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## Comparative status of explosive strength and cardio vascular endurance between kho-kho and kabaddi male players of secondary school boys of West Bengal

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### Abstract

The purpose of the study was to compare the physical fitness variable of Kho-Kho and Kabaddi Players. To fulfill the objective of the study 15 Kho-Kho and 15 Kabaddi players, only those male players of secondary school were selected who have participated at minimum inter district level tournament. The data were collected from a coaching camps organized by the District Sports Association. The age of the selected subjects ranged from 12 to 16 years. (Standing Board Jump and 600m run) were used to measure the selected physical fitness variables of the players. In order to analyze the data t-test was used to analyze the data and investigator observed the significant difference between Kho-Kho and Kabaddi players. To test the hypothesis, the level of significance was set at 0.05 level. The results indicated that the Cardio vascular endurance of the Kho-Kho players were comparatively better while the leg explosive strength of Kabaddi players was better than Kho-Kho players and it was statistically significant.

**Keywords:** Explosive strength, cardiovascular endurance, flexibility, kabaddi, kho-kho

### Introduction

The main purpose and objective of the present study was to compare the Kabaddi and Kho-Kho players on the selected physical abilities. In comparing the Kabaddi and Kho-Kho players of Bengal school going boys, who has obtained position at state championship in different level their respective sports competition on selected physical abilities such as Standing Broad Jump, 600m run between the players of Kabaddi and Kho-Kho. The following variables were found significant at both 0.05 and 0.01 level of confidence such as -Standing Broad Jump the 't' value 1.9, cardiovascular endurance in form of 600m run Test, the 't' value- 2.09 't' value 3.22, which was significant at both 0.05 and 0.01 level.

The significant difference was found in the Cardio vascular endurance ability- 600m run test the Kho-Kho players group had better performance in comparison to the Kabaddi players group. The significant difference was found in the Standing Broad Jump a test of explosive strength in relation to the Kaabddi and Kho-Kho players. The kabaddi players group had high explosive strength, showing greater jumping ability than the Kho-Kho players group.

### Objectives of the study

The main objective of the present study was to find out the difference between Kabaddi and Kho-Kho players at secondary school level in regards to their physical variables. The formally, the objectives of the study as under:

- To find out the differences between physical fitness components of Kabaddi and Kho-Kho players such as explosive strength of leg, cardiovascular endurance.

### Delimitations

The study was delimited as following

- The study was delimited to purposively selected 30 male subjects age ranging from 12 to 16 years of West Bengal schools, participated at state championship in different level Kabaddi and Kho-Kho competition.

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- The study was delimited to 30 male players from schools levels, 15 male players of Kabaddi and 15 male kho-kho players.

The investigation was delimited to selected variables parameters as under

- Explosive Strength- standing broad jump
- Cardiovascular endurance- 600m. Run test

### Limitations

- The findings of the study will be understood by considering the following limitations.
  1. Availability of small number of sample size was one of the limitations of the study.
  2. Sophisticated testing equipment and sophisticated equipment for exercises was also one of the limitation for the present study.
  3. Individual differences among the subjects and other factors such as- Life Style, dietary habits, daily routine, was also considered limitations for the present study.

### Methodology

#### Subject

The present study was conducted on 30 Kho-Kho and Kabaddi players of West Bengal. Keeping in view the objectives, the players were categorized into two main groups: Kho- Kho (15), and Kabaddi (15) players. The sample was collected from Malda, West Bengal. Their age was 12-16

year group.

### Criterion Measures

The criterion measures were used to collect the data in a deal and systematic way to record in a correct unit and style for each test item.

1. Explosive leg strength was measured by Standing Broad Jump test and scores were recorded in centimeters.
2. Cardio vascular endurance was measured by 600mt. run and time was recorded to the nearest 1/100 of a minute/second with the help of digital stopwatch.

**Table 1:** Details of Physical Fitness Components and Test

S. No	Physical fitness component	Test
1	Explosive Strength	Standing Broad Jump
2	Cardio vascular endurance	600mt run

### Procedure of Collecting Data

The necessary work was done before the start of the test, the first practice sessions were administered several times of each test with the help of the Supervisor. All the tests were administered and explained to the subjects by the researcher categorically and left no ambiguity. Any doubts of the subjects raised were clarified before taking the test, but no special training was given to the subjects.

### Result and Discussion

**Table 2:** Mean, Standard Deviation, 'T' value of physical fitness of Kho-Kho and Kabaddi players

Variables	Mean		Standard Deviation		T'-value	Sig. Level
	Kho-Kho	Kabaddi	Kho-Kho	Kabaddi		
Explosive strength	1.97	2.22	0.28	0.32	1.9	0.05
Cardio vascular endurance	7.30	6.52	1.08	0.65	2.09	0.05

\*.05 Level of significance

### Explosive Strength

Table – 2 shows that the mean of the power of Kho-Kho and Kabaddi Players is 1.97 and 2.22 respectively. Whereas the standard deviation of the power of Kho-Kho and Kabaddi Players is 0.28 and 0.32 respectively. The 'T' value of the power is 1.9 and significance value of the power is 0.05. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to leg strength. The significant difference was found in the explosive strength - Standing broad jump test the Kabaddi players group had better in explosive strength comparison to the Kabaddi players group.

### Cardio vascular endurance

Table – 2 shows that the mean of the Cardio vascular endurance of Kho-Kho and Kabaddi Players is 7.30 and 6.52 respectively. Whereas the standard deviation of the Cardio vascular endurance of Kho-Kho and Kabaddi Players is 1.08 and 0.65 respectively. The 'T' value of the endurance is – 2.09 and significance value of the Cardio vascular endurance is 0.05. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to Cardio vascular endurance.

### Conclusion

On the basis of the analysis of data the Kho- Kho players were having better mean values among Cardio vascular endurance than Kabaddi male players. Kabaddi players were having better mean values among explosive strength than the

Kho-Kho male players. After analysis and interpretation of the collected data, it was depicted that in the Cardio vascular endurance the kho-kho players was better and it was significant difference. Whereas in the explosive strength kabaddi players was better than kho-kho players and it was also significant.

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