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## Explosive Strength and Agility of District Level Men Kho-Kho and Kabaddi Players: A Comparative Study

P.Akhil Anand<sup>1</sup> & Mr.M.Senthil Kumar<sup>2</sup>

<sup>1</sup>M.Phil Research Scholar, Department of Physical Education & Sports Sciences, SRM University, Chennai, Tamilnadu, India.

<sup>2</sup>Assistant Professor, Department of Physical Education & Sports Sciences, SRM University, Chennai, Tamilnadu, India.

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### Abstract

Agility and explosive strength are two important skill related fitness components used in Kabaddi and Kho-Kho game frequently. Purpose of the study was to measure the agility and explosive strength of district level men Kabaddi and Kho-Kho players and their comparison. A total of 40 district level men players were agreed to take part in this study as subjects. Among them 20 were from Kabaddi and 20 were from Kho-Kho. The average age of the Kabaddi players was 18.85 years and for Kho-Kho players it was 18 to 20 years. Agility and explosive strength were the criterion measure in this study. 10x4 yards shuttle run was used to measure the agility and standing broad jump (SBJ) was used to measure the explosive strength. Mean and SD were computed for each variables and t-test was used to find out the difference between two groups means. All statistical calculations were done using standard statistical software and only 0.05 level of confidence was considered in this study. Results revealed that Kho-Kho players were superior in agility than the Kabaddi players and the difference in mean value was statistically significant ( $t=2.07$ ;  $p<0.05$ ). For explosive strength again Kho-Kho players had higher mean value but mean difference was not significant statistically ( $t=1.52$ ;  $p>0.05$ ). From above findings it was concluded that district level men Kho-Kho players had higher level of agility and explosive strength than Kabaddi players and difference for agility was statistically significant.

**Keywords:** Explosive strength, Agility, Kho-Kho and Kabaddi player, District level.

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### Introduction

Since inception of the human civilization motor ability was the only criteria for any sort of performance. At the very down of human civilization people used to lead a nomad life. They had to lead an uncertain life. They could not understand the peculiar behavior of the nature, adverse climatic condition. In these circumstances physical fitness and motor ability was the only weapon to survive against these odds. During this condition they started to become careful of only to procurement of food and shelter but they became interested to other pursuit like utilization of their energy in a meaningful way. Gradually with the passing of time the social scenario and life style started changing. Individual became interested to improve their fitness quality. Human being started realizing that physical fitness and motor ability is the key to improve performance and the way to survive in the constantly social environmental hazards. Competitive game requires high level of skill related fitness and agility and explosive strength are two important skill related fitness components used in Kabaddi and Kho-Kho game

frequently. Purpose of the study was to measure the agility and explosive strength of district level men Kabaddi and Kho-Kho players and comparison among them to highlight the existed differences.

### Materials and Methods

A total of 40 district level men players were agreed to take part in this study as subjects. Among them 20 were from Kabaddi and 20 were from Kho-Kho. The average age of the Kabaddi players was 18.85 years and for Kho-Kho players it was 18 to 20 years. Dependent variables are agility and explosive strength were the criterion measure in this study. Tests and Tools Used Agility was measured by 10x4 yards shuttle run and standing broad jump (SBJ) was used to measure the explosive strength.

### Statistical Procedure

Mean and SD were computed for each variables and t-test was used to find out the difference between two groups means. All statistical calculations were done using standard statistical software and only 0.05 level of confidence was considered in this study. Mean value and standard deviation (SD) of both selected variables were computed and result have presented in Table-1. Mean difference between groups for both variables were also analyzed and results have presented in Table- 1. Table-1

### Correspondence

P.Akhil Anand

E-mail: srmarunprasannaphd@gmail.com

revealed that the Kho Kho players were in a superior position in respect of both explosive strength and agility than Kabaddi players. T-value indicated that the mean difference between these two groups for explosive strength was statistically significant whereas the mean

difference between these two group for agility was not statistically significant. Results have also shown graphically in Figure-1 and Figure-2 for agility and explosive strength respectively.

Table 1

Mean, SD and t-value of selected variables for Kho-Kho and Kabaddi players

Variables	Statistical parameters	Kabaddi players	Kho Kho players	t-Value
Agility	Mean	12.35	11.21	2.07*
	SD	1.09	0.69	
Explosive strength	Mean	153.00	180.05	1.52
	SD	26.74	16.10	

\*Significant statistically as CR of t-value at 0.05 level was 2.03 (df=38).

The Table-I shows that the mean values of Kabaddi players and kho kho players on agility were 12.35 and 11.21 respectively. The obtained 't' ratio was 2.07\*, since the obtained 't' ratio was greater than the required table value of 2.03 for the significant at 0.05 level with 38 degrees of freedom it was found to be statistically significant. The Table-I shows that the mean values of Kabaddi players and kho kho players on explosive strength were 153.00 and 180.05 respectively. The obtained 't' ratio was 1.25, since the obtained 't' ratio was lesser than the required table value of 2.03 for the significant at 0.05 level with 38 degrees of freedom it was found to be statistically insignificant.

Figure I

Cylinder diagram ordered mean values of Agility

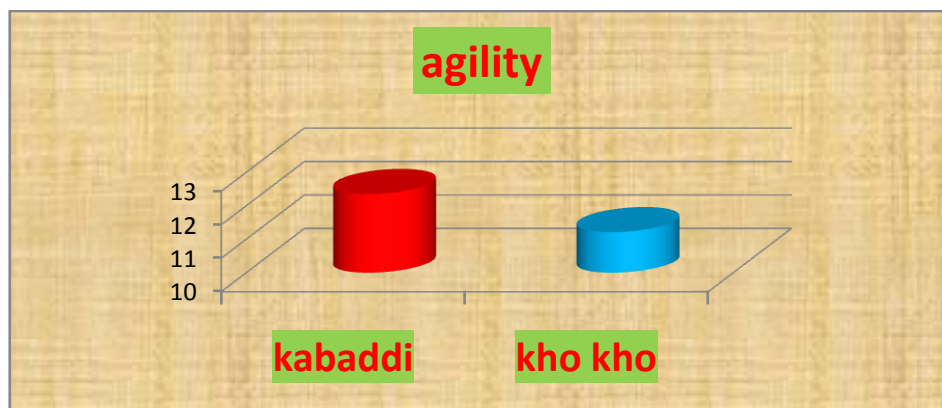


Figure II

Cylinder diagram ordered mean values of Explosive strength



## Discussion & Findings

A competitive sport requires high level of skill related fitness and each game requires different kinds of fitness components to execute high performance. In Kho-Kho and Kabaddi agility and explosive strength were the most important two skill related fitness components among these. As the player changes their moving direction frequently in both games so agility was most important concern to play the game efficiently. Result reveals that agility was higher in Kho-Kho players than Kabaddi players as mean value was lower for them. As the agility measured in seconds lower value indicated higher status. Haque and Ghosh, (2014), Found significant difference in anaerobic fitness between Indigenous and Non-indigenous Game Players in West Bengal. Chowdhury, Mitra and Gayen (2015) conducted a study on university level Kho-Kho and Kabaddi player and found significant difference on agility between Kho-Kho and Kabaddi players.

Explosive strength was measured in centimeters and higher value of mean was also observed for that parameters for Kho-Kho players in present study. By nature of game explosive strength is more used in Kho-Kho game than the Basketball. It is used to execute the skill like Pole drive, flying field drive, releases the box for 'early kho' etc whereas in Kabaddi it is used specially for Jump shot. Thus Kho-Kho players frequently used this ability for showing better performance and this might be the main cause of this findings. Kumar (2014), Compare the skill related fitness parameters (strength and speed) between Kho-Kho and Kabaddi Players and found significant difference between these two groups.[6] Patel and Datta (2014), reported significant difference in explosive strength when they compared that ability between Kho-Kho and Kabaddi players.

## Conclusion

From the above result it was concluded that district level men Kho-Kho players had higher agility and explosive strength than Kabaddi players.

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