speed were graphically represented in Figure I.



**Fig 1:** The mean value of college men kabaddi and kho kho players on speed

**Agility**

The data collected on agility were analysed and presented in Table III.

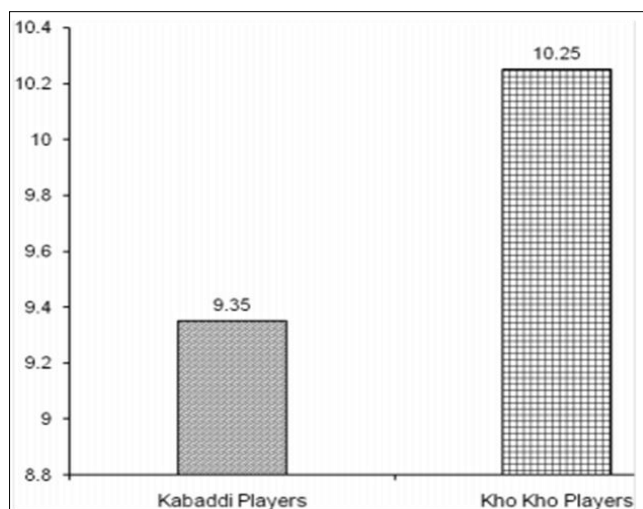
**Table 3:** The mean, standard deviation, and 't' ratio value of college men kabaddi and kho kho players on agility

Group	Mean	S.D.	t-ratio 8.18*
Kabaddi Players	9.35	0.21	
Kho kho Players	10.25	0.38	

\*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df 1, 28 was at 2.02).

Table IV indicated that theme an values of college men kabaddi and kho kho players on agility were 9.35 and10.25respectively.The obtained t ratio value of 8.18 was greater than required table value 2.02 for significance at 0.05 level of confidence with d f 1, 28. The results of the study shows that there was a significant difference that exist among college men kabaddi and kho kho players on agility.

The mean value of college men kabaddi and kho kho players on agility were graphically represented in Figure II.



**Fig 2:** The mean value of college men kabaddi and kho kho players on agility

**Strength endurance**

The data collected on strength endurance were analysed and presented in Table V.

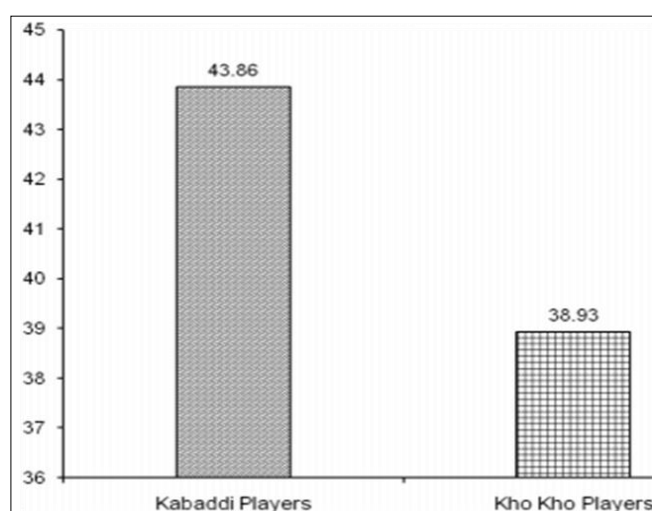
**Table 4:** The mean, standard deviation, and ‘t’ ratio value of college men kabaddi and khokho players on strength endurance

Group	Mean	Standard Deviation	t-ratio 4.21*
Kabaddi Players	43.86	3.02	
Kho kho Players	38.93	3.41	

\*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df 1, 28 was at2.02).

Table IV indicated that the mean values of college men kabaddi and kho kho players on strength endurance were 43.86 and 38.93 respectively. The obtained t-ratio value of 4.21 was greater than required table value2.02 for significance at 0.05 level of confidence with df 1, 28. There sults of the study shows that there was a significant difference that exist among college men kabaddi and kho kho players on strength endurance.

The mean value of college men kabaddi and kho kho players on strength endurance were graphically represented in Figure III.



**Fig 3:** The mean value of college men kabaddi and kho kho players on strength endurance

### 6. Explosive power

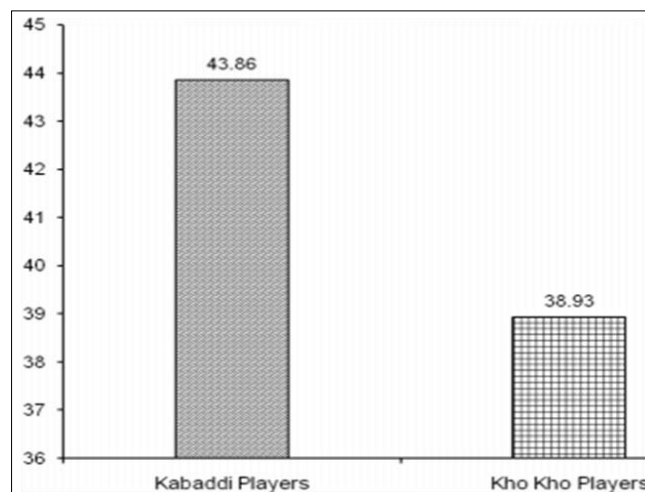
The data collected on explosive power were analysed and presented in Table V.

**Table 5:** The mean, standard deviation, and ‘t’ ratio value of college men kabaddi and kho kho players on explosive power

Group	Mean	Standard Deviation	t-ratio 4.53*
Kabaddi Players	184.66	3.47	
Kho kho Players	38.93	3.41	

\*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df1, 28 was at 2.02).

Table V indicated that theme an values of college men kabaddi and kho kho players on explosive power were184.66 and 190.33 respectively. The obtained t-ratio value of 4.53 was greater than required table value 2.02 for significance at 0.05 level of confidence with df 1, 28. The results of the study shows that there was a significant difference that exist among college men kabaddi and khokho players on explosive power. The mean value of college men kabaddi and kho kho players on explosive power were graphically represented in Figure IV.



**Fig 4:** The mean value of college men kabaddi and kho kho players on explosive power

### 7. Discussion of findings

The result of the study shows that there was a significant difference that exist among college men kabaddi and kho kho players on selected physical and such as speed, agility, strength endurance, explosive power. It may be due to the nature and area of the game selected for this study.

### 8. Discussion of hypothesis

There was a significant difference that exist among college men kabaddi and kho kho players on speed. Kho kho players have better performance than the kabaddi players on speed. Thus the hypothesis was accepted.

There was a significant difference that exist among college men kabaddi and kho kho players on agility. Kabaddi players have greater than the kho kho players on agility. Thus the hypothesis was accepted. There was a significant difference that exist among college men kabaddi and khokho players on strength endurance. Kabaddi players have better performance than the kho kho players on strength endurance. Thus the hypothesis was accepted. There was a significant difference that exist among college men kabaddi and kho kho players on explosive power. Kho kho players have better performance than the kabaddi players on explosive power. Thus the hypothesis was accepted. There was a significant difference that exists among college men kabaddi and khokho player on breath holding time. Kabaddi players have better performance than the kho kho players on breath holding time. Thus the hypothesis was accepted. There was a significant difference that exists among college men kabaddi and kho kho player on vo2 max. Kabaddi players have better performance than the khokho players on vo2 max. Thus the hypothesis was accepted. There was no significant difference existing among college men kabaddi and kho kho players on resting pulse rate. Thus the hypothesis was rejected.

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