



Agility ability and leg explosive strength of district level men kho-kho and kabaddi players: A comparative study

Somashakar R¹, Dr. Sudhakara G²

¹ Physical Education Director, Government First Grade College, Turuvekere, Tumkur, Karnataka, India

² Physical Education Teacher, Sri Prabulingaswamy High School, Hiremagalore, Chikmagalur, Karnataka, India

Abstract

Purpose of the study was to measure the agility ability and leg explosive strength of district level men Kabaddi and Kho-Kho players and their comparison.

Methodology: 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. Age of the subjects was 18 to 25 years. Agility and leg explosive strength were the criterion measure in this study. 10x4 meters shuttle run test was used to measure the agility ability and standing broad jump was used to measure the leg 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: 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 ($t=1.52$; $p>0.05$).

Conclusion: 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: leg explosive strength, agility ability, kho-kho, kabaddi

1. Introduction

The player's must be aware of the different types of fitness to develop an effective training program that centre on weak or important areas. Motor fitness or motor physical fitness, refers to how the players can perform at owns and sport and games, and involving the skills of agility, coordination, balance, power, and reaction time. So these five components of motor fitness are required to compete at high levels competitions, which is why the concept is seen as an essential part of any Sports person's training program. Motor fitness, also use the term motor ability, refers to individual performance as influence by the speed, agility, power, co- ordination and balance. The improvement of these abilities is very accommodating and essential in sports training and different kinds of training are required to achieve these motor abilities.

The game of kho-kho is stand on the natural principal of physical development. It is extremely enjoyable thrilling game, speed is heart of the game and to play four innings with same speed the players need a large amount endurance and stamina to controlled sprint, dodging, diving are the skill throughout the game. The defender perform such skill in the game like swift, zigzag running, circle running, faking stopping, twisting upper body, bending etc. Produce great psycho neuromuscular co-ordination especially at abdominal and spinal region. In the fast tempo of the game, perceptual motor skill must be needed through assessment and applied in the field. The kho-kho stress great skillful execution in chasing, running, faking, diving, pole dive, attacking, covering. Must be needed in kho- kho players. Extra it needs quickness, reflection, intelligence according

to game situation and perfect eye sight. The repetitive movements continue kho-kho, zig-zag running. Sudden fast movement, sudden slow movement, footwork may cause to injury. In kho-kho development of back, abdomen, neck muscles, leg strength for running and chasing etc. Should be developed by the coach and different training method must be used for development of the kho-kho players. In the game every players want to perform their best in the filled in chasing and running skills. Some following motor fitness variables are required in kho -kho players. The kho- kho player's performance depends high level of motor finest factor like speed, endurance, agility, power, flexibility, balance, reaction time, neuromuscular co- ordination, explosive strength, speed of movement and match practices are the principal qualities which should go with the kho-kho players. The Coach and game expert must be looked- for to develop these abilities in the kho-kho players through implement the various training methods. Now a day's more development noticed in this game if they are physical fitness, skill development, team work and standard of individual player all is improving day by day.

In Kabaddi, the specific fitness is relevant with reference to strength, speed and co-ordination. Fitness training equips the sportsperson to face the physiological and psychological challenges that come his way in his competitive sports career. Specific fitness enables the player to perform the unusual movements required by the concerned sport, which the non-sportsman does not perform in his everyday routine. Specific fitness however depends a lot on general fitness and this is the reason why the sportsperson has to give equal importance to both general as well as specific fitness, to

succeed. Since strength and endurance are the primary requisites of sportsperson, the training program should commence with physical excises and activity. Kabaddi being a team game, every player has a specific role to play in defense and offense. The motor qualities differ from player to player and specific abilities of players occupying different positions or roles in the team game also differ. For example, the specific fitness of a raider is slightly different from that of the main defense player. This calls for the designing of individual training programmes for each player, as far as possible, especially when they reach a certain standard of performance.

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.

1.1 Purpose of the Study

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

2. Methodology

2.1 Selection of Subjects

To achieve the purpose of the study the data was collected from twenty kho-kho and twenty kabaddi men players having District level participation and age ranged from 18 to 25 years.

2.2 Test Administration

The Agility ability was measured by 10x4 meters shuttle run test and standing broad jump was used to measure the leg explosive strength.

2.3 Statistical Technique

The obtained data were statistically analyzed by using ‘t’ test, to compare the agility ability and leg explosive strength of district level Kabaddi and Kho-Kho men players.

3. Results of the Study

The data was analyzed by ‘t’ test. The significance of mean difference found between score obtains on the agility ability and leg explosive strength of district level Kabaddi and Kho-Kho men players.

Table 3.1: Mean Difference between District Level Kabaddi and Kho-Kho Men Players on Agility Ability

Variable	Numbers	Players	Mean	S.D	t-Value
Agility Ability	20	Kabaddi players	12.35	1.09	2.07*
	20	Kho-Kho players	11.21	0.69	

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

The Table-3.1 shows that the mean values of Kabaddi players and kho- kho men players on agility ability 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.

Table 3.2: Mean Difference between District Level Kabaddi and Kho-Kho Men Players on Leg Explosive Strength

Variable	Numbers	Players	Mean	S.D	t-Value
Leg Explosive strength	20	Kabaddi Players	153.00	26.74	1.52
	20	Kho-Kho Players	180.05	16.10	

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

The Table-3.2 shows that the mean values of Kabaddi players and kho kho players on leg explosive strength were 153.00 and 180.05 respectively. The obtained ‘t’ ratio was 1.52, 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.

4. 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. Chowdhury, Mitra and Gayen (2015) [5] 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 those 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) [6], Compare the skill related fitness parameters (strength and speed) between Kho-Kho and Kabaddi Players and found significant difference between these two groups. Patel and Datta (2014) [7], reported significant difference in explosive strength when they

compared that ability between Kho-Kho and Kabaddi players.

5. Conclusion

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

6. References

1. Datt V, Mane M. A competitive Study of Speed, Strength and Agility of Inter Collegiate Basketball and Volleyball Players, *Variorum Multi- Disciplinary e-Research Journal*. 2013; 4(2):1-5.
2. Kansal DK. *A Practical Approach to Test, Measurement and Evaluation*. SSS Publication, New Delhi, 2012, 291-293.
3. Garrett H, Woodworth RS. *Statistics in Psychology and Education*; 5th Ed. Longmans, Green and Co. Ltd. 119 West Street, New York, USA, 1977.
4. Haque A, Ghosh S. 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*, 02, March/April Issue, 2014, 203-206.
5. Chowdhury M, Mitra S, Gayen A. Analysis of selected Motor Fitness Components between Basketball and Kho-Kho Players, *Indian Journal of Applied Research*. 2015; 5(4):657-658.
6. Kumar A. Comparison status of strength and speed between Kho-Kho and Kabaddi Male Players, *International Journal of Multidisciplinary Research and Development*. 2014; 1(7):63-66.
7. Patel MM, Datta NK. Selected Physical and Physiological Components of Inter Collegiate Kabaddi and Kho-Kho Players – A Comparative Study, *Global Journal of Research Analysis*. 2014; 3(6):01-03.