

A comparative study on selected physiological parameter between players of Kabaddi and Kho-Kho

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Abstract

The purpose of the study was to compare physiological parameter between players of kabaddi and kho-kho. For this study selected physiological parameter were taken for kabaddi and kho- kho players. Hundred (100) male subjects were selected as kabaddi (50) and kho-kho (50) and their age 18 to 30 years. The statistical technique 't'-test applied. The level of significance will be set at 0.05 to test the hypothesis. The results were analyzed statistically and on the basis of results interpretation was done. The findings of the study proved that there was significant difference between the Kabaddi and Kho- kho players in case of vital capacity and breath holding capacity.

Key words: Keywords: vital capacity, breath holding capacity, Kabaddi and Kho-Kho.

1. Introduction

Physical and physiology play an important role in deciding the particular build of the body with various measurements of the segments of the body. Physiology is defined as the science of the normal functions and phenomena of living things. Though the nature of two games Kabaddi and Kho- kho seems to be similar yet there is some differences in skills and nature of the two games.

Kabaddi is a complete collective sporting modality, characterized by the great amount and variety in its ball movements, ball manipulations and interaction with other athletes. Kabaddi is basically an outdoor game played on clay court; later the game is being played on the synthetic surface indoor with great success. The duration of the game is 40 minute for men and junior boys with 5 minutes break in between for the teams to change sides. The duration of the game is 30 minutes for the women, junior girls, sub junior boys and sub junior girls.

Kho-kho is ranked as one of the most popular traditional sports in India. Like all Indian games, it is simple, inexpensive and enjoyable. It does, however demand physical fitness, strength, speed and stamina.

2. Method and Materials

The present study was conducted on 100 players of Kabaddi and kho- kho. Players are related from different district of Uttar Pradesh. The age of the subjects was ranged from 18 to 30 years. To observe the differences between all the categories on their selected variables the data collected and was analyzed by using descriptive statistics and T-test. The level of significance was set at 0.05 level.

2.1 Statement of problem

A comparative study on selected physiological parameters between players of kabaddi and kho- kho.

2.2 Selection of variables:

- Vital capacity
- Breath holding capacity

2.3 Statistical Analysis:

To compare means of physiological characteristics between Kabaddi and Kho- Kho male players and T- test was used. The level of significance was set at 0.05.

3. Results

Table 1
Descriptive Statistics of Vital Capacity of Kabaddi and Kho-Kho Players in relation to Physiological Variables

Statistics		Kabaddi (x)	Kho -Kho (y)
N		50	50
Mean		4.48	4.02
Std. Error of Mean		0.10	0.11
Std. Deviation		0.70	0.80
Variance		0.49	0.63
Skewness		-0.32	-0.04
Std. Error of Skewness		0.34	0.34
Kurtosis		-1.00	-1.40
Std. Error of Kurtosis		0.66	0.66
Range		2.70	2.00
Minimum		3.10	3.00
Maximum		5.80	5.00
Percentiles	10	3.50	3.00
	20	3.72	3.00
	30	3.93	3.30
	40	4.44	4.00
	50	4.75	4.00
	60	4.86	4.00
	70	5.00	5.00
	80	5.00	5.00
	90	5.37	5.00

The above table reveals that the mean and standard deviation of Kabaddi Players were 4.48; 0.70 whereas mean and standard deviation of Kho- Kho players in relation to Vital Capacity were 4.02; 0.80 with a slight difference of .46 in mean.

Further, the variance of Vital Capacity was 0.49 in Kabaddi Players and 0.63 in Kho- Kho players. Range was 2.70 and 2.0 with a difference of 0.70; P40 for Kabaddi Players was 4.44 and 4.0 for Kho- Kho Players with difference of 0.44 whereas the P80 was 5.0 and 5.0.

Comparison of Means and SD between Kabaddi and Kho- Kho players in relation to Vital Capacity

Figure.1

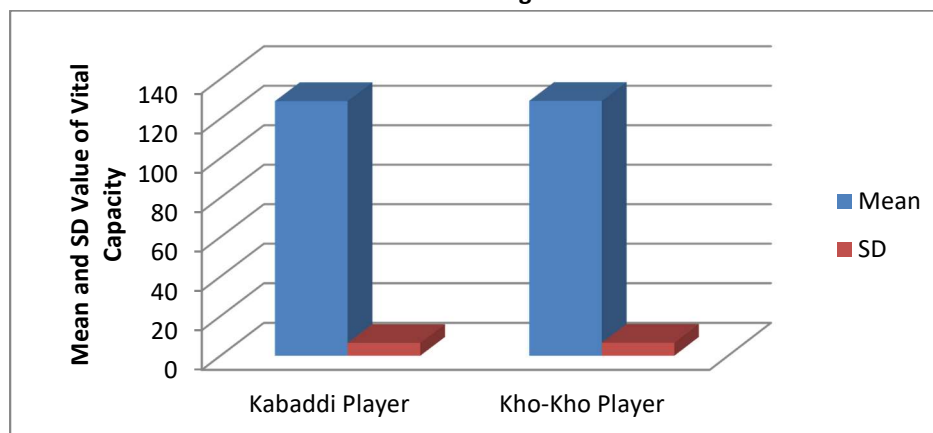


Table. 2

Descriptive Statistics of Breath Holding Capacity (Negative) of Kabaddi and KhoKho Players in relation to Physiological Variables

Statistics	Kabaddi (x)	Kho -Kho (y)
N	50	50
Mean	25.68	24.82
Std. Error of Mean	0.39	0.42
Std. Deviation	2.74	2.95
Variance	7.49	8.68
Skewness	-0.39	0.09
Std. Error of Skewness	0.34	0.34
Kurtosis	-0.97	-1.01
Std. Error of Kurtosis	0.66	0.66
Range	9.00	10.00
Minimum	21.00	20.00
Maximum	30.00	30.00
Percentiles	10	21.00
	20	22.20
	30	24.00
	40	25.00
	50	26.50
	60	27.00
	70	27.70
	80	28.00
	90	29.00

The above table reveals that the mean and standard deviation of Kabaddi Players were 25.68; 2.74 whereas mean and standard deviation of Kho- Kho players in relation to Breath Holding Capacity (Negative) were 24.82; 2.95 with a slight difference of .86 in mean.

Further, the variance of Breath Holding Capacity (Negative) was 7.49 in Kabaddi Players and 8.68 in Kho- Kho players. Range was 9.00 and 10.00 with a difference of .1; P40 for Kabaddi Players was 25.0 and 24.0 for Kho- Kho Players with difference of 1 whereas the P80 was 28.0 and 27.0.

Figure. 2
Comparison of Means and SD between Kabaddi and Kho- Kho players in relation to Breath Holding Capacity (Negative)

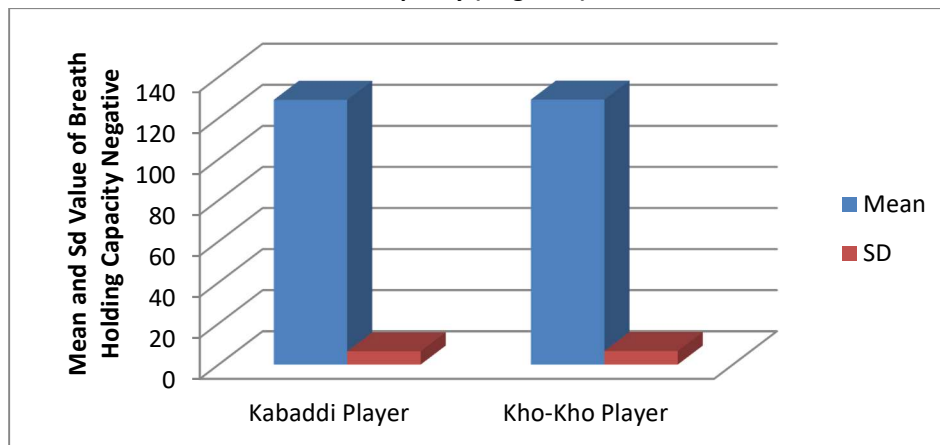


Table. 3

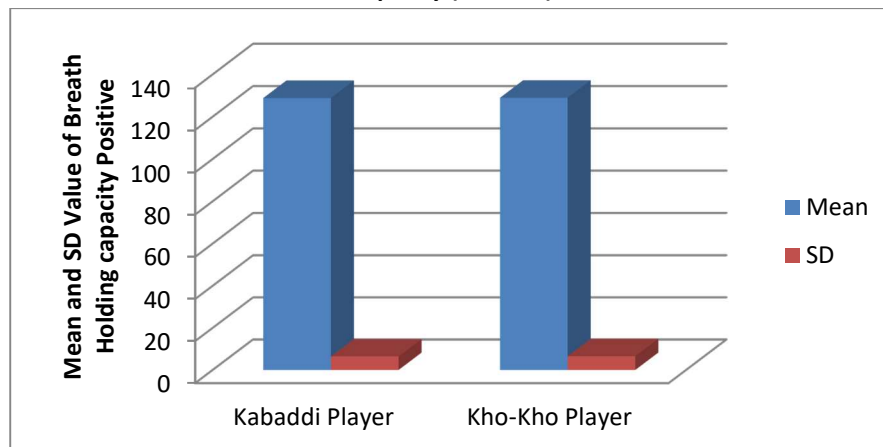
Descriptive Statistics of Breath Holding Capacity (Positive) of Kabaddi and KhoKho Players in relation to Physiological Variables

Statistics	Kabaddi (x)	Kho -Kho (y)
N	50	50
Mean	69.30	72.54
Std. Error of Mean	1.54	1.75
Std. Deviation	10.88	12.36
Variance	118.42	152.74
Skewness	0.22	-0.25
Std. Error of Skewness	0.34	0.34
Kurtosis	-1.10	-1.24
Std. Error of Kurtosis	0.66	0.66
Range	36.00	40.00
Minimum	54.00	50.00
Maximum	90.00	90.00
	10	55.00
	20	57.60
	30	61.00
Percentiles	40	65.40
	50	69.00
	60	72.00
	70	76.00
	80	80.80
	90	85.80
		54.00
		59.20
		64.00
		69.40
		74.00
		78.00
		82.70
		86.00
		87.00

The above table reveals that the mean and standard deviation of Kabaddi Players were 69.30; 10.88 whereas mean and standard deviation of Kho- Kho players in relation to Breath Holding Capacity (Positive) were 72.54; 12.36 with a slight difference of 3.24 in mean.

Further, the variance of Breath Holding Capacity (Positive) was 118.42 in Kabaddi Players and 152.74 in Kho-Kho players. Range was 36.0 and 40.0 with a difference of 4; P40 for Kabaddi Players was 65.40 and 69.40 for Kho- Kho Players with difference of 4.0 whereas the P80 was 88.80 and 86.0.

Figure.3
Comparison of Means and SD between Kabaddi and Kho- Kho players in relation to Breath Holding Capacity (Positive)



4. Findings and results

Above tables shows that Significant difference was found in relation to Vital capacity and Kabaddi players were having greater Vital capacity in comparison to KhoKho players this might be due to that the raider in Kabaddi continuously told Kabaddi during raid without breaking the breath it helps lungs capacity which also helps to improve the vital capacity.

Whereas Insignificant difference was found in relation to Breath holding Capacity (Positive/Negative), this might be due to that both games is related to breath.

5. Conclusion

The study found that kabaddi players have greater vital capacity in comparison to kho-kho players whereas there is insignificant difference in relation to breathe holding capacity.

6. References

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