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COMPARATIVE STUDY OF PHYSICAL FITNESS AMONG KHO-KHO AND KABADDI MALE PLAYERS

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Abstract

The purpose of the study was to compare the variability in fitness of male athletes from Kho-Kho and Kabaddi. Two randomly selected groups of 20 subjects each age group aged 18-21 participated in the study. All the players are from different colleges in Meerut district. Details were collected during their university camp. In order to compare physical fitness a sample method was used to achieve the research objectives. All subjects, after being informed of the purpose and protocol of the study, gave their consent and volunteered to participate in the study. The 't' test was used to determine the significant differences between the male players of Kho-Kho and Kabaddi. To test the hypothesis, the significance level was set at 0.05.

Key words : Kho-Kho and Kabaddi, players

Introduction

Kho-Kho is Indian traditional game. Kho-Kho game is played particularly in rural and urban areas. Kho–Kho game was originated in India and has considerably long tradition. The Kho-Kho game is, at present, becoming the most popular amongst the indigenous activities in Physical Education in India and neighbouring countries in South Asia. Different games provided to do the body activities, differently. The theory of coordinative abilities is thought to be rapidly getting recognition in the world of sports. However, there is no general agreement regarding the number of coordinative abilities required for sports.

Monitoring of a training programme provides useful information to both scientists and coaches in relation to its effectiveness, the athlete's physical condition and preparation for competition. In order for monitoring to be effective (i.e. providing updated and accurate information on physiological profiling), the tests need to be administered at regular, predetermined intervals based on training cycles. Additionally, testing should be specific to the sport ideally conducted in the athlete's training environment in order to obtain ecologically valid and reliable results. A situation where physiological, anthropometric and sportspecific data can be obtained simultaneously provides the most accurate and informative results, due to the ease of comparisons and the complete profiling achievement. Research in other team sports has suggested that changes in performance parameters over the course of a season may not follow the expected trend. It was found that preseason training of field hockey players decreased body fat percentage, increased maximum oxygen uptake, but decreased muscular strength.

The extensive research was carried-out by Menial and Schobel (1987) regarding introduction of new and wide term coordinative abilities in place of agility as one of the basic component of physical fitness. For achieving excellence in the field of Kho-Kho and Kabaddi, these components of physical fitness and coordinative ability must be possessed by the 'Kabaddi and Kho-Kho' player. Studies by Jana et al., 2019 had showed that there were no significant difference in lean body mass, body mass index and

percentage of body fat amongst football and Kho-Kho players which established an important fact that in body contact sports and for sports which requires ample of endurance, strength, agility, speed physical fitness remains same for the athletes involving in same type of sports. Research studies by Dhanula et al., 2012 had shown that there were significant differences in body composition; trunk & hip flexibility of Kabaddi & Kho-Kho Players. Furthermore regarding to muscular endurance between both the groups, showed significant difference. Research study has proved that Kho-Kho players are having good speed and agility compare to Kabbadi player.

Although a few work has been done regarding comparision level of them with normal people or with other sports persons.Therefore in the context of the previous studies it has observed that Kho-Kho playing might have an impact on development of speed, agility and explosive strength, which is not reported by any research studies till date. Therefore the present study unveils the impact of Kho-Kho playing towards the physiological changes and development of some specific skill related physical fitness factors.

Kabaddi is a wrestling sport from India. Two teams occupy opposite halves of a small swimming pool or field and take turns sending a "raider" into the other half, to win points by tackling members of the opposing team; then the raider tries to return to his own half. The raider must not cross the lobby unless he touches any of his opponents. If he does so then he will be declared as "out". There is also a bonus line which ensures extra points for the raider if he manages to touch it and return to his side of the field successfully. The word Kabaddi is derived from a Tamil word meaning "holding of hand", which is indeed the crucial aspect of play. It is the national game of Bangladesh, and the state game of Tamil Nadu, Karnataka, Punjab and Andhra Pradesh in India. In the international team version of kabaddi, two teams of seven members each occupy opposite halves of a field of 10 m × 13 m in case of men and 8 m × 12 m in case of women. Each has three supplementary players held in reserve. The game is played with 20-minute halves and a five minute halftime break during which the teams exchange sides. Teams take turns sending a "raider" to the opposite team's half, where the goal is to tag or wrestle ("confine") members of the opposite team before returning to the home half. Tagged members are "out" and temporarily sent off the field. The goal of the defenders is to stop the raider from returning to the home side before taking a breath. If any of the seven players cross the lobby without touching the raider he will be declared as "out".

Review of Literature

Bawa, Gurdial Singh And Debnath Kalpna (2018). Studied the emotional Intelligence of Indian national women football and gymnastic Kabaddi they found a significant difference in six of the emotional Intelligence between the two Kabaddis. Female gymnasts were found to be significantly more intelligent more controlled, having higher self concept control where as national footballs Kabaddi was found more suspicious, more apprehensive and moody and more self sufficient than gymnastic Kabaddi.

Kiran Saidu (2020) conducted a personality study on 200 collegiate sports women who participated in basketball, cricket, hockey, handball, Kabaddi , Kho-kho, volleyball, badminton, cross country, chess, gymnastics, shooting, lawn-tennis, swimming, Table tennis, track and field. Another group of 200 non-sports women of matching age and educational level where also selected.
Hein (2017) found Kabaddi sports participants to be more extraverted than those participating in Kho-Khosports. He also found that participants on Kho-Kho anddual sports possessed less amount of self assurance.

Peterson etal (2016) reported that women athletes who participated in Kho-Khosports, when compared to women competing in Kabaddi sports were more dominant, adventures, sensitive, self sufficient and more forthright.

Mulumply (1968) and Ogilvie (1968) Also conducted a related investigation, where four groups of female athletes i.e. athletes in Kabaddi sports, in Kho-Khosports, Kabaddi Kho-Khosports, subjectively judged sports and the non-athletes, differed on various factors. the athletes from Kho-Khosports were more extraverted than those from Kabaddi KhoKhogroups. The seemed to be in disagreement with the findings of Peterson, Weber and Trousdale (1967). Malumply also found that the Kabaddi sports group as less extraverted than the non-athletes. However, he found KhoKhofemale athletes to be more anxious, venturesome, toug-minded and extraverted while Kabaddi athletes were lower in leadership, less venturesome extraverted learnes.

Singer (2016) compared the basketball players and tennis players on EPPS norms and also the highest and lowest ranked athletes in both sports. The baseball Kabaddi scaored significantally lower than the other two groups, on the interception variable, lower than the tennis group of the achievement variable, lower than the norm group on autonomy and lower than the tennis group on dominance. Both the baseball and tennis groups scored significantly higher than the norm group on the aggression factor. No differences were noted between high and low rated baseball players.

Sharma and Shukla (2018) studied the emotional Intelligenceof sportsmen of Kho-Kho and Kabaddi sports. They reported that Kho-Khosports athletes were higher on these traits: conscientiousness, outgoing, super ego-strengt, vigorous and tough mind ness.

Sharma and Shukla (1986) found that Kho-Khosports athletes were higher on conscientiousness, outgoing, suerego, strength, vigorous, relaxed and tough mind ness. Singh (1986) found that the players of Kho-Khoevents and Kabaddis differed significantlyon the extraversion and neuroticism traits of personality. In the case of both male and female, the athletic group was more extraverted and more neurotic than the hockey group.

Research Methodology

Total 40 male subjects aged between 18–21 years were selected for this study. All players are different colleges of Meerut district. The data was collected during their university camp. To compare the physical fitness the sampling technique was used to attain the objectives of the study. All the subjects, after having been informed about the objective and protocol of the study, gave their consent and volunteered to participate in the study. They were divided into two groups of 20 each who were from Kho-Kho and Kabaddi.

Data Analysis

Microsoft Excel software was used for data analysis. Mean, Standard Deviation, 'T' value, 'P' value of physical fitness of Kho-Kho and Kabaddi Player in University Camp was used in data analysis. In all the analysis, the 0.05 was considered to indicate statistical significance.

RESULTS

Table – 1
Details of Physical Fitness Components, Tests and Unit of Measurement

Sr. No.	Physical Fitness Components	Tests	Units of Measurements
1	Reaction Time	Nelson Hand Reaction Time Test	In 1/10th of sec
2	Balance	Stork Balance Stand Test	In 1/10th of sec
3	Agility	Illinois Agility Test	In 1/10th of sec
4	Speed	30 Yard Dash Test	In 1/10th of sec
5	Power	Standing Broad Jump Test	Meters

Details of Physical Fitness Components, Tests and Unit of Measurement

Table – 2
Mean, Standard Deviation, 'T' value, 'P' value of physical fitness of Kho-Kho and Kabaddi Player in University Camp

Variables	Mean		Standard Deviation		'T' Value	'P' Value
	Kabaddi	KhoKho	Kabaddi	KhoKho		
Reaction Time	0.25	0.21	0.04	0.04	1.75	0.03
Balance	27.70	29.12	16.38	14.24	2.03	0.02
Agility	6.55	7.05	0.57	0.76	2.60	0.02
Speed	7.02	6.21	0.90	0.60	2.73	0.01
Power	2.07	2.29	0.31	0.36	1.80	0.03

* 0.05 (level of significance)

Reaction Time : Table – 2 shows that the mean of the reaction time of Kho-Kho and Kabaddi Players was 0.25 and 0.21 respectively. Whereas the standard deviation of the reaction time of Kho-Kho and Kabaddi Players was 0.04 and 0.04 respectively. The 'T' value of the reaction time was 1.75 and 'P' value of the reaction time was 0.03. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to reaction time.

Balance : Table – 2 shows that the mean of the balance of Kho-Kho and Kabaddi Players was 27.70 and 29.12 respectively. Whereas the standard deviation of the balance of Kho-Kho and Kabaddi Players was 16.38 and 14.24 respectively. The 'T' value of the balance was 2.03 and 'P' value of the balance was 0.02. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to balance.

Speed : Table – 2 shows that the mean of the speed of Kho-Kho and Kabaddi Players was 6.55 and 7.05 respectively. Whereas the standard deviation of the speed of Kho-Kho and Kabaddi Players was 0.57 and 0.76 respectively. The 'T' value of the speed was 2.6 and 'P' value of the speed was 0.02. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to speed.

Agility : Table – 2 shows that the mean of the agility of Kho-Kho and Kabaddi Players was 7.02and 6.21 respectively. Whereas the standard deviation of the agility of Kho-Kho and Kabaddi Players was 0.90 and 0.60 respectively. The 'T' value of the agility was 2.73 and 'P' value of the agility was 0.01. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to agility.

Power : Table – 2 shows that the mean of the power of Kho-Kho and Kabaddi Players was 2.07 and 2.29 respectively. Whereas the standard deviation of the power of Kho-Kho and Kabaddi Players was 0.31 and 0.36 respectively. The 'T' value of the power was 1.8 and 'P' value of the power was 0.03. The analysis shows there are significant difference between kho-kho and kabaddi players in relation to power.

Result : For analysis and interpretation of the collected data, it was depicted that in the speed, agility, and endurance the khokho players was better and it was significant difference. Whereas in the explosive strength kabaddi players was better than kho-kho players and it was also significant.

Conclusion

It was also concluded that there is a significant difference in linear measurements such as, height, lower leg length, foot length, foot width, total arm length, forearm length, sitting height in comparison to Kho-Kho players. Kabaddi players are found more in weight, weight, height, lower leg length, foot length, foot width, total arm length, forearm length, sitting height in comparison to Kho-Kho players. But no significant difference was found in total leg length, thigh length, upper arm length, hand length, trunk length. Regarding body circumferences, there is a significant difference in shoulder, chest, hip, thigh, calf between Kabaddi and Kho-Kho players. For analysis and interpretation of the collected data, it was depicted that in the speed, agility, and endurance the khokho players was better and it was significant difference. Whereas in the explosive strength kabaddi players was better than kho-kho players and it was also significant.

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