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A study of comparison of vital capacity between men and women Kabaddi and Kho-Kho players

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Abstract
The purpose of this study was to compare the physiological variable namely vital capacity between men and women kabaddi and kho-kho players. To achieve the purpose of this study one hundred and twenty players of kabaddi and kho-kho games studying in the Department of Physical Education and Sports Sciences, Annamalai University, Annamalai Nagar, Chidambaram, Cuddalore District, Tamil Nadu and India were randomly selected as subjects. Among them sixty men players (thirty men kabaddi and thirty men kho-kho players) and sixty women players (thirty women kabaddi and thirty women kho-kho players) with an age of the subjects were ranged between 18 to 24 years were selected as subjects. Vital capacity was assessed by using standardized test item Spirometry and it was statistically analysed by using 2 x 2 factorial ANOVA. Whenever, the obtained 'F' ratio value for interaction effect was found to be significant, the simple effect test was applied as follow up test. In all cases, the.05 level of confidence was fixed to test the level of significance which was considered as an appropriate. There was significant difference between men and women players on selected physiological variable namely vital capacity irrespective of their games (kabaddi and kho-kho). Among them, men kho-kho players were better vital capacity than other categories of players.

Keywords: Physiological, Vital Capacity, Kabaddi and Kho-kho Players.

1. Introduction
A good athlete is like a machine, he needs good fuel constantly in order to maintain top performance. A healthy mind rests only in healthy body. One can be mentally sound only when his body is physically fit. Fitness is for everybody and not just for youth, this makes fitness everybody's business. It is a part of education but it is also a part of life everybody who wants to be fit needs must do exercise. The basic problem is that the human body is designed and constructed for movement and vigorous, not for rest and it functions more effectively. When it is active, most people taken better care of their automobile than they do of their own body. The old saying is "if you don't use it you lose it".
The volume of air inspired into, expired from, or contained within the lungs during breathing. One of the most useful measurements of lung volume is vital capacity: the maximal volume of air that can be forcefully exhaled after taking the deepest breath. Values vary from 3 litres to 6 litres. The actual value is not a very good indicator of fitness because it tends to vary for a number of reasons, including the size and sex of each individual. However, among individuals of the same size and sex, the vital capacity tends to be greater in those who exercise regularly. Usually, relatively fit and healthy individuals can exhale at least 83 per cent of their vital capacity in the first second of exhalation. At rest, only about half a litre of air is drawn into the lungs with each breath; this is known as the tidal volume. It increases with exercise until it reaches the vital capacity. The total amount of air inhaled each minute (ventilation rate) depends on both the depth and frequency of breathing. At rest, about 12 breaths per minute are taken so that the total volume of air inhaled is about 6 litres. During very strenuous exercise, this can increase to more than 100 litres a minute.

1.1 Statistical technique
The collected data's were statistically analysed by using 2 x 2 factorial ANOVA. Whenever, the obtained 'F' ratio value for interaction effect was found to be significant, the simple effect test was applied as follow up test. In all cases, the.05 level of confidence was fixed to test the

level of significance which was considered as an appropriate.

1.2 Selection of subjects

To achieve the purpose of the study one hundred and twenty players of kabaddi and kho-kho games studying in the Department of Physical Education and Sports Sciences, Annamalai University, Annamalai Nagar, Chidambaram, Cuddalore District, Tamil Nadu and India were randomly selected as subjects. Among them sixty men players (thirty men kabaddi and thirty men kho-kho players) and sixty women players (thirty women kabaddi and thirty women kho-kho players) with an age of the subjects were ranged between 18 to 24 years were selected as subjects.

In the present study, the investigator selected the physiological Variable namely vital capacity.

1.3 Analysis of the data and results

The mean and standard deviation values on vital capacity of men and women kabaddi and kho-kho players have been analysed and presented in Table I.

Table 1: The mean and standard deviation on vital capacity of men and women kabaddi and kho-kho players

Gender/Games		Kabaddi Players	Kh-Kho Players
Men	Mean	4.33	4.52
	SD	0.03	0.04
Women	Mean	3.49	3.79
	SD	0.15	0.07

Table I shows that the mean values on vital capacity of men kabaddi, men kho-kho, women kabaddi and women kho-kho players were 4.33, 4.52, 3.49 and 3.79 respectively.

The two way factorial ANOVA on vital capacity of men and women kabaddi and kho-kho players have been presented in Table II.

Table 2: Two way FACTORIAL ANOVA on vital capacity of men and women kabaddi and kho-kho players

Source of Variance	Sum of Squares	df	Mean Squares	Obtained "F" Ratio
A factor (Gender)	18.49	1	18.49	2281.74*
B factor (Games)	1.78	1	1.78	219.66*
AB factor (interaction) (Gender x Games)	0.11	1	0.11	13.57*
Error	0.94	116	0.01	

*Significant at.05 level of confidence.

(The table value required for significance at.05 level of confidence with df 1 and 116 was 3.924).

Table II shows that the obtained 'F' ratio value on vital capacity 2281.74 for factor-A (Gender - men and women players) irrespective of their games which was greater than the table value of 3.924 with df 1 and 116 required for significance at.05 level of confidence. The results of the study indicated that there was a significant difference between men and women players irrespective of their games on vital capacity.

The obtained 'F' ratio value on vital capacity 219.66 for factor-B (Games – kabaddi and kho-kho) irrespective of their gender which was greater than the table value of 3.924 with df 1 and 116 required for significance at.05 level of confidence. The results of the study indicated that there was a significant difference between the kabaddi and kho-kho players irrespective of their gender on vital capacity.

The obtained 'F' ratio value on vital capacity 13.57 for interaction [AB factor - (Gender × Games)] which was also greater than the table value of 3.924 with df 1 and 116 required for significance at.05 level of confidence. The results of the study showed that there was a significant difference between men and women kabaddi and kho-kho players on vital capacity.

Since, the obtained 'F' ratio for the interaction effect was found significant, the simple effect test was applied as follow up test and it was presented in Table III.

Table 3: The simple effect test for gender and games on agility. The simple effect test for gender and games on vital capacity

Source of Variance	Sum of Squares	df	Mean Squares	Obtained "F" Ratio
Gender and Kabaddi Players	10	1	10.00	1234.04*
Gender and Kho-Kho Players	7.49	1	7.49	924.30*
Games and Men	0.52	1	0.52	64.17*
Games and Women	1.32	1	1.32	162.89*
Error	0.94	116	0.01	

*Significant at.05 level of confidence.

(The table value required for significance at.05 level of confidence with df 1 and 116 was 3.924).

Table III shows that the obtained 'F' ratio values on vital capacity 1234.04 and 924.30 for gender and kabaddi players and gender and kho-kho players which are greater than the table value of 3.924 with df 1 and 116 required for significant at.05 level of confidence. The results of the study indicated that there was a significant difference between gender and kabaddi players and gender and kho-kho players on vital capacity.

Table III also revealed that the obtained 'F' ratio value on vital capacity 64.17 and 162.89 for games and men players and games and women players which are greater than the table value 3.924 with df 1 and 116 required for significance at.05 level of confidence. The results of the study indicated that there was a significant difference between games and men players and games and women players on vital capacity.

The mean values of men and women kabaddi and kho-kho players on vital capacity are graphically represented in Figure I.

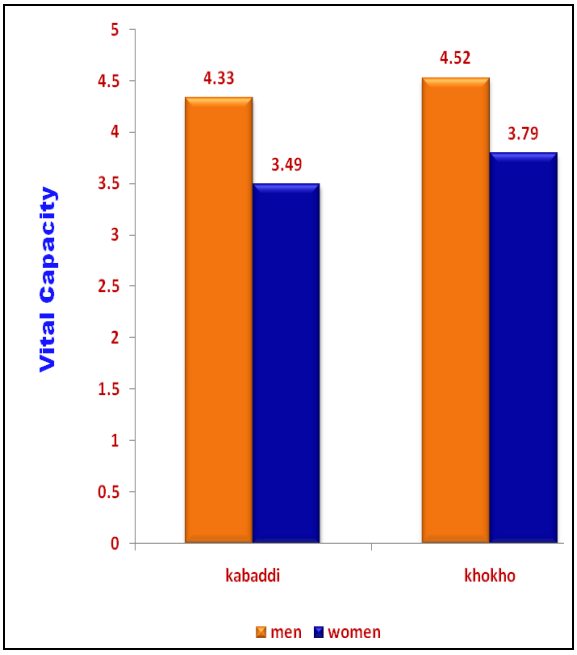

Fig 1: The mean values of men and women Kabaddi and Kho-Kho players on vital capacity

2. Conclusions

Based on the results of the study, the following conclusions were drawn,

1. There was significant difference between men and women players on vital capacity irrespective of their games (kabaddi and kho-kho).
2. There was significant difference between kabaddi and kho-kho players on vital capacity irrespective of their gender (men and women).
3. There was significant difference between men and women kabaddi and kho-kho players on vital capacity.
4. Among the groups, men kho-kho players were better on vital capacity than other categories of players.

3. References

1. Abhishek Verma, Devpal Rana, Abhimanyu Singh. To Develop Physical Profile of Kabaddi Players: The Descriptive Study, Indian Journal of Movement Education and Exercise Sciences, 2011, 1-1.
2. Allen Philips D, James Hornek E. Measurement and Evaluation in Physical Education. Canada: John and Willy and Sons, 1979.
3. Dick Frank W. Dick. Sports Training Principles. London: Lepus Book Ltd., 1989.
4. James Baley S. Illustrated Guide to Developing Athletic Strength, Power and Agility. New York: The Parker Publishing Inc, 1977.
5. Kamalesh. Psychology of Physical Education and Sports. New Delhi Hanuman Publications, 1987.
6. Mathews, Donald K. Measurement in Physical Education. Philadelphia WB. Saunders Co., 1978.
7. President council on Youth Fitness, Cited by Reuben B. Frost in Psychological Concepts Applied to Physical Education and Coaching. New York: Addison Wesley Publishing Company, 1971.
8. Singh, Hardayal. Science of Sports Training. New Delhi: DVS. Publications, 1979.