



MALE KHO-KHO PLAYING SKILL IS INFLUENCED BY FACTORS RELATED TO MOTOR FITNESS.

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ABSTRACT

The primary objective of this research was to identify the motor fitness characteristics that are most strongly associated with a man's Kho-Kho playing skill. The participants were 100 male Kho-Kho intercollegiate players from Panjab University, ranging in age from 18 to 25. These individuals were enrolled in Punjab University, Chandigarh, in a selection of programmed offered by its associated colleges. How different factors affect the ability to play Kho-Kho as a whole. Thus, various correlations were used to determine the relative importance of each motor fitness component to total Kho-Kho playing skill, as measured by calculating Pearson's coefficients. As the results demonstrate, the significance level linked with the five predictors was increased when all of them were input. This study used a randomized, one-group research strategy. Fifteen people were chosen at random to have their motor fitness, agility, speed, cardio-vascular endurance, and kho-kho playing abilities evaluated. A Pearson coefficient of correlation analysis was performed on the obtained data to determine the degree to which a given motor ability measure was related to the total playing skill of Kho Kho players.

Keywords Motor Fitness, Agility, Balance, Coordination, Power and Reaction Time

INTRODUCTION

The Indian civilization is the world's oldest. Several benefits have been bestowed to the earth as a result of its existence. Indian culture is the source of many global ideas and practices, including those in the fields of literature, art, sports, philosophy, science, politics, and economics. The Rig-Veda, an old and sacred religious text, is a priceless cultural treasure for the Indian people. The Indian subcontinent is home to two of the world's greatest epics, the Mahabharata and the Ramayana. The notion of Ram Rajya is based on the Ramayana and is intended to benefit all of humanity. Like many other forms of global entertainment, India's cultural heritage is the cradle of many popular sports. The ancient Indian treatises we have access to mention a wide range of games and sports. Kho-Kho is essentially an Indian card game. The Kho Kho game is popular in both suburban neighborhoods and city streets. And it's not just in California; this game's popularity has spread throughout the country. All of India's individual states are represented by Kho-Kho Associations that are in turn a part of the Indian national federation.

The ancient Indian game of Kho-Kho has a rich history. In India and other South Asian countries, the indigenous game of Kho-Kho is quickly rising to the top of the popularity charts when it comes to Physical Education. Every so often, an effort is made to include the Indian sport of Kho-Kho to the world competitive sports scene. Currently, competitions on this sport are conducted at the high school, college, and all-India interuniversity levels. Kho-Kho is a popular Indian game because it can be played with less resources and on a smaller playing ground than other sports. In addition, many people may engage in the activity as a team sport, gaining the health and fitness benefits as a result. Most junior and tertiary levels, as well as Zonal, State, inter-State, and all-India university levels, have competitions for the sport of Kho-Kho. Performance in competitive

Kho-Kho is highly dependent on the selection process: how the players are picked, and how accurate and trustworthy those criteria are. The present investigator found it desirable to design and standardize a co-relation of Kho-Kho playing game ability test, which could be of great use in selecting the sport talents in Kho-Kho for displaying top performance, despite the fact that there are varying opinions on the topic and no clear answer has yet been found. India places a premium on Kho-Kho and other sports. Multiple sports of varying types have a long history in our country for a variety of reasons dating back to antiquity. Different forms of physical activity continue to remain popular. Some sports really help us become bigger and stronger by keeping us physically active. While others are played again to establish a record or determine a champion in a tournament. Since Kho-Kho is a popular traditional game in India, academics there have opted to investigate it. Researcher in aforementioned study investigated link between Kho-Kho

According to the specificity law, an individual will only adapt to a training load that is similar in nature to the stimulus it was designed to overcome. This particular reaction has a bias toward emphasizing certain fitness-related skills. These skills are fundamental and can be easily taught to others. These skills are referred to as "bio-motor abilities" since they impact a person's physical movement. Definition of bio-motor skills: the capacity to do a variety of physical actions, including those requiring speed, endurance, flexibility, strength, coordination, etc. The Indian game of kho-kho is sometimes considered the foundation of all sports since it necessitates the development of fundamental bio-motor skills (speed, explosive strength, agility, flexibility, endurance, response ability, etc.). The best kho-kho players can quickly adapt their bodies for use in other sports. Flexibility, the ability of a joint or muscle to move through its complete range of motion, is a key component of bio-motor ability. It's a fundamental part of kho-kho and a lot of other sports as well. Key abilities including the kho-kho, pole dive, heel tap, and other talents may be seen. As an example, if a chaser wishes to quickly provide kho to his team members, he has to be able to extend his leg and hand forward in order to contact his teammates and offer kho; this requires a high degree of flexibility, which would otherwise prevent him from doing so. Also, being bendy helps keep you safe from sports-related injuries.

The capacity to complete a movement in a short amount of time is what we mean when we talk about speed. As a result, players need practice both speed and slowing down in order to maximize their potential. There are three factors that players and coaches should think about to improve these skills: the quickness with which one may respond to various inputs. Muscles' explosiveness is a function of their contraction speed. Body movement frequency, accuracy in performing actions at varying speeds It's often assumed that "skilled" athletes have a high level of agility.

LITERATURE REVIEW

Velu, Kumar et.al (2018). The researchers wanted to see how participants of Kabaddi and Kho-Kho stacked up on a few key bio motor traits, so they compared the two sports. Thirty male and thirty female participants who had played in an intercollegiate Kabaddi or Kho-Kho tournament at Manonmaniam Sundaranar University in Tirunelveli during the 2017-2018 academic year were chosen for the research. Players were between the ages of 18 and 25 when they were chosen. The researchers focused on the bio motor features of Kabaddi and Kho-Kho players, including their speed, agility, and muscular power. Standardized test items were used to evaluate the chosen variables. The 50-meter sprint was used to measure speed, the 4-by-10-meter shuttle run was used to measure agility, and the bent-knee sit-ups were used to measure strength in the abdominal muscles. The research used a static group comparison design. Independent's t test was used for statistical analysis of the data acquired. If this is the case. In order to see whether the hypothesis was true, we utilized a 5% threshold of significance. Researchers came to the conclusion that Kabaddi and Kho-Kho players are significantly different from one another in terms of some bio motor properties.

Jesudoss, Samuel. (2019). This research aimed to examine the similarities and differences in the physical fitness levels of female high school athletes who participated in the sports of kho-kho and kabaddi. The study's objectives were met by recruiting a sample of 30 amateur athletes from P.S.G.G. Kanya Gurukul am Higher Secondary School in Melamed, Coimbatore, 15 of whom had played kho-kho and 15 of whom had played kabaddi but had not received any specialized instruction or coaching. They might, however, take part in the college's required physical education courses. All participants were adults (20-25) years of age. Endurance and Flexibility were chosen as the measures of physical fitness to analyses. The dependent 't' ratio was utilized to test for statistical significance between kho-kho and kabaddi players. The research found that female high school athletes had different levels of endurance and flexibility while playing kho-kho and kabaddi.

Mrs. Shivaleela,et.al (2017) The needs of prehistoric people were fundamental and uncomplicated. The ability to hunt and fish required him to be physically fit, and the ability to battle the animal was crucial to his life. The study of such crucial abilities was his fundamental and initial education and growth of the body via intensive physical exercise. Serving is a key talent for the efficient life of man, and the process of improving body and abilities has persisted through the years. Although it is a truth that even prehistoric man understood the need of maintaining a healthy body. However, this does not imply that fitness is any less vital in today's society. Because of how crucial it is to his success in today's cutthroat business world, the contemporary man can't afford to get complacent and forget its significance. He may improve his organic and muscular strength stamina, vitality, and the activity skills associated to his growth with the correct sort and quantity of physical exercise. In other words, fitness and exercise go hand in hand.

Dr.Sangita Arvindrao Deshmukh (2019) The goal of this research was to determine whether or not there was a connection between certain measures of motor fitness and the performance of collegiate male kho kho players. Fifteen kho kho players from various colleges in Amravati (MS) were randomly recruited for this study. Participants ranged in age from 18 to 23. The study's investigator focused on the relationship between motor fitness factors, namely speed, agility, and endurance, and the collegiate men's kho-kho playing skill. This study used a randomized, one-group research strategy. Fifteen people were chosen at random to have their motor fitness, agility, speed, cardio-vascular endurance, and kho-kho playing abilities evaluated. A Pearson coefficient of correlation analysis was performed on the obtained data to determine the degree to which a given motor ability measure was related to the total playing skill of Kho players. College men's kho-kho performance was shown to be significantly correlated with their sprinting speed, stamina, and agility.

Sunil vyas (2020) The current research aimed to examine the motor skills of male students in the Jaipur area who participate in the sports of kabaddi and kho-kho. Fifty male kabaddi and Kho Kho players aged 14 to 18 from the Jaipur area were recruited for the research. Muscular endurance, muscular strength, exploring strength variations between kabaddi and kho-kho, agility in kabaddi and kho-kho, and the speed motor ability variable in kabaddi and kho-kho players were all compared and assessed using just motor skills. Kabaddi and Kho Kho male players from the Jaipur district were selected using a random sample procedure. Methods for sample size determination, variable and outcome selection, data collecting, experimental design, test administration, and statistical analysis have all been outlined.

METHODOLOGY

The current research aimed to identify the relationship between Kho-Kho playing skill and the specified Motor fitness characteristics. One hundred male Kho-Kho players aged 18 to 25 from Panjab University's intercollegiate team served as the study's participants. Those involved were students at Punjab University in Chandigarh.

In the 2011-2012 school year, all of the players that were cited as examples were male college students competing in the Panjab University inter college Kho-Kho tournament. How different factors affect the ability to play Kho-kho as a whole (the dependent variable). Thus, various correlations were used to determine the relative importance of each motor fitness component to total Kho-Kho playing skill, as measured by calculating Pearson's (zero or der) coefficients.

DATA ANALYSIS

Table: 1 RELATIONSHIP PLAYING ABILITY OF MALE KHO-KHO PLAYER TO THE MOTOR FITNESS VARIABLE

| Criterion Variable | Independent Variables | Calculated 'r' |
|---|-----------------------|----------------|
| Playing Ability of male Kho-Kho Players | Agility | -0.76* |
| | Balance | -0.84* |
| | Co-ordination | 0.86* |
| | Power | 0.81* |
| | Reaction time | -0.71* |

Tabled r = 0.195 at 98 degrees of freedom (0.05)

Attribution variables such as agility ($r = -0.76$), balance ($r = -0.84$), co-ordination ($r = 0.86$), power ($r = 0.81$), and reaction time ($r = -0.71$) were found to have significant relationships with the playing ability of male kho-kho players at the 0.05 level of significance (since the obtained values were greater than the tabulated value of 't' $df (98) = 0.195$) in Table 1). Male kho-kho players' skill and agility were shown to be substantially connected.

The data was analyzed using linear regression in Microsoft Office Professional Plus (Excel) 2013, and the regression equation of motor fitness factors with the playing ability of male Kho- Kho players was developed.

RELATIONSHIP BETWEEN MALE KHO-KHO PERFORMANCE AND SELECTED MOTOR FITNESSVARIABLES.

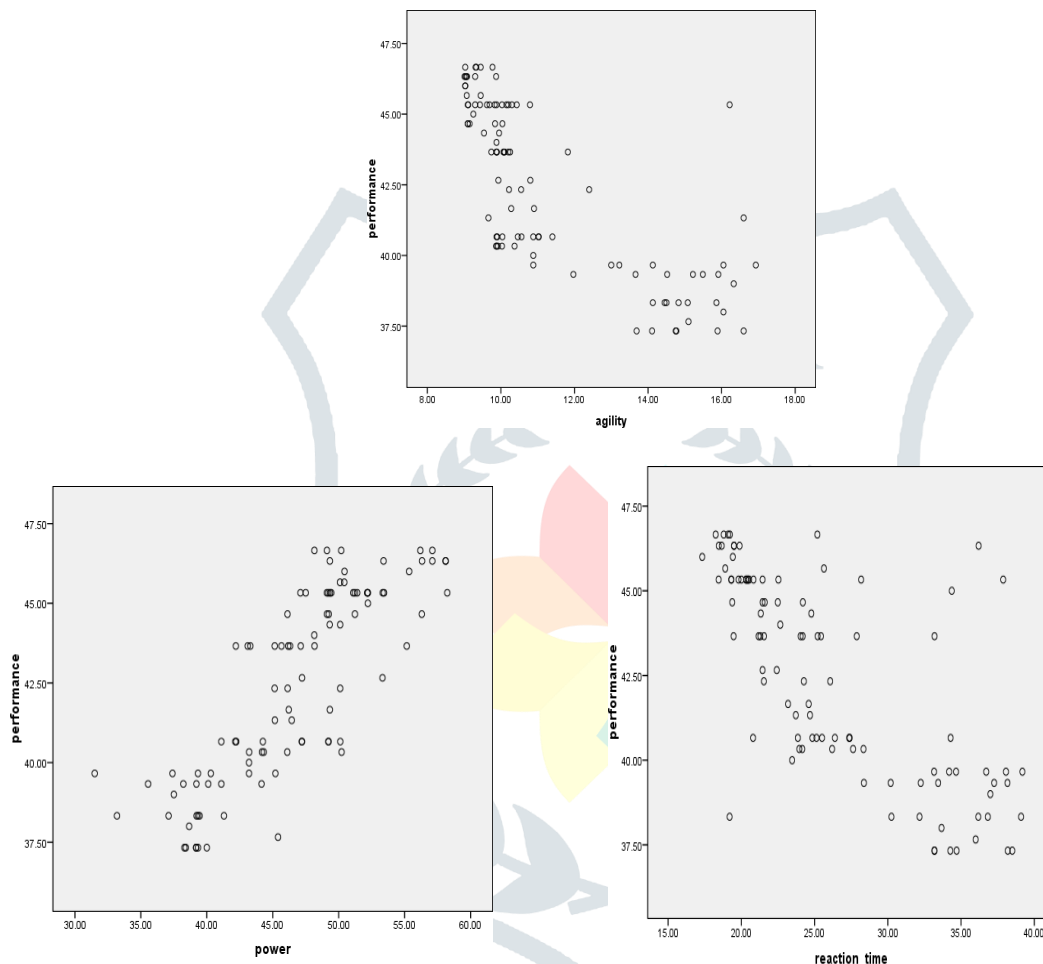


Table 2. Correlation Coefficient between Endurancewith Playing Ability of College Men Kho-Kho Players

| Variables | Obtained 'r' | Required 'r' |
|------------------------------|--------------|--------------|
| Kho-Kho Playing Vs Endurance | -0.619* | 0.497 |

* Probability threshold 0.05 significant Table Value Needed = 0.5 (df = 1,14, 0.05) = 0.497.

In a study of college-aged males, a correlation of 0.619 was found between Kho-Kho skill and stamina, which is much higher than the minimum acceptable value of 0.497. This demonstrated a statistically significant correlation between college men's levels of stamina and their Kho-Kho skills.

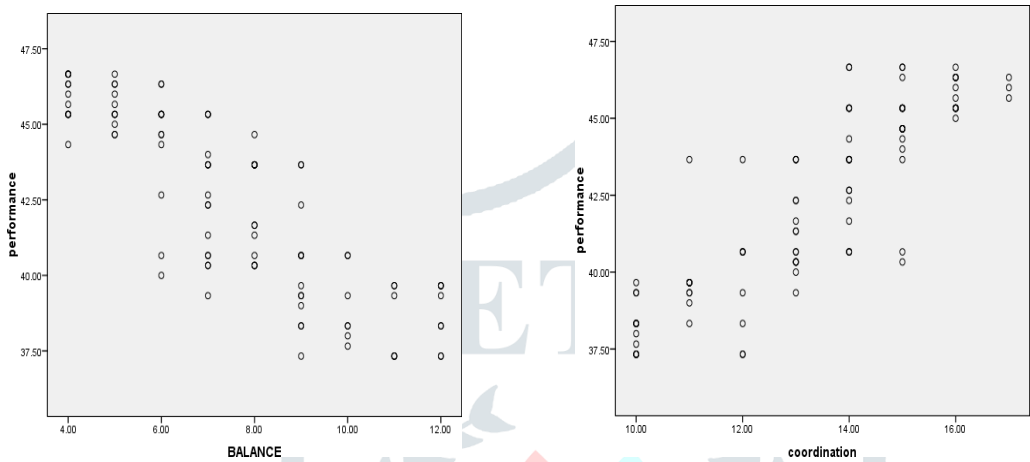


Table 3 SUMMARY OUTPUT

| Regression Statistics | | | | |
|-----------------------|----------|-------------------|----------------|--------------|
| | R Square | Adjusted R Square | Standard Error | Observations |
| Multiple R | | | | |
| 0.922 | 0.851 | 0.843 | 1.185 | 100 |

Table 3 shows that after using all five predictors, the R-squared value was 0.902. This suggests that improvements in certain aspects of motor fitness—agility, balance, coordination, power, and reaction time—accounted for 92.2% of the variation in men's kho-kho playing skill.

Table 4 ANOVA IN THE REGRESSION

| | df | SS | MS | F | Significance F |
|------------|----|---------|---------|---------|----------------|
| Regression | 5 | 752.085 | 150.417 | 107.098 | 0.000 |
| Residual | 94 | 132.021 | 1.404 | | |
| Total | 99 | 884.106 | | | |

In table 4 ANOVA tests the null hypothesis that predictor and dependent variables do not have a linear relationship. The observed value of F is 172.81 when all five predictors (motor fitness) were included in the analysis.

Table 5 COEFFICIENT IN THE REGRESSION

| | Coefficients | StandardError | t Stat | P-value | Lower 95% | Upper 95% |
|-----------|--------------|---------------|--------|---------|-----------|-----------|
| Intercept | 34.590 | 3.095 | 11.175 | 0.000 | 28.444 | 40.736 |
| Agility | -0.119 | 0.082 | -1.450 | 0.150 | -0.282 | 0.044 |
| Balance | -0.400 | 0.090 | -4.438 | 0.000 | -0.579 | -0.221 |

| | | | | | | |
|----------------|--------|-------|--------|-------|--------|-------|
| Co- ordination | 0.505 | 0.116 | 4.344 | 0.000 | 0.274 | 0.736 |
| Power | 0.120 | 0.035 | 3.392 | 0.001 | 0.050 | 0.190 |
| Reactiontime | -0.007 | 0.029 | -0.232 | 0.817 | -0.064 | 0.051 |

Table 5 shows the chance that a linear connection exists between each predictor variable and the dependent variable as a function of the value of the coefficient in the regression equation. Find the standard error of the coefficient, sometimes known as 'B,' and the slope of the line here (Beta). The standard regression coefficient is denoted by the letter beta ('B').

Except for balance and response time, all of the model's other measures of coordination and power had P-values less than 0.05, indicating that they were consistent with the null hypothesis.

The resulting regression equation is

$$\text{Men's Kho-Kho Playing Ability} = 34.590 - 0.400 (\text{Balance}) +$$

It is estimated that 92.2% of the variation in the dependent variable (Kho-Kho Plying Ability) can be accounted for by the motor fitness factors.

Table 6 Correlation Coefficient between Speed withPlaying Ability of College Men Kho-Kho Players

| Variables | Obtained 'r' | Required 'r' |
|--------------------------|--------------|--------------|
| Kho-Kho Playing Vs Speed | -0.627* | 0.497 |

* Probability threshold 0.05 significant Table Value Needed = 0.497 (df = 1, 14) (0.05).

The 0.627 observed for the Coefficient of Correlation between college men's Kho-Kho playing skill and speed was higher than the minimum r value of 0.497. Clearly, this demonstrated a strong correlation between speed and the Kho-Kho skills of college males. The association between college men's agility and their overall kho-kho playing skill is seen in Table 6

Table 7. Correlation Coefficient between Agility withPlaying Ability of College Men Kho-Kho Players

| Variables | Obtained 'r' | Required 'r' |
|----------------------------|--------------|--------------|
| Kho-Kho Playing Vs Agility | -0.729* | 0.497 |

* Probability threshold 0.05 significant Table Value Needed = 0.5 (df = 1,14, 0.05) = 0.497.

Coefficient of Correlation (r) value of 0.729 was found between college men's Kho-Kho playing skill and their agility, which is higher than the minimum needed value (0.497). As a result, we know that college-aged men's agility significantly correlates with their Kho-Kho playing prowess. The association between college men's agility and their kho-kho playing skill is seen in Table 7

CONCLUSION

It was determined via analysis of the data that male Kho-Kho players had high levels of power and superior response speed across all measures of motor fitness. Men's Kho-Kho players were shown to have a higher average and standard deviation of skill. At the 0.05 significance level, there is a correlation between this and a

player's Kho-Kho skill. Playing skill among Male Kho-Kho was strongly connected with factors including agility, balance, co-ordination, power, and response time. The correlation between the independent and dependent variables is nonlinear. The degree of significance was found when all five predictors were input. The kho-kho skills of college males were significantly correlated with their sprinting speed. The kho-kho skills of college guys were significantly correlated with their level of agility. In college guys, kho-kho playing skill was significantly correlated with endurance.

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