

Analytical Study on Fitness Levels of Kho-Kho Players

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Abstract

The basic purpose of physical education is to develop students' skill sets, knowledge bases, and mental outlooks via the medium of human movement. In most countries, students at the secondary and higher school levels are required to take some kind of physical education. The players' ages varied from 18 to 20, making up the bulk of the team. Performance physical fitness components include the 50-meter sprint, standing broad jump, bent-knee sit-ups, 600-yard dash, reaction time test, speed endurance, 300-meter run, agility (10x4-shuttle run), and flexibility (Wrist and Ankle Flexibility). The current research evaluated the psychological well-being of Kho-Kho athletes to their performance on the field. A total of 80 male kho-kho players were used in the study: 20 from the national team (average age: 25.72 years), 20 from the state team (average age: 23.12 years), and 20 from the district team (average age: 20.66 years). Positive mental health, which is correlated with a high degree of mental organisations and integration, was shown to be a differentiating factor in kho-kho athletic success. This data reveals a negative correlation between a player's kho-kho playing ability and his or her agility, speed, Reaction Ability, Speed Endurance, and ankle flexibility..

Keywords: Physical Fitness Variables, Kho-Kho, Speed, Reaction Ability, Agility, Flexibility, Speed Endurance.

1. INTRODUCTION

Traditional Indian sport Kho-Kho dates all the way back to ancient times. On the Indian subcontinent, it is second only to kabaddi as the most played traditional tag game. The court for Kho-Kho is rectangular, with a central channel linking two poles located at opposite ends of the field. Nine players from the pursuing team are out there, with eight of them seated in the center lane, while three players from the defending team sprint around the court trying not to be touched. If you look at the seated players on the pursuing team, you'll see that they're all facing in the other way.

One member of the chasing team may run around the court at any time in an attempt to tag members of the defending team, with one point scored for each tag and each tagged defender being required to leave the field; however, the active chaser is not allowed to cross the central lane to access the other half of the field, and may not change direction once they have begun running toward either pole. To get past these limitations, the active chaser on the chasing side may either pat the back of a seated teammate facing the opposite half of the court and shout "Kho" to swap positions with them, or dash to the space behind either pole and switch direction/half. There are four nine-minute halves, two for each team's offensive and defensive efforts. The victorious team is the one that amasses the most points at game's finish.

The sport is popular all throughout South Asia and has a sizeable following in countries like South Africa and England. Among school-aged youngsters in India and Pakistan, it is a popular competitive sport. In August of 2021, India introduced the first professional Ultimate Kho Kho league. A sport is a competitive game played by individuals or teams according to established rules, whether it be inside or outdoors. It's something individuals do in their spare time for the express purpose of having a good time. It used to be looked down upon as something unimportant, something that only the most hedonistic among us indulged in. The contemporary era has brought about a dramatic shift in this concept of sports, as participation in and consumption of sports are now considered fundamental to a fulfilling and healthy lifestyle. This is according to research (Bucher, 1964). The capacity to maintain a healthy, fulfilling lifestyle is the definition of fitness. It encompasses not only the mental and emotional but also the social and spiritual dimensions of a person. Because of the intricate web of relationships between these many aspects of a man's health, he will be unable to function normally in his profession or daily life if even one of them is out of whack. Having a healthy heart, blood vessels, lungs, and muscles is the essence of physical fitness.

A wide range of physical fitness is required for optimal human function. For his own growth, sustenance, and success, he must obtain each kind as it is needed. There are many different kinds of fitness, but the most common ones include physical fitness, mental fitness, social fitness, and emotional fitness. Since physical fitness is the foundation of that amazing human construction we call "personality," it takes precedence among the different types of fitness. Man was built to move, since we are originally a muscular species. Strength training helps men endure, cope with stress, and keep going even when things become tough. Numerous studies have shown that being physically fit is associated with success in school and other endeavors.

To educate students in the areas of skill, knowledge, and attitude development via human movement is the primary goal of physical education. Physical education is a mandatory aspect of the curriculum at the secondary and postsecondary levels in most countries. Many countries throughout the globe have given physical education this kind of reform. Taking a holistic view of education, physical education programmed in schools give each student the chance to evaluate his or her current level of fitness and, based on that assessment, choose activities that will help him or her improve areas of weakness and foster the growth of transferable skills and knowledge that will serve him or her well throughout his or her lifetime. The distinctive value of physical education is in the improvement of both physical and psychomotor abilities.

2. LITERATURE REVIEW

Poonam (2017) It is the goal of this research to contrast the fitness levels of professional basketball players with those of Kabaddi players. 40 kabaddi players and 40 basketball players were needed to complete the research. To ensure that all of the chosen male players had at least intercollegiate experience, only those who meet that standard were considered. The aspects of physical fitness that were evaluated were only speed, explosive arm strength, and agility. The average was calculated so that players from various regions may be compared to one another.

Dr. Yallappa M (2020) Due to its many benefits, yoga and yogic practise have been the subject of this research. The benefits of physical education on students' health and well-being have been studied again, and the field itself has been legitimised as an important one. A healthy workout routine should include working on your flexibility and agility. Forty Kabaddi and Kho-Kho players were randomly split into an experimental (N = 20) and control (N = 20) group, with each group taking a sit-and-reach test for flexibility and a shuttle run test for assessed agility both before and after a six-week training session. The individuals in the study's experimental group engaged in yogic exercises for a total of six weeks. As compared to the control group, subjects in the experimental condition demonstrated significant gains in both flexibility and agility. Pre and post-test results for the experimental and control groups were significantly different. Therefore, it can be inferred that kabaddi and kho-kho players experience considerable improvements in flexibility and agility after engaging in yogic activities for six weeks.

Dhamane I. G1 et.al (2018) Being physically fit means you can work hard for an extended period of time without compromising your health and can bounce back quickly. This is the ultimate consequence of a person's level of strength, stamina, pliability, speed, and agility. A player's ability to improve her kabaddi or khokho talents depends on a number of things, including her genetics, her hygiene, her style of life, and her diet. Thirty kabaddi players and thirty kho-kho players from a district-level competition in the Nandurbar district were chosen to participate in the current research. Comparative analysis of kabaddi and kho-kho female athletes' fitness levels. The age range of the topic is 18-20. A 5% significance threshold was used.

Rafiq Ahmad Mir (2021) The research set out to compare the speed of school-aged kho-kho and kabaddi players in the Ganderbal area. The methodology included the selection of 100 players (50 kho-kho boys and 50 kabaddi boys' players) from different schools in the Ganderbal area. The players' ages varied from 14 to 19 years old. The fifty-yard dash served as the standard test for measuring sprinting ability. The statistical methods utilised to examine the data included the mean, standard deviation, and t-test. The significance level was established at the 0.05 level of confidence. Speed was shown to be significantly different between kho-kho and kabaddi players.

MUKESH KUMAR VERMA (2017) Modern sports training places a higher focus on mentally preparing the athletes than on physically preparing them, and therefore more attention is being paid to psychological studies of the mental traits of elite athletes. In addition to the obvious physical disparities, kho-kho players are also different mentally from male sportsmen. Athlete performance may be affected by several factors, one of which is the athlete's achievement motivation (kho-kho player). The researcher opted to conduct this study due to the importance they placed on accomplishment motivation in regards to competitive performance. Substances and

Techniques: Male and female kho-kho players from Dr. Ram Manohar Lohia Avadh University in Faizabad, Uttar Pradesh, were randomly recruited for this research (n=30). Kamlesh (1990) developed a test called the Sports Achievement Motivation Test (SAMT) to analyse a subject's drive to succeed. The instrument had 20 multiple-choice questions, with t-tests performed to compare groups and a threshold of 0.05 established for statistical significance. The research found that male and female college kho-kho players had different levels of intrinsic drive to succeed. The researcher draws conclusions on the levels of accomplishment motivation among college-aged male and female kho-kho players based on the data from this study. The researcher draws the conclusion from the data in this study that men collegiate kho-kho players are substantially more driven to succeed than their female counterparts.

3. METHODOLOGY

Selection of Subjects: This research has employed a random sampling method to pick its participants. One hundred twenty male Kho-kho players aged 18 to 20 from the state of Andhra Pradesh served as the study's participants. All of the players used have competed in junior national kho-kho tournaments for boys in 2014-2015.

Selection of Variables: Components of physical fitness serve as independent variables, while general Kho-Kho skill and performance serve as dependent variables.

Sample To conduct the study, 40 national male kho-kho players (Ave. age 25.72 yrs.), 40 state level male kho-kho players (Ave. age 23.12 yrs) and 40 district level male kho-kho players (Ave. age 20.66 yrs.) were selected as sample. The sample was collected through convenience sampling method.

Tests and Collection of Data

Components Measured	Tests
Muscular Strength	Pull-ups
Muscular Endurance	Bent Knee-Sit ups
Agility	Shuttle Run
Muscular Power	Standing Broad Jump
Speed	50 Mts Sprint
Cardiovascular endurance	(600 yards run/walk/12 min. run/walk)
Flexibility	(Wrist and Ankle Flexibility)
Reaction Ability	Foot Reaction test
Speed Endurance	300 Mts run

Pull-ups (Muscular Strength): Total score is based on the maximum number of reps you were able to perform.

The number of sit-ups with a bent knee in one minute was recorded as his result for the muscular endurance test. The timing for the agility test (Shuttle Run) was recorded to the nearest hundredth of a second. The best of his three attempts at the standing broad jump was recorded as his score. The 50-meter dash time was timed to the nearest tenth of a second for accuracy. A person's score in a test of cardiovascular endurance (600-yard run) was based on how quickly they completed the test. For the purpose of measuring flexibility (both wrist and ankle), the angle at which each subject's wrists moved from flexion to extension was measured independently for each hand and then averaged.

Timed reactions on the foot were recorded to the nearest tenth of a second to assess reaction time. When timing the 300-meter dash for speed endurance, the time was rounded up to the closest tenth of a second.

Competence in Playing: The ability to play at a high level is a necessary but not sufficient condition for success in any sport. How well each player does in the real game depends on this factor. This refers to the experts' evaluation of a player's performance in both defensive (running) and offensive (chasing) situations. In this research, three experts rated each player's performance during a kho-kho match on a scale of one to five, with the average representing that player's skill level.

4. RESULTS AND DISCUSSION

For the purpose of predicting the kho-kho playing ability of boys, we analysed the data using the person's product moment coefficient of correlation between the boys' overall playing ability and each of the performance physical fitness components.

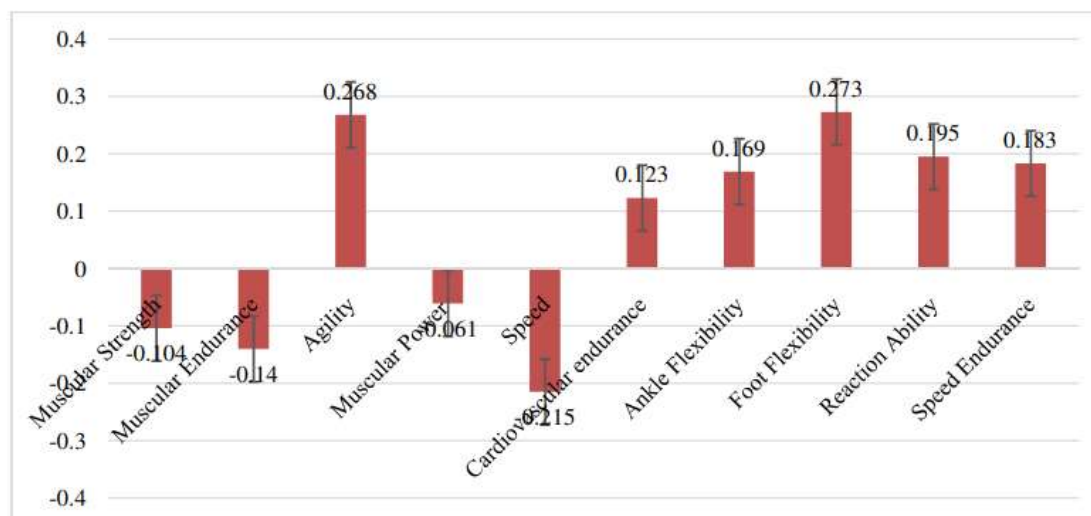


Figure-1relationship Between Physical Fitness Components and Playing Ability of Kho-Kho

Table-1Relationship of physical fitness Components with playingability of kho-kho players

S.No	Physical Fitness Components	Coefficient of correlation (r)
1	Muscular Strength	-0.104
2	Muscular Endurance	-0.14
3	Agility	0.268*
4	Muscular Power	-0.061
5	Speed	-0.215*
6	Cardiovascular endurance	0.123
7	Ankle Flexibility	0.169
8	Foot Flexibility	0.273*
9	Reaction Ability	0.195*
10	Speed Endurance	0.183*

* Significant at 5% level $r=0.174$, $DF = 118$

Table-1 reveals a negative but statistically significant relationship between the speed component of physical fitness and the kho-kho playing skill at the 5% level. At the 5% level, kho-kho players' agility, reaction time, speed endurance, and ankle flexibility were positively correlated with their performance. Muscular strength, muscular endurance, muscular power, cardiorespiratory endurance, and wrist flexibility are not significantly correlated with kho-kho playing skill. This data reveals that a player's kho-kho performance is inversely related to his or her measures of agility, speed, Reaction Ability, Speed Endurance, and ankle flexibility.

Table 2: Comparison of Positive Mental Health among Kho-Kho Players on the Basis of their Sports Achievements(N=120)

Groups	N	Positive Mental Health	
		Mean	S.D.
National Level Male Kho-Kho Player	40	20.80	2.98
State Level Male Kho-Kho Players	40	18.36	4.65
District Level Male Kho-Kho Players	40	17.60	4.50
		F=4.99, p<.01	

Table 2 shows that there is a large disparity between the national (M=20.80), state (M=18.36), and district (M=17.60) kho-kho players' good mental health. At the .01 level of significance, the computed F=4.99 supports this result. Since the F value obtained in One Way ANOVA was determined to be statistically significant, the Least Significant Difference Test was performed to compare the mean scores on the positive mental health survey for kho-kho players at the national, state, and district levels. Check out table 3 for the outcomes.

Table 3: Comparison of Mean Positive Mental Health Scores of Different Study Group with Least Significant Difference Test

Mean (I)	Mean (J)	Mean Difference (I-J)
National Level Male Kho-Kho Players	State Level Male Kho-Kho Players	2.43*
	District Level Male Kho-Kho Players	3.20*
State Level Male Kho-Kho Players	District Level Male Kho-Kho Players	0.76

* Significant at .05 level

The Least Significant Difference Test yielded the following findings: - Male kho-kho players at the national level reported considerably higher levels of positive mental health than their counterparts at the state and district levels. At the .05 level of statistical significance, the mean difference between the two groups was 2.43 and 3.20. Positive mental health among male kho-kho players at the state and district levels did not vary significantly. There was no statistically significant variation from the mean of 0.76.

The following findings are derived from the data analysis:

Positive mental health was shown to be considerably higher among national level male kho-kho players when compared to state and district level male kho-kho players, but no significant difference was identified among players at the state and district levels.

The current research found a significant relationship between the mental health and performance of male kho-kho players. According to the findings of the current investigation, Vaillant's hypothesis (2003:15) holds true. In terms of positive psychology, which incorporates emotional, social, and physical well-being, Vaillant (2003) conceived of mental health as a positive. It demonstrates that all four aspects of health—physical, emotional, social, and psychological—are necessary for success in any endeavor.

5. CONCLUSION

According to Table-1, there were favorable and statistically significant connections between kho-kho players' agility, reaction time, speed endurance, and ankle flexibility at the 5% level of significance. At the 5% level, the speed component of physical fitness correlates negatively but significantly with kho-kho players' skill. There are no links between other aspects of physical fitness and a player's kho-kho skill. Players' kho-kho skills seem to be inversely related to their agility, speed, response time, speed endurance, and ankle flexibility. Positive mental health of male kho-kho players does vary considerably by level of athletic accomplishment, according to the findings.

REFERENCES

1. Poonam (2017) a study of physical fitness between basketball and kabaddi players of m.d university rohtak issn 2249-3093

2. Dr. Yallappa m (2020) a study on flexibility and agility in yogic exercise of the kho-kho and kabaddi players e-issn: 2707-7020 p-issn: 2707-7012
3. Dhamane i. G1 and borane v.r (2018) comparative study of physical fitness variables of kabaddi and kho-kho girls players of nandurbar district, maharashtra doi: 10.24327/ijrsr
4. Rafiq ahmad mir (2021) a comparative study on speed among school level kho-kho and kabaddi players of district ganderbal issn: 2456-5474
5. Mukesh kumar verma (2017) gender difference of achievement motivation in university khokho players e issn-0976-7924
6. Anilkumar (2014), comparison status of strength and speed between kho-kho and kabaddi male players, international journal of multidisciplinary research and development, vol1(7):63-66
7. Sanesh kumari and navin kumar (2015), a comparative study of physical fitness components between kho-kho and kabaddi girls players of haryana,international journals of physical education,sports and health , vol.2(2);242- 244
8. Rathore, v. S., & singh, a. B. (2014). Analysis of physical and physiological parameters of kabaddi and khokho inter-varsity players. American journal of sports science and medicine, 2(5a), 13-1 sharma, v. K. (2010). Health and education. Saraswati house pvt. Ltd.,

