



# Biomotor Abilities between Runner and Chaser of Kho-Kho: A Comparative Study

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## Abstract

*The purpose of this study was to compare the selected biomotor abilities between runner and chaser of kho kho. A Sample of 30 male kho kho players (15 Chaser and 15 Runner) was selected through purposive sampling technique from Jawahar Navodaya Vidyalaya, Chandigarh. The speed of subjects was measured by 30 meter dash test, Agility was measured by Right boomerang run test and Cardiovascular endurance was measured by 9 min run/ walk test. Collected data were analysed by computing the 't' test to see the significance mean difference between runner and chaser on biomotor abilities. The results indicated that there were insignificant differences with regard to biomotor abilities of speed, agility and cardiovascular endurance between runner and chaser of kho kho. The outcome of study might help physical educators and coaches to evaluate and modify the training programs pertaining to the biomotor abilities for runner and chaser of kho kho.*

**Keywords:** Biomotor, Boomerang, Speed, Agility, Cardiovascular Endurance.

## Introduction

Kho kho like Yogasana, Malkham, Lathi, Phari-Gadga, Kabaddi, Atayapatya, Langdi, Lagore, Viti-Dandu, are peculiar indigenous activity preserved and handed over to the present generation. At present Kho Kho is the most popular among all the indigenous team games of India in which competitions are being held from school level to national level. Kho kho is a chase and tag game where a chaser chases the runner to dismiss him/her from the game. The game is called kho kho because it is obligatory on the part of the active chaser to utter 'kho' behind a seated chaser to hand over chase to the seated chaser for the progress of the game, failure in its, is a foul<sup>1</sup>.

According to kho kho Federation of India<sup>2</sup> the kho kho is based on the natural principles of physical development. It is vigorous and fosters a healthy competitive spirit among youth and not merely running with speed but also a natural instinct to overtake, to pursuit, to catch a kill. No doubt speed is the heart of this game and to stand a relentless pursuit of 9 minutes at a stretch where the heart demands stoutness and stamina. Controlled sprint, dogging, diving are some of the skills exhibited during the game. In turn, a physically fit youth enjoy it and the spectators who watch enjoy thrilling sports to their satisfaction<sup>3</sup>.

The physical variable namely, speed, endurance, agility, flexibility, dynamic balance, power and reaction time are very important for kho kho players because the nature of the game requires fast running for escaping from the opponents as well as changing the opponents. Change of the direction is needed in order to shake off the opponents as well as to escape. A kho kho

player needs abundant endurance as one has to run with varying speed over a period of time<sup>4</sup>.

The nature of the game demands that a kho kho player should be able to pick up speed as quickly as possible and perform the movement rapidly. Speed is the quickness with which one is able to move his body from one point to another<sup>5</sup>.

During running and chasing in kho kho players have to change their direction rapidly and accurately for enhance the performance. Agility as the physical ability, which enable an individual to rapidly change body position and direction in precise manner<sup>6</sup>.

Cardiovascular endurance plays very vital role in the performance of players in kho kho. It enables the players to do the movement, with the desired quality and speed under the condition of fatigue<sup>7</sup>. Endurance is the result of physiological capacity of individual to sustain movement over a period of time. It is the ability to continuous successive movement in situation where the muscle or muscle group being used and loaded heavily<sup>8</sup>. Therefore, the present study was under taken to compare the three major biomotor abilities speed, agility and cardiovascular endurance among runner and chaser of kho kho.

## Methodology

Total thirty male (N=30) which includes fifteen (n=15) runners and fifteen (15 chaser) kho kho players, who were represented their school team in navodaya cluster tournaments were selected as subjects for the present study by employing purposive sampling technique. Speed of the subjects was measured by 30 meter dash test, Agility was measured by Right boomerang run

test and cardiovascular endurance was measured by 9 min run/walk test. Collected data was analysed by computing the 't' test to see the significance of mean differences between runner and chaser on these three selected biomotor abilities i.e. speed, agility and cardiovascular endurance.

**Results and Discussion**

**Results:** The results with regard to the selected biomotor abilities i.e. speed, agility and cardiovascular endurance between runners and chaser has been presented in tables below.

Table -1 explained the mean value of runner was found to be 5.56 with standard deviation of 0.67. Whereas, mean value of chaser was recorded as 5.69 with standard deviation 0.49. The mean difference was observed as .12. The standard error difference of mean was found .22. The obtained 't' value was 0.56. Results showed insignificant mean differences between runner and chaser with regard to the variable speed as the obtained 't' value of 0.56 was not found to be statistically significant at .05 level. The comparison of mean scores of both the groups has been presented graphically in figure-1.

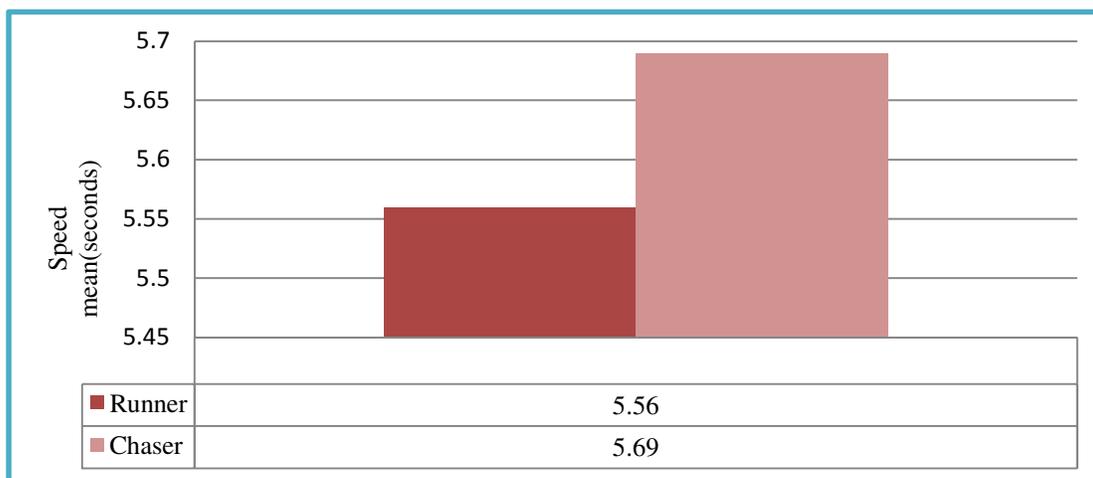
Table -2 explained the mean value of runner was found to be 12.95 with standard deviation of 0.52. Whereas, mean value of chaser was recorded 14.19 with standard deviation of 2.91. The mean difference was observed 1.24. The standard error difference of mean was found .76. The obtained 't' value was 1.62. Results showed insignificant mean differences between runner and chaser with regard to agility as the obtained 't' value of 1.62 was not found to be statistically significant at .05 level. The comparison of mean scores of both the groups has been presented graphically in figure-2.

Table -3 explain that the mean value of runner were found to be 1.77 with standard deviation of 0.43 where as mean value of chaser were recorded 1.93 with standard deviation of 0.25. The mean difference was observed .16. The standard error difference of mean was found 0.13. The obtained 't' value was 1.256. Results showed insignificant mean differences between runner and chaser with regard to cardiovascular endurance as the obtained 't' value of 0.56 was not found to be statistically significant at .05 level. The comparison of mean scores of both the groups has been presented graphically in figure-3.

**Table-1**  
**Significance of difference between runner and chaser with regard to the biomotor ability i.e. speed**

Variable	Groups	N	Mean	SD	MD	SEDM	't'
Speed	Runner	15	5.56	.67	.12	.22	.56
	Chaser	15	5.69	.49			

$t_{0.05}(28)=2.05$



**Figure-1**  
 Graphical representation of mean scores between runner and chaser with regard to the biomotor ability i.e. speed

**Table-2**  
**Significance of difference between runner and chaser with regard to the biomotor ability i.e. agility**

Variable	Groups	N	Mean	SD	MD	SEMD	't'
Agility	Runner	15	12.95	.52	1.24	.76	1.62
	Chaser	15	14.19	2.91			

$t_{0.05}(28)=2.05$

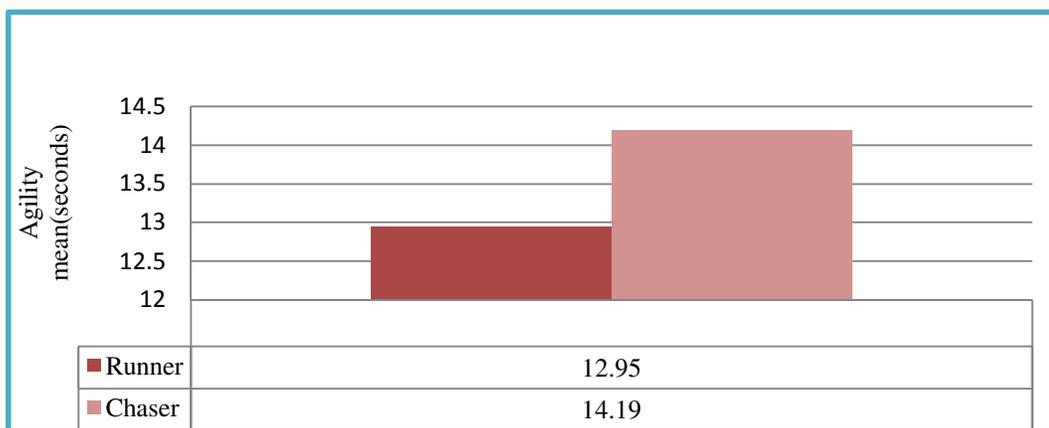


Figure-2

Graphical representation of mean scores between runner and chaser with regard to the biomotor ability i.e. agility

Table-3

Significance of difference between runner and chaser with regard to the biomotor ability i.e. cardiovascular endurance

Variable	Groups	N	Mean	SD	MD	SEMD	't'
Cardiovascular endurance	Runner	15	1.77	.43	0.16	0.13	1.256
	Chaser	15	1.93	.25			

t<sub>0.05</sub> (28)=2.05

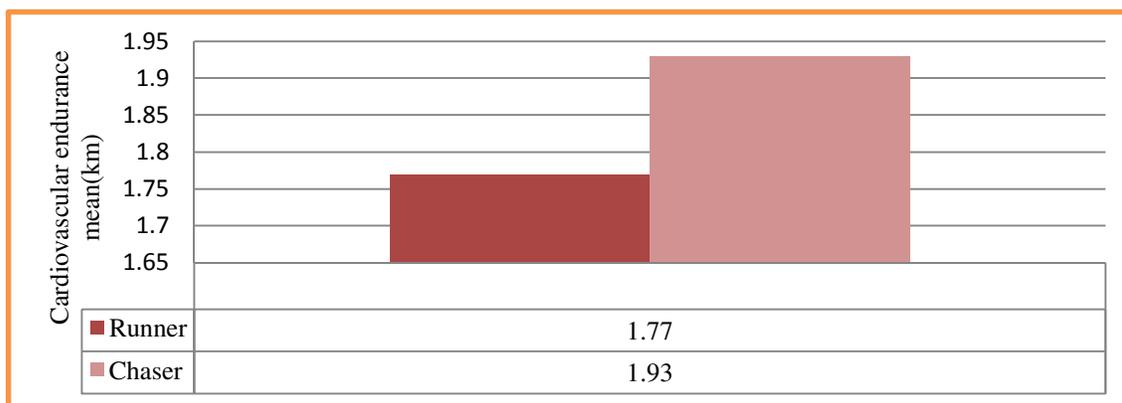


Figure-3

Graphical representation of mean scores between runner and chaser with regard to the biomotor ability i.e. cardiovascular endurance

**Discussion:** It is evident from above findings that insignificant differences were found with regard to selected biomotor variables i.e. speed, agility and cardiovascular endurance between runner and chaser of kho kho. The outcome of result might be due the nature of game in which runners as well as chasers have to interchange their role during the match so both the group have same training condition and schedules.

**Conclusion**

It is concluded that runner and chaser were found almost similar on all the selected biomotor variables i.e. speed, agility and cardiovascular endurance.

**References**

1. Kendre U.N., Study of effect of explosive strength, speed, endurance and agility training on performance of kho kho, Unpublished Doctoral Thesis, Gwalior: Lnipe (2005)
2. kho kho federation of India (1995)
3. Sharma M.P., Physical and physiological variable as predictor of kho kho performance, Unpublished Doctoral Thesis, Gwalior: Lnipe (2004)
4. Robert V.H., The path way of living, St. louis: C.V. Mosbey Company (1973)

5. Neilson N.P. and Johnson C.R., Measurement and statistics in physical education, Belmont, California.: Warsworth Publishing company, 245 (1970)
6. Barrow M.H. and Mc Gee. R., Practical approach to measurement in physical education, Lea and Philadelphia, 115 (1970)
7. Singh P.P., Comparisons and relationship of selected motor fitness components between kho kho and kabaddi players, Unpublished Master Thesis. Gwalior: Lnipe (1985)
8. Vishaw. G., Singh S., Singh M. and Rathi B., Comparative study of arm and shoulder girdle strength and agility of college-level baseball pitchers and non-pitchers, *Journal of Physical Education and Sports Management*, 2(2), 17-20 ISSN 1996-0794 (2011)