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A COMPARATIVE STUDY OF SELECTED PHYSICAL FACTORS OF FEMALE PLAYERS OF KABADDI AND KHO- KHO

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Abstract: *Kho- Kho and kabaddi are the most recognized and popular traditional games played in India. It is a form of tag game, like Kabaddi, mostly popular in the Indian subcontinent. Kho- Kho has originated in the Indian state of Maharashtra. It is played by several teams consisting of 12 players out of which 9 enter the field and the remaining 3 become the defending members. One of the oldest and popular games in India is Kabaddi. From Tamil Nadu to International land, Kabaddi has travelled far and long. After a significant journey, Kabaddi has made it to the foreign land and is considered as one of the most thrilling games of India that require lots of energy besides strategy. Sports have a big role to play in the development of the individual as physical exercise is equally important in the mental growth of an individual. Kabaddi is a game that helps people find their inner power, which allows them to tackle overwhelming anxieties, disappointments, and problems in everyday life. Many people multitask to some extent to increase productivity, and in today's society, when the speed of life is sometimes frantic, such people are often considered as efficient and productive. And, as part of the individual's mentality, the game of Kabaddi necessitates the proactive, presence of mind, team management, physical strength, crisis management, and knowing the opponent's plan. Kabaddi necessitates a variety of physical attributes, including agility, strong lung capacity, muscle coordination, mental present, and rapid reactions. Forecasting ability and practise aid in understanding the circumstance and acting appropriately at the appropriate time with the appropriate judgments. The game is justified by winning or losing, and as a participant, one learns to accept everything with openness. As a result, Kabaddi aids in the development of the appropriate spirit amongst individuals. Sports and physical activity have been regarded fundamental components of human life from the beginning of time. Human existence necessitates physical exercise. Sports are now frequently considered as a social as well as a self-help activity. In recent times, the spirit of strong competition has changed the complexion or scene of sports. In order to attain fame in the sport of Kho- Kho and Kabaddi, players must possess a variety of physical fitness components. The goal of the study was to see if there were any significant variations in physical fitness between collegiate female's Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh. In order to meet the study's goal, fifteen Kabaddi players and fifteen Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh were chosen as participants. Selected criteria factors such as speed, agility, explosive power, and strength endurance were assessed on the selected volunteers. They were put to the test in the 50-meter sprint, shuttle run, standing broad leap, and sit-ups. The acquired data was statistically analysed using the t-ratio to determine if there were any significant differences.*

Key Words: Physical fitness, speed, agility, Kho- Kho, Kabbadi, statistically, acquired, volunteers.

Since the dawn of time, sports and physical exercise have been considered essential components of human life. Physical activity is a requirement for human survival. Sports and games are commonly acknowledged to meet the needs of human activity. Electronic media's revolutionary breakthroughs have increased its importance not only in the lives of participants, but also in the lives of millions of spectators, viewers, and listeners. Sports are now widely regarded as both a social and a self-benefiting activity. The spirit of fierce competitiveness has



transformed the complexion or scene of sports in modern times. The desire to win gold at the Olympics and other international contests has sparked an interest among sports scientists to investigate all factors and possibilities that might help to improve high-level sport performance. Today, there is an increasing emphasis on doing reasonably well and living a long life. Because it is difficult to move, more scientific information is gradually revealing the keys to fitness and activities to attain these principles. Numerous simple chores need physical exertion. Mechanically mobile culture has shifted to relying on muscles rather than machinery to go around. In sum, we continued to spend the remainder of the population's free time (including children), and a national audience grew. As a result, the objective of obesity and excess weight, among other things, to illustrate that the situation is becoming worse. However, statistics show that the vaccination pays off, therefore his or her doctor will have to wait for the final results. The goal is to get everyone to act right now. Quality The human body is responsible for fine-tuning the engine. It assists us in presenting ourselves to ourselves. Exercise is the best-looking, most joyful experience that describes the scenario that allows us to perform at our best. It's more particularly loved leisure time activities as well as urgent needs of energy, enthusiasm, and alertness to complete everyday chores. "It's an unsuitable individual who couldn't continue the scenario process, stress tolerant, capable of standing, and in excellent health, and it's based on a key." Various components of physical fitness must be held by Kho-Kho and Kabaddi players in order to achieve greatness in the area of Kho-Kho and Kabaddi.

Statement of the problem- The purpose of this study was to compare selected physical factors among female collegiate Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

Delimitation-

1. The subject for this study each 15 college female Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh were selected as subjects between the age group of 18 to 25 years.
2. The physical variables selected for the present study speed, agility, strength endurance and explosive strength (horizontally).
3. The physiological variables selected for the present study the resting pulse rate, breath holding time and Vo₂ max.
4. Years of experience in the play court regular activities pertaining to their day today activities were not considered.
5. The tests were conducted randomly in the premises of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

Objectives- The present research study focuses the following objectives regarding physical variables among college female Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh are:

1. To find out the significant differences on such as speed, agility, strength between college female Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.
2. To find out the significant differences on selected physical parameters such as breathe holding time between college female Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.
3. To compare the physical fitness among college female Kabaddi and Kho-Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

Hypothesis- 1. It was hypothesised that Kho-Kho players may have the better speed, explosive power than the Kabaddi players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

2. It was hypothesised that Kabaddi players may have the better agility, strength endurance than the Kho-Kho player of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

1.6 Significance of the study

* This research may helpful to suggest ways and means for improving better fitness through special type of physical exercises.



* The results of the study may help the teacher and physical educator to find out which players may be better in the selected physical variables.

* The study given additional knowledge to the area of research.

Selection of subjects- The study's goal was to examine several physical fitness factors among collegiate female's Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh. To meet the study's goal, 15 collegiate female's Kabaddi and Kho-Kho players, ranging in age from 18 to 25, were chosen as participants from Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh.

Selection of variables- In the present study, the investigator selected the following variables.

1. Speed, 2. Agility, 3. Explosive strength, 4. Strength Endurance

Selection of tests- The goal of this study was to see if there was a significant difference in chosen physical fitness factors such as speed, agility, strength endurance, and explosive power between university Kho- Kho and Kabaddi players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh. The investigator reviewed several literatures and conferred with physical education specialists before deciding on the following test items, which are listed in Table. I and are standardized and virtually acceptable for the aim of this study.

Table 1: Selection of test

Sr. No.	Variables	Tests
1.	Speed	50 mtr dash
2.	Agility	Shuttle run
3.	Strength endurance	Bent knee sit ups
4.	Explosive power	Standing broad jump

The investigator has learnt the procedure and method of administering the tests and had a number of practice session in order to familiarize the testing procedure.

Test Administration- 50 Meters Run, Purpose: To measures the speed.

Equipment: Stop watch with a split

Administration: It is recommended that two subjects run concurrently. Both of them begin from a standing stance. "Are you ready" and "Go" are presented as orders. When the starter is told to proceed, she drops his arm, allowing the timer in the finishing line vehicle to begin timing. The subjects run as fast as possible across the finishing line.

Scoring: The elapsed time from the starting signal until the runner crosses the finishing lines is measures to the nearest tenth of a second.

Shuttle Run- Purpose: To measures the agility.

Equipment: Two blocks of wood 2x2x4 inches behind one of the lines.

Administration: The pupil starts form behind of other line. On signal, the pupil runs to the blocks, picks one up, runs back to the starting line and places the block behind the line; he then runs back and picks up the second blocks, which he carries across the starting line. To eliminate the necessity for returning the block after each race, start the race alternately, first from behind one line and then from behind the other. Two trials are permitted. Scoring: Record the time of the better of the two trials to the nearest tenth of a second.

3 Sit-Ups- Purpose: To measure the abdominal strength endurance.

Procedure: The subject took a supine position on clean floor. The knees OS were bent, feet parallel to each other. The angle between knees was kept below 90°. The student's hands were clasped behind the neck and elbows were placed squarely on the mat. The ankle was firmly held by a partner. The patient pushed his upper body forward to coil opposition and contacted his knees with elbows before returning to the supine posture to do the bent knee sit-up. This producer's name was repeated as many times as possible for one minute. Throughout the



exercise, the fingers were grasped behind the neck.

Scoring: Number of sit-ups done in one minute is record as the individuals score.

4 Standing board jump- Purpose: To measure explosive power in horizontal direction.

Equipment: Steel Measuring Tape.

Procedure: The subjects were taught, the method to perform standing board jump perfectly by the investigator. Before the execution of standing board jump test, subjects were directed to practice for a few minutes. A horizontal line was marked in the long jump pit. The subject stood behind the line facing the pit, feet parallel and then swung their arm forward and backward assuming a crouched position with knees bent at the right ankles. He then jumped forward as far as possible.

Scoring: The distance between the nearest break point to the horizontal line was recorded as the subject's performance in the nearest centimeter. The best of the three trials was recorded as the test score.

Statistical procedure- The purpose of the study was to find out the significant difference, if any, between college female Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh on selected criterion variables. The subjects were tested on selected criterion variables and they were analyzed statistically by using t-ratio to find out the significant difference. In all cases .05 level of confidence was fixed to be the significance.

Analysis of the data- The analysis of the data for physical and physiological variable among college female Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh have been analyzed and presented separately.

1 Speed

The data collected on speed were analyzed and presented in Table 2.

Group	Mean	Standard Deviation	t-ratio 5.78*
Kabaddi Players	6.49	0.21	
Kho-kho Players	6.16	0.08	

Table 2: The mean, standard deviation, and 't' ratio value of college female Kabaddi and Kho- Kho player of speed

*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with d f 1,28 was at 2.02).

Table 2 indicated that the values of college female's Kabaddi and Kho- Kho players on speed were 6.49 and 6.16 respectively. The obtained t ratio value of 5.78 was greater than required table value 2.02 for significance at 0.05 level of confidence withdf1, 28. There sults of the study shows that there was a significant difference that exist among college female Kabaddi and Kho- Kho players on speed.

The value of college female Kabaddi and Kho-Kho players on speed were graphically represented in Figure 1.

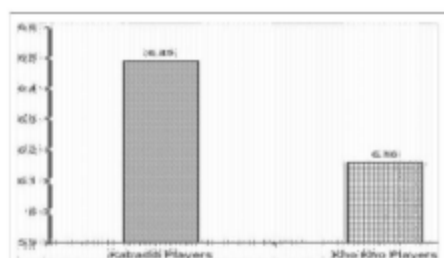




Fig 1: The mean value of college female Kabaddi and Kho- Kho players on speed

Agility-

The data collected on agility were analysed and presented in Table 3.

Table 3: The mean, standard deviation, and 't' ratio value of college female Kabaddi and Kho- Kho players on agility.

Group	Mean	S.D.	t-ratio 8.18*
Kabaddi Players	9.35	0.21	
Kho- Kho players	10.25	0.38	

Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df 1, 28 was at 2.02).

Table 3 indicated that the mean values of college female Kabaddi and Kho- Kho players on agility were 9.35 and 10.25 respectively. The obtained t ratio value of 8.18 was greater than required table value 2.02 for significance at 0.05 level of confidence with df 1, 28. The results of the study shows that there was a significant difference that exist among college female Kabaddi and Kho- Kho players on agility. The mean value of college female Kabaddi and Kho- Kho players on agility were graphically represented in Figure 2.

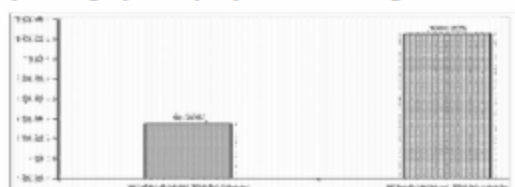


Fig 2: The mean value of college female Kabaddi and Kho- Kho players on agility.

Strength endurance-

The data collected on strength endurance were analysed and presented in Table 4.

Table 4: The mean, standard deviation, and 't' ratio value of college female Kabaddi and Kho- Kho players on strength endurance.

Group	Mean	Standard Deviation	t-ratio 4.21*
Kabaddi Players	43.86	3.02	
Kho- Kho players	38.93	3.41	

*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df 1, 28 was at 2.02).

Table 4 indicated that the mean values of college female Kabaddi and kho -kho players on strength endurance were 43.86 and 38.93 respectively. The obtained t-ratio value of 4.21 was greater than required table value 2.02 for significance at 0.05 level of confidence with df 1, 28. The results of the study shows that there was a significant difference that exist among college female's Kabaddi and Kho- Kho players on strength endurance. The mean value of college female Kabaddi and Kho- Kho players on strength endurance were graphically represented in Figure 3.

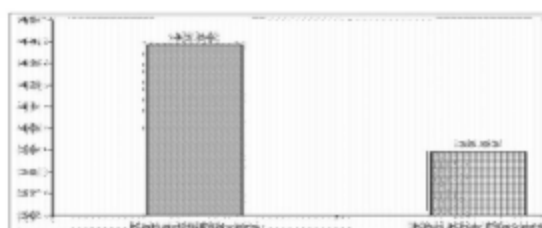


Fig 3: The mean value of college female Kabaddi and Kho- Kho players on strength endurance

4 Explosive power-

The data collected on explosive power were analyzed and presented in Table 5.

Table 5: The mean, standard deviation, and 't' ratio value of college female Kabaddi and Kho- Kho players on explosive power

Group	Mean	Standard Deviation	t-ratio
Kabaddi Players	184.66	3.47	4.53*
Kho- Kho players	190.33	3.41	

*Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level with df 1, 28 was at 2.02).

Table 5 indicated that the values of college female Kabaddi and Kho- Kho players on explosive power were 184.66 and 190.33 respectively. The obtained t-ratio value of 4.53 was greater than required table value 2.02 for significance at 0.05 level of confidence with df 1, 28. The results of the study shows that there was a significant difference that exist among college female Kabaddi and Kho- Kho players on explosive power. The mean value of college female Kabaddi and Kho- Kho players on explosive power were graphically represented in Figure 4.

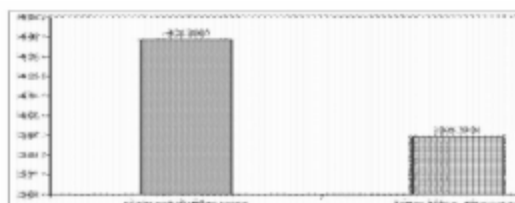


Fig 4: The mean value of college female Kabaddi and Kho- Kho players on explosive power.

Discussion of findings-

The study's findings suggest that there is a substantial difference in physical attributes such as speed, agility, strength endurance, and explosive power between collegiate female's Kabaddi and Kho- Kho players. It might be because of the nature and location of the game chosen for this investigation.

Discussion of hypothesis-

* There was a significant difference that exist among college female Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh on speed. Kho- Kho players have better performance than the Kabaddi players on speed. Thus the hypothesis was accepted.

* On agility, there was a considerable difference between college female's Kabaddi and Kho- Kho players of Shree Tika Ram Kanya Mahavidyalaya, Aligarh, Uttar Pradesh. Kabaddi players have higher agility than Kho- Kho players. As a result, the hypothesis was accepted.

* On strength endurance, there was a substantial difference between college female's Kabaddi and khokho players. Kabaddi players outperform Kho- Kho players in terms of strength endurance. As a result, the hypothesis was accepted.

* On explosive power, there was a considerable difference between college female's Kabaddi and Kho- Kho players. In terms of explosive force, Kho- Kho players outperform Kabaddi players. As a result, the hypothesis was accepted.

REFERENCES

1. Abhishek Verma, Devpal Rana, Abhimanyu Singh. To Develop Physical Profile of Kabaddi Players: The Descriptive Study, Indian Journal of Movement Education and Exercise Sciences Adams W.C. et al.,



- Foundations of Physical Activity p.132. 2011;1(1):46-49.
2. Ajmir Singh. Essential of Physical Education, (New Delhi: Kalyani publisher). Arokiam, A Comparison of Speed Agility and Strength Endurance between Kabaddi and Kho- Kho players, Unpublished M.Phil., Dissertation, Annamalai University 2002-2003.
 3. Arvind Rami C, Neeraj Silawat. A Study of the Psychological Factors Anthropometric Measurefemalet and Physical Fitness of Selected University Players in Gujarat, Shodh, Samikshaur Mulyankan, (International Research Journal) 2009;2(6):853-854.
 4. Baumgarthar J, Andrews Jackson. Measurefemalet for Evaluation in Physical Education and Exercise Science, Duhugue: Wm.C. Brown Publishers 1991.
 5. Bhaskar Salvi D, Quadri Sayed Javeed, Jyoti Dhama Prakash. A Study of Self-Conceptand Adaptability of Inter University Kabaddi Players, International Journal of Health, Physical Education and Computer Science in Sports 2011;2(1):106-108.
