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## Identification of physical factor correlated to playing ability of intercollegiate level Kho-Kho players

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### Abstract

To forecast Intercollegiate Kho Kho participants' playing skill and physical variables. N=100 men intercollegiate Kho Kho players from Manonmaniam Sundaranar University's Affiliated College in Tirunelveli, Tamil Nadu, India was chosen as participants for this research. Participants ranged in age from 18 to 25. For this research, the physical component (speed, Cardiovascular endurance, agility, and reaction ability) was chosen as an independent variable, and playing ability was chosen as a criterion variable. The data was analyzed using descriptive and correlation methods at the 0.05 threshold of significance. The findings indicate a significant relationship between Kho Kho playing skill and physical variables.

**Keywords:** Physical variable, Playing ability, and Kho Kho players

### Introduction

Kho-Kho is a famous traditional sport in India (Jaiswal, 2014; Tiwari, & Venugopal, 2015) [5, 12]. Kho Kho is an indigenous game of India (Haque, & Ghosh, 2014; Roy *et al.*, 2016) [3, 10]. Because of the dodging, feinting, and controlled speed spurts, this game is extremely exciting (Jaiswal, 2014) [5].

Age, gender, motor development, physiological, biochemical, biomechanical, hereditary, anthropological, and psychological factors all have an impact on athletes' success (Carter, 1970) [2]. Size, shape, physique, proportions, physical fitness, and skill efficiency level are all essential factors in achieving higher levels of performance (Smith, 2003; Mishra, & Rathore, 2015) [11, 8].

Many researchers have conducted studies on various body characteristics of various sports activities, and they have determined that there is a strong connection between physical components and performance (Kant, 2017; Roy *et al.*, 2016 & Jagathesan, 2018) [7, 10, 4].

### Purpose of the Study

To predict the playing ability and physical (Speed, Cardio vascular Endurance, Agility and Reaction time) variables among Intercollegiate Kho Kho players.

### Methods

For this study N=100 men intercollegiate Kho Kho players were selected as participants from Affiliated college of Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. Selected participants age from 18 to 25 years. Physical component such as Speed, Cardiovascular Endurance, Agility, Reaction ability were selected as independent variable, and playing ability were selected as criterion variable for this study.

The 50 m run test was used to determine speed (James *et al.*, 2015) [14]. Cooper's 12 Min Run Test was used to determine cardiovascular endurance. Shuttle Run was used to measure agility (James *et al.*, 2015) [14]. Reaction ability test was used to measure Reaction ability (Tiwari, & Venugopal, 2015) [13]. Judges' rating scales were used to assess Kho-Kho playing abilities. (Paul, & Das, 2016) [9]. Descriptive and correlation were used to analysis the data at 0.05 level of significance.

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## Results and Discussion

Table 1 represent the summary of descriptive statistics

**Table 1:** The summary of descriptive statistics on selected physical variables

Descriptive Statistics	N	Mean	Std. Deviation
Speed	100	7.3	0.04
Cardiovascular Endurance	100	1600	54.5
Agility	100	9.82	0.06
Reaction Ability	100	19.20	0.13

The data on the physical variables associated with playing skill were statistically analyzed using Pearson product moment correlation, and the findings are shown in table 2.

**Table 2:** Correlation between Physical variable and Playing ability

Dependent variable	Independent variable	Coefficient Correlation	Sig
Playing ability	Speed	0.62*	0.003
	Cardiovascular Endurance	0.78*	0.010
	Agility	0.91*	0.002
	Reaction ability	0.89*	0.045

From table 2 Table - 3 Shows all the p values  $p < 0.005$ , it indicates that there exists a significant relationship between Kho Kho playing ability and physical variables such as speed, Cardiovascular endurance, agility, and reaction ability.

Previous empirical study in prediction the playing ability with physical component supported with various team sports players like kho kho and kabaddi players, volleyball (Kant, 2017; Jeyaraj, & Gopinathan, 2014; Bhupinder, S., & Sonia, S. (2014)<sup>[7, 6, 1]</sup>.

## Conclusion

1. Significant association was found between Speed and Kho Kho playing ability.
2. Significant association was found between Cardiovascular Endurance and Kho kho playing ability.
3. Significant association was found between Agility and Kho kho playing ability.
4. Significant association was found between Reaction ability and Kho kho playing ability.

## Reference

1. Bhupinder S, Sonia S. Biomotor abilities between runner and chaser of kho-kho: a comparative study. Research Journal of Physical Education Sciences, 2014. ISSN, 2320, 9011.
2. Carter JL. The somatotypes of athletes—a review. Human biology; c1970. p. 535-569.
3. Haque A, Ghosh SS. A comparative study of aerobic and anaerobic fitness between indigenous and non-indigenous game players in West Bengal. International journal of multidisciplinary and current research; c2014. p. 203-206.
4. Jagathesan R. Co-Relation of Physical Fitness Components with Skill Related Components and Playing Ability on Kho-Kho Players. Ganesar College of Arts and Science; c2014, 2018. p. 161.
5. Jaiswal A. Anthropometric and somatotyping study among the female Kho-Kho players of Pondicherry: a comparative analysis. J Glob. Econ. 2014;2(4):1-3.
6. Jeyaraj N, Gopinathan P. Relationship of selected physical fitness and psychological variables to Kabaddi

- playing ability. Indian Streams Research Journal; c2014.
7. Kant S. Playing Ability of Kho-Kho from Selected Physical Fitness Variables among College Level Players. Int. J Phy. Edu. Spo. 2017;2(11):45-48.
8. Mishra MK, Rathore VS. Selected Anthropometric Parameters as a Predictors of Volleyball Playing Ability. International Journal of Science and Research. 2015;4(9):436-439.
9. Paul S, Das SS. Physiological performance structure of male Kho-Kho players. International Journal of Physical Education, Sports and Health. 2016;3(3):98-100.
10. Roy T, De A, Nandi DSC. A study on mental toughness in relation to agility and reaction ability among female Kho Kho players. Int J Home Sci. 2016;2(3):406-9.
11. Smith DJ. A framework for understanding the training process leading to elite performance. Sports medicine. 2003;33:1103-1126.
12. Tiwari R, Venugopal R. Reaction ability test for female Kho-Kho players. International Journal of Physical Education, Sports and Health. 2015;2(1):177-179.
13. Tiwari R, Venugopal R. To develop a tapping skill test for Kho-Kho female players. IJAR. 2015;1(13):164-166.
14. James AS, Clifford SP, Thomas EA. Osmosis in Cortical Collecting Tubules. Journal of General Physiology. 1974 Aug 1;64(2):201-228.