



# A Comparative Study on Speed and Endurance among Basketball and Kho-Kho Players of Hyderabad

**Mr. Shareefa Abed Abdullah**

Master of Physical Education University College of Physical Education, Osmania University

## ABSTRACT:

*The purpose of the study was to compare the physical fitness, speed and endurance variable of Kho-Kho and Basketball Players. To fulfil the objective of the study, (25 Kho-Kho and 25 Basketball) players. Only those male players were selected who have participated at minimum inter collegiate level. The data were collected in different coaching camps organized by the university. The age of the selected subjects ranged from 19 to 25 years. (Standing Board Jump and 60 yard dash tests) were used to measures the selected physical fitness variables of the players. In order to analyze the data t-test was used to analyze the data and investigator observed the significant different between Kho-Kho and Basketball players.*

**Keywords:** Badminton game; Kho-kho game; Bio-energy systems; shot frequency.

## INTRODUCTION:

The study discusses the about the collection of subjects and data for the research analysis. It also explains the tools and methods used for the analysis of the subject skill performance in offensive and defensive. The exercises effect on the performance is analysed, through a longitudinal study, the Olympic Badminton Men's singles finals to assess some changes of the Badminton game characteristics. The results show a change in the game's temporal structure: a significant difference in the rally time, rest time and number of shots per rally (all  $p < 0.0001$ ;  $0.09 < \eta^2 < 0.16$ ).

Badminton is a recreational sport played using rackets to hit a shuttlecock across a net. Although it may be played with larger teams, the most common forms of the game are "singles" (with one player per side) and "doubles" (with two players per side). Badminton is often played as a casual outdoor activity in a yard or on a beach; formal games are played on a rectangular indoor court. Points are scored by striking the

shuttlecock with the racket and landing it within the opposing side's half of the court. Each side may only strike the shuttlecock once before it passes over the net. Play ends once the shuttlecock has struck the floor or if a fault has been called by the umpire, service judge, or (in their absence) the opposing side.

The shuttlecock is a feathered or (in informal matches) plastic projectile which flies differently from the balls used in many other sports. In particular, the feathers create much higher drag, causing the shuttlecock to decelerate more rapidly. Shuttlecocks also have a high top speed compared to the balls in other racket sports.

## OFFENSIVE & DEFENSIVE SKILLS

Individual offense is often called one-on-one badminton moves. Prefer to call it individual offense due to the fact that badminton is a team game. In teaching players individual badminton moves, often the wrong message can be sent. Players get mixed messages when they come to practice after a summer of working on individual skills and we ask them to integrate those skills

into a team concept. The various types of offenses are designed to use teamwork to free up or isolate players for good shots against a multitude of defenses. Offenses must be simple with the emphasis on execution and fundamentals. Offensive spacing should provide for strong offensive rebounding position as well as allowing for defensive balance. Offenses must be flexible to meet various types of defensive pressure. They must also have counter options that take advantage of any defensive overplays and traps. Offenses can be categorized into Early, Set, Motion, Zone, and Spread. In a badminton doubles rally you will either be attacking or defending, and it's important to understand which tactical situation you're in, where you and your partner should be standing, and the effect your shot will have on the situation. In other words, it is important to understand basic badminton tactics! So if you are uncertain about these tactical aspects, read on.

**METHODOLOGY:**

The sample consisted of 25 basketball experts (25 male (expert group), mean age = 23.87, SD = 5.26) and 25 kho-kho experts (25 male (control group), mean age = 25.69, SD = 4.19). All twenty participants had normal or

corrected to normal vision. Participants in this study were male kho-kho players and male basketball players.

All participants were members of teams that competed in the Osmania University Championship. The sample was divided into two groups: kho-kho-players (10 males, respectively), and BASKETBALL-players. The coaches of tested teams were asked to separate their players in specified groups. Every participant was fully informed about the nature and demands of the study as well as its potential risks.

Variables included body height, body mass, broad jump, 5-m sprint, and basketball-specific tests of non-reactive agility and reactive agility (reactive-agility). Body height and body mass were assessed using a weighing scales. The broad-jump and 5-m sprint test were used to compare the overall training status of the offensive and defensive athletes. These procedures are explained in detail elsewhere. The basketball - specific CODS test and its complementary test of reactive-agility were theoretically designed through consultations with high-level athletes and renowned strength and conditioning experts from basketball, including coaches from teams of the highest competitive rank.

TABLE 1: showing the sample of the study:

Si. No	Name of the category	Number of the subjects
1	Group – I	25
2	Group - II	25

**RESULTS:**

The reliability parameters suggested a high consistency for reactive-agility-test and CODS-test (ICC of 0.85 and 0.91, and CV of 3% and 4.8% for reactive-agility and CODS, respectively in kho-kho players group-i; and ICC of 0.90 and 0.93, and CV of 2.4% and 3.6% for reactive-agility and CODS, respectively in Basketball players group-ii). The ANOVA showed no significant between-trial differences for both tests.

Both kho-kho players group-i (n = 10), Basketball players group-ii (n = 10) performed 15-20% better in the CODS than in the reactive-agility-test.

Table 2: Reliability analyses. Data are presented as means ( $\pm$  standard deviations).

	Basketball Players Group-II (N = 10)				Kho-kho Players Group-I (N = 10),			
	1 <sup>st</sup> day	2 <sup>nd</sup> day	CV	ICC	1 <sup>st</sup> day	2 <sup>nd</sup> day	CV	ICC
<b>CODS (s)</b>	6.94 (.47)	6.89 (.55)	.048	.91	7.46 (.37)	7.41 (.29)	.036	.93
<b>Reactive-agility (s)</b>	8.17 (.60)	8.19 (.71)	.030	.85	8.83 (.91)	8.92 (.98)	.024	.90

CODS – Basketball specific change of direction speed; Reactive-agility – Basketball specific test of reactive agility; CV – coefficient of variation; ICC – intra-class coefficient.

Correlations between reactive-agility and CODS were significant ( $r = 0.40$  and  $0.42$  for kho-kho players group-i (n = 10), Basketball players group-ii (n = 10), respectively;  $p < 0.05$ ), demonstrating that reactive- and non-reactive-agility-test shared less than 20% of the common variance.

Among kho-kho players group-is, defensive players were significantly taller (moderate difference), and heavier (moderate difference). Basketball players group-ii (n = 10) offensive players outperformed defensive players in CODS (moderate difference), while defensive players achieved significantly better results in P&RC (moderate difference). In Basketball players group-ii (n = 10), offensive and defensive players did not differ significantly in 5-m sprint (small difference), broad-jump (trivial difference), and reactive-agility performance (trivial difference).

Table 3: Differences in CODS, reactive-agility and perceptual-and-reactive-index (P&RC) between offensive and defensive players among kho-kho players group-is. Data are presented as means ( $\pm$  standard deviations).

	Offensive players	Defensive players	t-test	Effect size		
			T-value (p)	ES	- 95%CI	+95%CI
<b>Body height (m)</b>	1.87 (5.48)	1.92 (5.44)	-2.28 (.02)	-.91	-1.48	-.31
<b>Body mass (kg)</b>	91.1 (9.3)	96.5 (7.7)	-2.13 (.02)	-.69	-1.25	-.10
<b>Sprinting-5-meters (s)</b>	1.04 (.06)	1.07 (.07)	-1.40 (.08)	-.47	-1.03	.10
<b>Broad jump (cm)</b>	288.2 (13.0)	288.9 (27.6)	-.12 (.45)	.01	-.55	.57
<b>CODS (s)</b>	6.41 (.44)	6.82 (.37)	-1.75 (.04)	-.97	-1.64	-.26
<b>Reactive agility (s)</b>	8.33 (.69)	8.18 (.62)	.69 (.25)	.07	-.59	.74
<b>P&amp;RC (ratio)</b>	.77 (.06)	.83 (.06)	-1.91 (.03)	- 1.00	-1.68	-.29

CODS – Basketball specific change of direction speed; Reactive-agility – Basketball specific test of reactive agility; P&RC – index of perceptual and reactive capacity (ratio between achievement on CODS and Reactive-agility); CI – confidence interval.

**Group Statistics**

Groups		N	Mean Scores	Std. Deviation	Std. Error Mean
No. of volleys in 30sec	KHO-KHO PLAYERS GROUP-I (N = 10)	10	10.42	1.3214	.33462
	BASKETBALL PLAYERS GROUP-II (N = 10)	10	19.220	4.1854	.48450

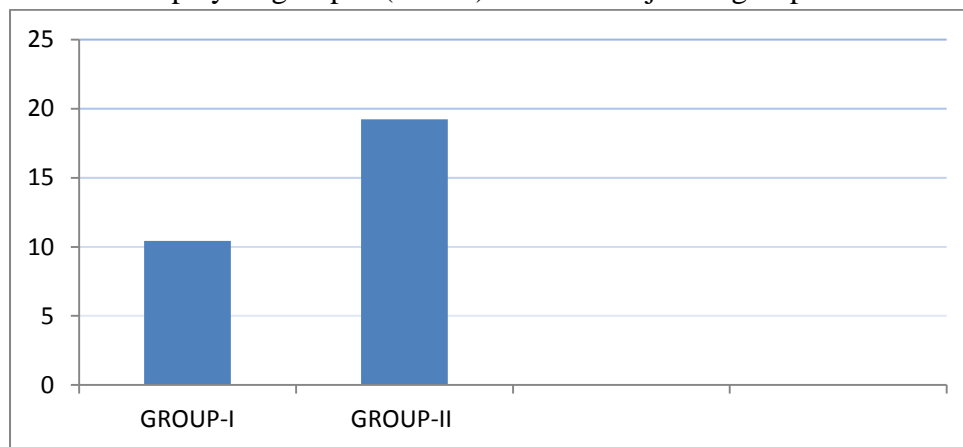
Table 4: Group Statistics

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
No. of volleys in 30sec	Equal variances assumed	6.459	42	.000	8.8200

Table 5: Independent Sample Test

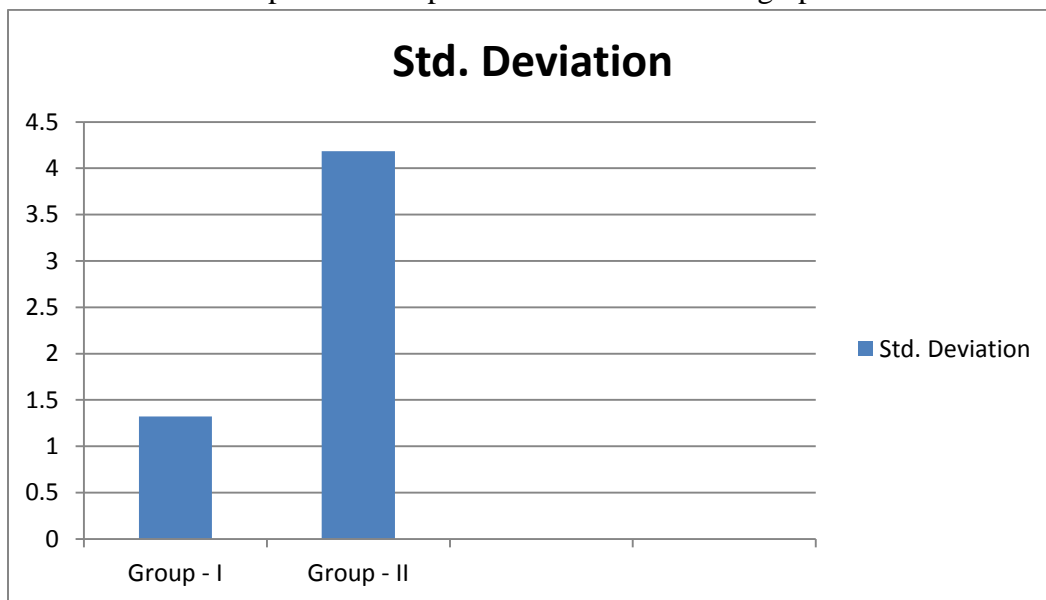
The calculated value of Mean on the above variable shows (number of volleys in 30 seconds). 10.42 and 19.220 respectively in among of kho-kho players group-i (n = 10), Basketball players group-ii (n = 10). The calculated value of Standard deviation on the above variable shows (number of volleys in 30 seconds) 1.32 and 4.1854 respectively among kho-kho players group-i (n = 10), Basketball players group-ii (n = 10). There is a little variation in the Mean value as kho-kho players group-i (n = 10), Basketball players group-ii (n = 10) and control junior group and this can be attributed that in this variable kho-kho players group-i (n = 10), Basketball players group-ii (n = 10).

GRAPH- 1: Comparison of Mean in volleying ability among kho-kho players group-i (n = 10), Basketball players group-ii (n = 10) and control junior group.



The above figure shows that there is variation in volleying ability in kho-kho in Hyderabad.

Graph – 2: Comparison of Std. Deviation graphs



The above figure shows that there is visualization skills variation in volleying ability in kho-kho in Hyderabad.

The above graphs show the comparative analysis of Mean and Standard Deviation in between kho-kho players group-i (n = 10), Basketball players group-ii (n = 10) to show the difference in volleys ability in kho-kho students.

SL.NO:	TEST	SCORES	
		KHO-KHO PLAYERS GROUP-I (N = 10)	BASKETBALL PLAYERS GROUP-II (N = 10)
1.	Attack kho-kho test	09	29
2.	Serve kho-kho test	18	28
3.	Pass kho-kho test	10	32

Table 6: The test results shows that the kho-kho players group-i has scored LESS compared to Basketball players group-ii.

The Basketball players group-ii (n = 10), performed attacks scored 29, and serve scored 28, pass scored 32. kho-kho players group-i (n = 10) has performed attacks score 09, and serve scored 18, pass scored 10.

**CONCLUSION:**

In conclusion, the training improves the basketball skills which are a fundamental element for high profit for the sport activities. The study analysis the basketball skills among junior kho-

kho players and senior kho-kho players. These results say that the performance of junior elite players is high compared to senior players. The study states that the training for basketball skills improves the performance among junior players.

The study found that athletes from interceptive sport types and junior males performed better. However, previous researchers have noted some weaknesses in these studies such as small sample sizes and methodological heterogeneity. Moreover, the authors pointed out that there are more studies involving male than female athletes and more work related to interceptive than strategic sports (as kho-kho) or static sports.

On the basis of our preliminary results we hypothesize that in the kho-kho players the experience-dependent learning and brain could level the differences of basketball skills correlated to the kho-kho players. Further studies with large sample sizes could verify this assumption.

#### REFERENCE:

- [1] Bouchard C, Shepherd RJ. Physical activity, fitness and health: The model and Key concepts In: C Bouchard, RJ Sheppard, T. Stephens (Eds): Physical Activity Fitness and Health: International Proceeding and consensus statement, Human Kinetics cham Piling (III), 1994, 77-88.
- [2] Esther H et al. The effect of age on physical fitness of deaf elementary school children. *Pediatric exercise science* 2007; 19:267-278.
- [3] Gaurav V, Singh A, Singh S. A study of physical fitness variables among baseball players at different level of achievement scientific. *Journal in sports and exercise* 2011; 7(2):34-38.
- [4] Gentova L. Energy and Macro nutrient requirements for physical fitness in exercising subjects. *Journal of clinical nutritional*, 2010.
- [5] Gupta A, Sandhu JS, Koley S. Study on the physical fitness, spinal mobility and flexibility in football. *Indian sport studies* 2002; 6(1):1-5.
- [6] Habbinen A. Association of physical fitness with health related quality of life in finish young men. *Journal of health and quality of life outcomes* 2010; 10:1477-7525.
- [7] Haga M. Physical fitness in children with high competence is different from that in children with low motor competence. *Journal of physiological therapy* 2009; 89(10):1089-1097.
- [8] Iahinone M, Mito R, Satio K. Physical activity fitness and health: Obesity and Lifestyle in Mamaica. *International collaboration in community health* 2004; 1267:39-50
- [9] Koutedakis Y, Bouziotas C. National Physical education curriculum Motor and cardiovascular health related fitness in Greek adolescents. *British Journal of Sports Medicine* 2003; 37:311-314.
- [10] Marry FW. Physical Fitness of 10 grade White and Black female students of Northern High School. *Completed Research in Health. Physical Education & Recreation* 1982; 24(19):53.
- [11] Ozer D. Comparison of Physical Fitness and Body Awareness between Special Olympics Players and Non-Players with Intellectual Disabilities. *Journal International Council for Health, Physical Education, Recreation, Sports and Dance* 2005; 41(3):55-60.



[12] Pathak BS. A comparative study of selected physical profiles between individual players team game players. Unpublished Master's Thesis, Krukshetra University, 2005, 37-42.

[13] Singh P. Normalative study of the Physical Fitness of Male Teenager of the state of Jammu & Kashmir. Unpublished Doctoral Thesis, Jiwaji University, Gwalior, 1988.

[14] Singh RM. Physical Fitness norms of Punjab High School Boys". (Unpublished Doctoral Thesis, Punjab University, Chandigarh, 1986.