



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2019; 4(2): 274-277

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www.theyogicjournal.com

Received: 27-05-2019

Accepted: 30-06-2019

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A comparative study on health related fitness components of Kabaddi and Kho-Kho players

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Abstract

The aim of study was to access health related physical wellness of kabaddi and kho-kho players of Jammu region. 48 male players (24 players of each game) were chosen randomly during inter-school competition from Jammu district of Jammu and Kashmir, age ranged 15 to 24 years. The subjects were regularly practicing and competing in their respective sports. All the subjects were educated about the protocol and procedure of the examination and they elected to partake in this investigation. The subjects were tested on speed by 50yd dash, explosive strength by standing broad Jump, flexibility by sit and reach test, muscular strength endurance by one minute sit-ups test and cardio-vascular endurance by 12min. run/walk test. T-test was used to find the difference between both groups. To test the hypothesis, the level of significance was set at 0.05.

Keywords: Health related physical fitness, kabaddi, Kho-Kho

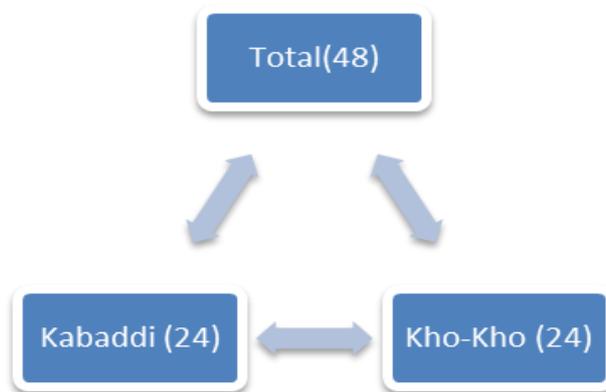
Introduction

Kabaddi is basically an Indian game, which requires both skill and power, and combines the characteristics of wrestling and rugby. Kabaddi is aptly known as the "GAME OF THE MASSES" due to its popularity, simple, easy to comprehend rules, and public appeal. The game calls for no sophisticated equipment what so ever, which makes it a very popular sport in the developing countries. Despite the fact that it is fundamentally an outside game played on mud court, recently the game is being played on engineered surface inside with extraordinary achievement. The length of the game is 45 minutes for men and junior young men with a 5-minute break in the middle of for the groups to change sides. On account of ladies and sub junior young men, the term is 35 minutes with a 5-minute break in the middle. Bhatnagar (1980) ^[1] conducted "A study on 23 rural sportsman (Athletics' 8, Kabaddi 7 and volleyball 8) of Madhya Pradesh (India) pertaining to their weight, height and sub cutaneous tissue fold at biceps, triceps, suprailiac and sub-scapular region. They have been found to be lighter, shorter with less amount of fat as compared to normal urban Punjabis. More Physiological differences pertaining to sportive activities indicates that volleyball players are lightest-shortest with maximum amount of fat compared to Kabaddi players and athletes whereas Kabaddi players are heaviest and fattest among the rural sportsman of Madhya Pradesh. Rambabu D. what's more, Johnson P. (2016) ^[2]. Physical action which is characterized as 'all recreation and non-relaxation body developments bringing about an expanded vitality yield from the resting condition' is one of the most significant components for improving wellbeing at all ages. Vaz (1994) ^[5] investigated some of the selected anthropometric characteristics and physical fitness components of predictors of performance in Judo. He found in his study that anthropometric variables namely, height, weight, calf girth, arm girth index, were related to Judo Performance in various weight categories, but by length, thigh girth and rural ratio were not seen significantly related to Judo performance. Warburton DER *et al.* (2006) ^[3] According to Nixon and Cozens (1964), it was the craving to build up a logical way to deal with advancement of physical wellness which shaped the premise of the main gathering of sports mentors in 1885. The physical wellness changes from sports to sports and playing position of players. The United States President's Council on physical wellness and sports characterized the terms physical wellness as "the capacity to complete day by day errands with force and sharpness without excessive weakness, with plentiful vitality to appreciate recreation time

interests, and to meet unexpected crises". Physical wellness is one's most extravagant belonging; it can't be bought however it must be earned through a day by day schedule of physical activities." Physical wellness prompts better games execution, and keep preparing will for the most part create physical wellness. Definite examination of the physical and physiological segments of competitors shows that it is conceivable to make genuinely dependable expectations of sports execution. Scores acquired by different wellness tests show different degrees of connection with the scores made in rivalry. Kind of constitution, quality and force, adaptability, and cardiovascular segments are among the variables that decide execution. physical wellness is a fundamental piece of our games cooperation, and those of us who play composed games, or take part in recreational athletic exercises, use practice in a sorted out way to prepare our bodes to improve, or if nothing else to all the more likely endure the requests we place them. The two games for example kabaddi and kho-kho require significant level of wellness so as to prevail in rivalry.

to 24 years. For data collection, the research scholar has gone through the various competition sites and administrates various tests.

Flow chart of Sampling



Methodology: For the purpose of present study, total sixty (48) players were selected. In which there were 24 kabaddi players and 24 kho-kho players were randomly selected to serve as subjects of the study. The subjects were selected from district level competition held at Jammu district of Jammu and Kashmir. Age of the subjects ranged between 15

Selection of the Variables

- a. Speed
- b. Explosive Strength
- c. Flexibility
- d. Muscular Strength
- e. Cardio-vascular Endurance

Table 1: of Health Related Physical Fitness Components and Test

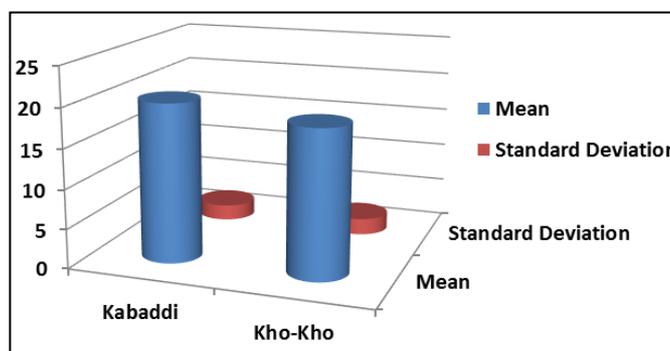
S. No	Health Related Physical Fitness Component	Test
1	Muscular Endurance	One min sit ups
2	Flexibility	Sit And Reach Test
3	Muscular Strength	8 lbs medicine throw (sitting position)
4	Cardio-vascular Endurance	12min. Run/Walk Test
5	Body Mass Index	Body weight/ (Height in meter) ²

Result and Discussion

Table 2: Descriptive statistics of selected variables for Kabaddi and Kho-Kho players

Variables	Mean		Standard Deviation		t'-value
	Kabaddi	Kho-Kho	Kabaddi	Kho-Kho	
Muscular Endurance	38.5	39.10	3.20	3.14	0.733
Flexibility (centimeter)	17.86	20.63	3.41	1.88	3.89*
Muscular Strength (meter)	3.45	3.12	.45	.38	3.069*
Cardio-vascular Endurance (meter)	1670.9	2037.9	72.82	89.67	17.4*
Body Mass Index (Kg/m ²)	20.12	18.63	2.01	2.10	2.807*

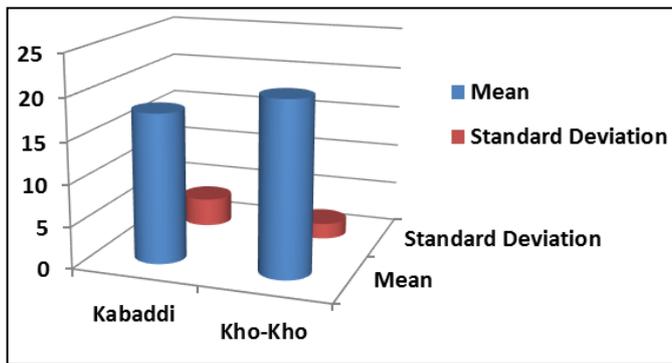
*Significant at 0.05 level, Degree of freedom= 46



Graph 1: of Muscular Endurance

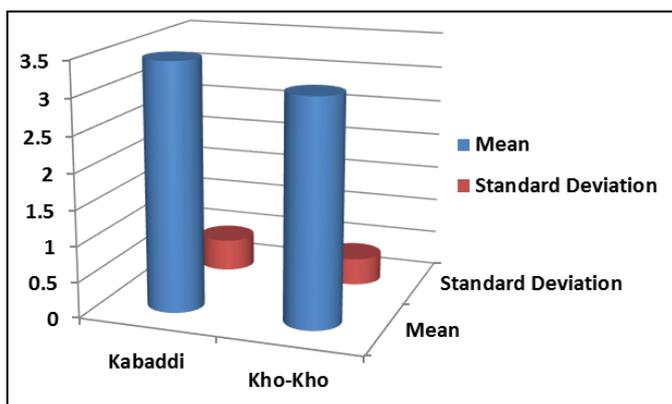
Graph- 1 shows that the mean of the muscular endurance of Kabaddi and Kho-Kho Players is 38.5 and 39.10 respectively. Whereas standard deviation of the muscular endurance of Kabaddi and Kho-Kho Players is 3.20 and 3.14 respectively,

't' value is 0.733. The result reveals no statistically significant difference in muscular endurance between Kabaddi and Kho-Kho players.



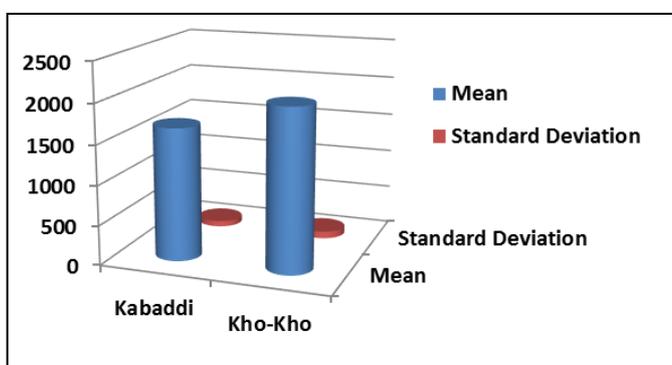
Graph 2: of flexibility

Graph-2 shows that the mean of the flexibility of Kabaddi and Kho-Kho Players is 17.86 and 20.63 respectively. Whereas standard deviation of the flexibility of Kabaddi and Kho-Kho Players is 3.41 and 1.88 respectively, 't' value is 3.89. The result reveals a statistically significant difference in flexibility between Kabaddi and Kho-Kho players. Kho-Kho players were found better in flexibility as compare to Kabaddi players.



Graph 3: of muscular strength

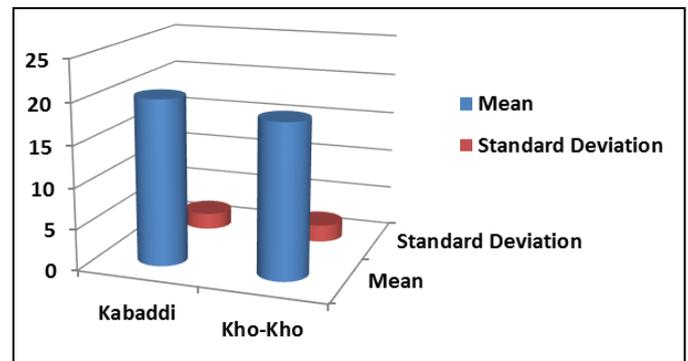
Graph-3 shows that the mean of the muscular strength of Kabaddi and Kho-Kho Players is 3.45 and 3.12 respectively. Whereas standard deviation of the Kabaddi players and Kho-Kho Players is .45 and .38 respectively, 't' value is 3.069*. The result reveals a statistically significant difference in muscular strength between Kabaddi and Kho-Kho players. Kabaddi players were found better in muscular strength as compare to Kho-Kho players.



Graph 4: of cardio-vascular endurance

Graph-4 shows that the mean of the cardio-vascular endurance of Kabaddi and Kho-Kho Players is 17.86 and 20.63 respectively. Whereas standard deviation of the cardio-

vascular endurance of Kabaddi and Kho-Kho Players is 3.41 and 1.88 respectively, 't' value is 3.89. The result reveals a statistically significant difference in cardio-vascular endurance between Kabaddi and Kho-Kho players. Kho-Kho players were found better in cardio-vascular endurance as compare to Kabaddi players.



Graph 5: of Body Mass Index

Graph -5 indicates that the mean of the body mass index of Kabaddi and Kho-Kho Players is 20.12 and 18.63 respectively. Whereas standard deviation of the body mass index of Kabaddi and Kho-Kho Players is 2.01 and 2.10 respectively, 't' value is 2.807*. The result reveals that statistically significant difference in explosive strength between Kabaddi and Kho-Kho players. The kabaddi players have more body mass index than their counterpart.

Conclusion

The Investigator dissected the gathered information according to the reason for study. The factual examination of health related fitness variables uncovered that in the boundaries, for example, adaptability, solid quality, cardio-vascular perseverance and weight list there were critical distinction among kabaddi and kho-kho players of Jammu area and there was no noteworthy contrast in the segment of strong continuance among kabaddi and kho-kho players. The examination additionally uncovered that the kabaddi players are better in strong quality and have more weight file as contrast with kho-kho players. Though kho-kho players were better in adaptability and cardio-vascular perseverance as contrast with kabaddi players. Similar results were founded in the study carried out by Debajyoti Haldar (2015) [9] A Comparative Study on Selected Physical Fitness Components of Kabaddi and Kho-Kho Players of West Bengal state. Significant difference was founded for Speed, Cardio vascular endurance, Agility. The results are also in conformity with the study carried out by Sunil Kumar (2011) [6] A Comparative Study on Selected Psycho-Physical Fitness Components of Kabaddi and Kho-Kho Players of Delhi Schools. Significant difference was founded for speed, flexibility, cardio-vascular endurance. The differences in physical fitness parameters between kabaddi and kho-kho players may be due to difference in techniques, nature of game, and movement's pattern etc.

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