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Analysis of selected physical fitness parameters between inter-university level female kho-kho and kabaddi players

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Abstract

The purpose of this study was to find out the significant difference of Physical fitness parameters between female Kho-Kho and Kabaddi players. For this study, total 40 inter-university level female players (20 each game) selected as a subjects. The subjects age ranging between 19-25 years was selected randomly from Punjabi university, Patiala affiliated colleges. Speed, Agility and explosive leg strength these variables selected for this study. Unpaired t-test was employed. The level of significance 0.05 was set. The result shows that significant differences in all variables between inter-university level female Kho-Kho and Kabaddi players.

Keywords: Physical fitness, speed, agility and explosive leg strength

Introduction

Physical fitness of a player depends on the nature of his game and also external conditions. There are a number of fitness elements that need to be developed (Singh and Dubey, 2016) [4]. Physical fitness is used in the context of two meanings: General fitness (a state of health and well-being) and specific fitness (the ability to perform specific sports of occupational skill). Fitness can be further subdivided into five categories: Cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition. The criteria of physical fitness have also expanded to include the capacity to meet physical demands in an emergency situation. Physical fitness is the capacity of the heart, Blood vessels, lungs, and muscle to function at optimum efficiency. Physical fitness was defined as the capacity to carry out the day's activities without undue fatigue (Singh, *et al.* (2017) [5].

Speed is easily defined as the rate of motion or the velocity of the body, or any one of its parts. Speed has the dimensions of distance divided by time. Agility is the ability to decelerate, accelerate, and change direction quickly while maintaining good body control without decreasing speed. Explosive strength is a combination of strength and speed abilities. It can be defined as the ability to overcome resistance with high speed. It depending on the nature of combination of strength and speed. It is a form of dynamic strength, (Singh, 1991) [3].

The aim of this study was to find out the difference between Physical fitness parameters of female Kho-Kho and Kabaddi players.

Hypothesis

It is hypothesized that, there would be significance difference of selected Physical fitness parameters between Inter-University level female Kho-Kho and Kabaddi players.

Methodology

Selection of Subjects

For the present study the 40 all India Inter university level female Kho-Kho and Kabaddi players (20 each game). The age of subjects ranging between 19 to 25 years was selected randomly from Punjabi university, Patiala affiliated colleges.

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Selection of Variables

Therefore keeping the feasibility criterion in mind, the investigator had been selected the following variables for the present study. These variables are:

Physical Fitness variables

- i. Speed
- ii. Agility
- iii. Explosive leg Strength

Selection of Test and Measurement

- **Speed:** A standard test of 50 yards dash (Johnson, Borrey and Nelson, Jack K.1988) was applied to measure speed. The time taken to complete the course was noted in seconds and was recorded in 1/100th second. Two trials were given to each subject and the better one was recorded as score.

- **Agility:** Shuttle Run 10x10 yards (Johnson, Borrey and Nelson, Jack K.1988) was applied to measure agility. The time taken to complete the course was noted in seconds and was recorded in 1/100th sec. Two trials were given to each subject and the better one was recorded as score.
- **Explosive leg Strength:** Standing Broad Jump-: The reading was taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped from the best of three attempts.

Statistical Technique

Unpaired t test was applied and the level of significance set at 0.05.

Results

Table 1: Shows Mean, SD and t-value of Speed variable between female Kho-Kho and Kabaddi players

Physical Fitness Variable	Group	Mean	Standard Deviation	t-value
Speed	Kho-Kho players	9.15	0.17	6.63
	Kabaddi players	9.78	0.38	

$t'_{.05} (38) = 2.024$

Table & figure 1: shows the Mean and SD values of Speed variable of Kho-Kho and Kabaddi players were 9.15 ± 0.17 and 9.78 ± 0.38 respectively. The obtained “t” value 6.63 (2.024) was found statistically significant, ($P < .05$) .05 level of significance.

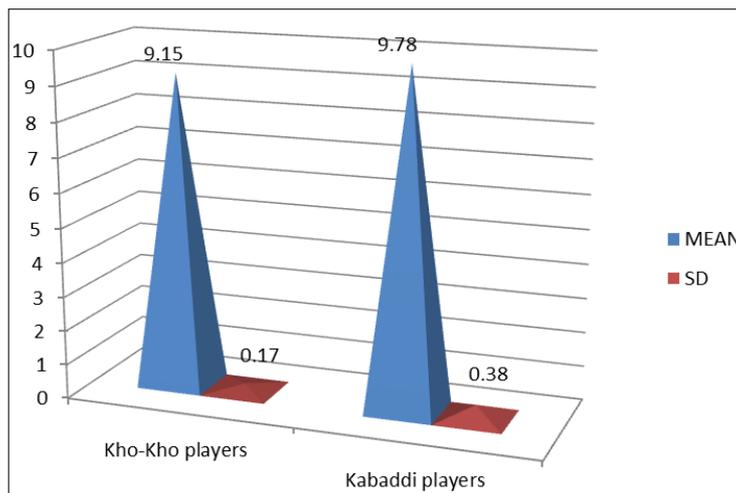


Fig 1: (Speed)

Table 2: Shows Mean, SD and t-value of Agility variable between female Kho-Kho and Kabaddi players

Physical Fitness Variable	Group	Mean	Standard Deviation	t-value
Agility	Kho-Kho players	10.27	0.45	3.66
	Kabaddi players	10.95	0.69	

$t'_{.05} (38) = 2.024$

Table & figure 2: depict the Mean and SD values of Agility variable of Kho-Kho and Kabaddi players were 10.27 ± 0.45 and 10.95 ± 0.69 respectively. The obtained “t” value 3.66

(2.024) was found statistically significant, ($P < .05$) .05 level of significance.

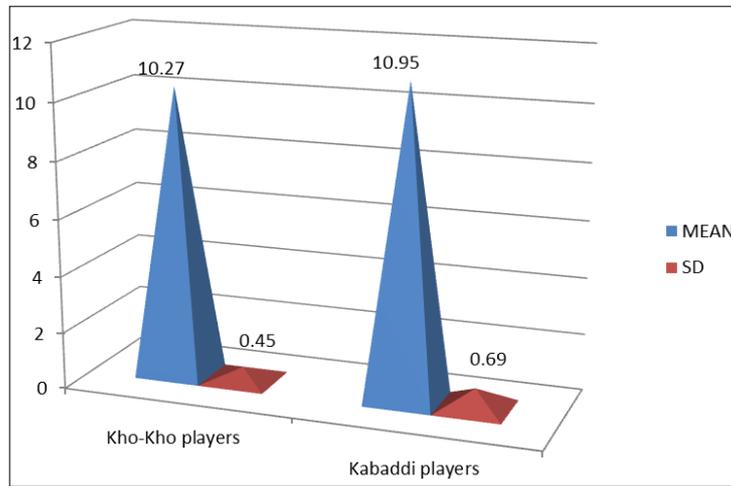


Fig 2: (Agility)

Table 3: Shows Mean, SD and t-value of Explosive leg Strength variable between female Kho-Kho and Kabaddi players

Physical Fitness Variable	Group	Mean	Standard Deviation	t-value
Explosive leg Strength	Kho-Kho players	1.78	0.20	2.152
	Kabaddi players	1.91	0.16	

*t_{.05} (38) = 2.024

Table & figure 3: represent the Mean and SD values of Explosive leg Strength variable of Kho-Kho and Kabaddi players were 1.78±0.20 and 1.91±0.16 respectively. The

obtained “t” value 2.152 (2.024) was found statistically significant, (P<.05) .05 level of significance.

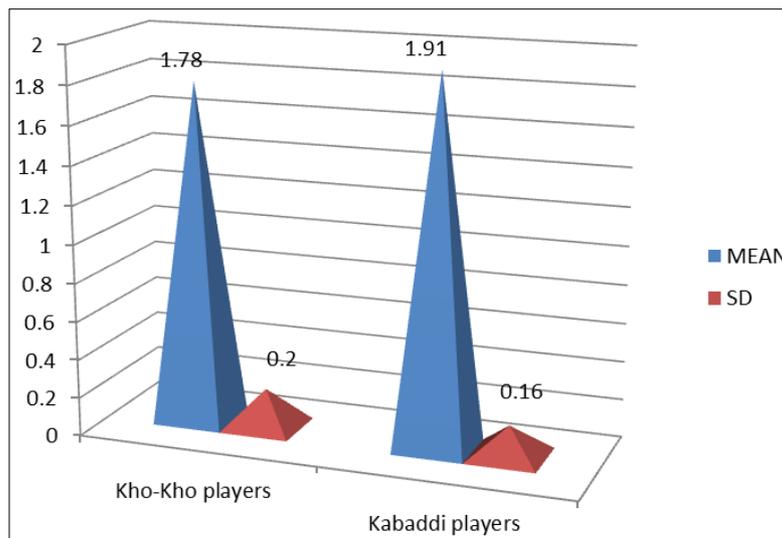


Fig 3: (Explosive Leg Strength)

Discussion of the findings

The outcomes of the study notify that significance differences were found between both games for their physical fitness parameters. The outcome shows that Kho- Kho female players are better as compare the Kabaddi female players for their Speed and Agility. But in explosive leg strength Kabaddi female players demonstrate better then Kho- Kho female players. On the basis of analysis of the data, researcher found that the earlier study of Malik, A. K., Devi, P. and Rani, M. (2017) [2], Kumari, S. and Kumar, N. (2015) [1] & Wani, Z. A. and Hassan, M. A (2017) [6] sported the this study.

Discussion of Hypothesis

1. There would be significance difference of selected Physical fitness parameters between Inter-University level female Kho-Kho and Kabaddi players. This hypothesis was accepted because significance difference

was found between female Kho-Kho and Kabaddi players.

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