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Comparison of physical fitness components of kabaddi and kho-kho girls players

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Abstract

Backgrounds: Sports is a specific form of culture, an aspect of the cultural activity of society, a component of improving the general health and developing the physical abilities and physical fitness of the growing and adults population. The purpose of the study is to compare physical fitness components such as speed, strength, endurance, agility and flexibility of kabaddi and kho-kho girl players.

Materials and methods: A total numbers of subjects for the present study were 60 (30 kabaddi and 30 kho-kho)girls players, who had participated at least at school state level of Haryana in age group 14 to 19 years. Physical fitness test items were conducted as per the standardized procedures of AAHPERD youth fitness test. For the study of mean value, standard deviation, t-test were applied to analyze the data, different steps in "t" test were used.

Conclusion: On the basis of the analysis of data kho-kho girls players found with better mean value than kabaddi girls players on speed. Kabaddi girls players have better as compare to kho-kho girls players on endurance but there was no significant difference in strength, agility and flexibility between kabaddi and kho-kho girls players.

Keywords: Speed, strength, endurance, agility and flexibility

1. Introduction

Mobile Fitness is as much as an attitude of mind as a physical state. The dimension of fitness indicates body mind relationship which has been a hot pot of philosophical deliberation. The deceptive of physical education has made many advances in clarifying such relationships and has resulted in monitoring fitness to human beings. (Ajmer Singh.1996) [1].

The contribution of physical fitness of life includes the joy of work, health and happiness. Physical fitness and development of neuromuscular skills have assumed greater improve in the present time due to the emphasis that is being placed on the development of human resources. In the opinion of Clarke," Physical fitness is an ability to come out daily task with vigor and alertness, with under fatigue and with ample energy leisure time pursuits and to meet unforeseen emergencies." (Harrison Clarke, 1997) [3].

Physical fitness is the most important determinant of excellent performance in sports. However, importance of various components of fitness varies with different sports for better performance. Physical fitness is possible through the study of motor fitness. The motor fitness can be understood by analysis of its components like speed, strength, endurance flexibility, agility, coordination ability and balance, although physical fitness is conditioned by heredity, physical organic and behavioral components. Robson, M. *et al.* (1978) [4].

Physical fitness is the capacity to do prolonged hard work and recover to the same state of health in short duration of time this is the result of the degree of strength, speed, power, endurance, agility and flexibility one assesses there element of physical fitness are useful for different games and sports. Physical fitness depends on several factors such as heredity, hygienic living nutrition and body maneuver of an individual. Amongst these body maneuvers ever play activities, differently. Kabaddi and Kho-Kho player are equally conductive to developing these skills amongst players. Clark, H. H. & Clark, D. H. (1987) [2] Kabaddi (sometimes Kabaddi or Kabadi) is a contact sport that originated in Ancient India. The title Kabaddi is a generic term used to describe the following:- National Kabaddi recognised by the Amateur Kabaddi Federation of India: National style (which resembles the Sanjeevani style), Circle style (the Punjab style), Indoor and national games, Beach Kabaddi and National professional league Kabaddi. Kho-Kho ranks as one of the most popular traditional sports in India.

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The origin of Kho-Kho is difficult to trace, but many historians believe, that it is a modified form of 'Run Chase', which in its simplest form involves chasing and touching a person. With its origins in Maharashtra, Kho-Kho in ancient times, was played on 'raths' or chariots, and was known as RATHERA.

2. Materials and Methods

2.1 Sample

To achieve the purpose of the study 60 girls players (30 Kabaddi & 30 kho-kho players) in the age group of 14 to 19 were selected randomly as subjects. The participation of the players was at least at school state level of Haryana.

2.2 Sources of the Data

The sources of the data for the present study were Kabaddi and Kho-Kho girl's players. The Kabaddi and Kho-Kho players who had participated at least at school state level of Haryana were selected as sources of the data.

2.3 Procedure

The research scholar conducted the tests on the respective subjects with the help of physical education teachers and

concerned coaches. The test battery of Physical Fitness was conducted in a single day. Physical Fitness test items were conducted as per the standardized procedures of AAHPERED youth fitness test.

3. Statistical Techniques Used

For the present study, the mean value, standard deviation, 't' test were applied to analyze the data, different steps in 't' test were used and the final conclusions were drawn and it was also compared with the significant value at .05 level. The utilization of mean values, standard deviation and 't' test were made according to the requirement of the present study as per the statistical technique.

4. Results and discussions

The finding of various parameters is discussed as under: Speed, Strength, Endurance, Agility and flexibility. The details for comparative mean value and SD values of Kabaddi and Kho-Kho players were tabulated and values of 't'- test with various steps value were also presented from Table 4.1 to 4.5

Table 4.1: Comparison of 50m dash of Kabaddi & Kho-Kho Girls players

Component	Games	N	Mean (M)	Standard deviation (S.D.)	Standard error of difference (SED)	t-ratio
Speed	Kabaddi	30	9.94	1.07	0.26	2.69
	Kho-Kho	30	9.24	1.04		

Significant at 0.01 levels

Table 4.1 Illustrates the mean scores of 9.94±1.07 of Kabaddi girl's player and mean score of 9.24±1.04 Kho-Kho girl's player on 50 mtr. Dash test. The t-ratio is 2.69. It is significant at 0.01 levels. The mean score Kabaddi girls players is higher than Kho-Kho girls players. It is clear that

lesser the item taken higher is the 50m dash possessed by the players and vice-versa. It is further implied that Kho-Kho girl's players have better speed as compare to Kabaddi girl's players. The hypothesis was rejected.

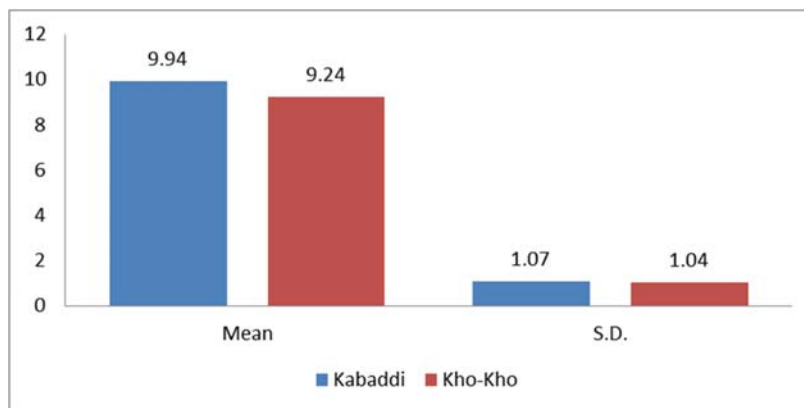


Fig 4.1: Graphic Representation of 50m dash of Kabaddi and Kho-Kho Girls Players.

Table 4.2: Comparison of Standing Broad Jump component of Kabaddi & Kho-Kho Girls players

Component	Games	N	Mean (M)	Standard deviation	Standard error of difference (SED)	t-ratio
Strength	Kabaddi	30	1.64	.14	0.43	.88
	Kho-Kho	30	1.61	.23		

No Significant at 0.05 level

Table 4.2 Illustrates the mean scores of 1.64±.14 of Kabaddi girls player and mean score of 1.61±.23 Kho-Kho girls player on Standing Broad Jump. The t-ratio is .88. It is no significant at 0.05 level. The mean score Kabaddi girls players is higher than Kho-Kho girls players. It is clear that

lesser the item taken higher is the standing broad jump possessed by the players and vice-versa. There is no significant difference between Kabaddi and Kho-Kho girls players on standing broad jump. The hypothesis was accepted.

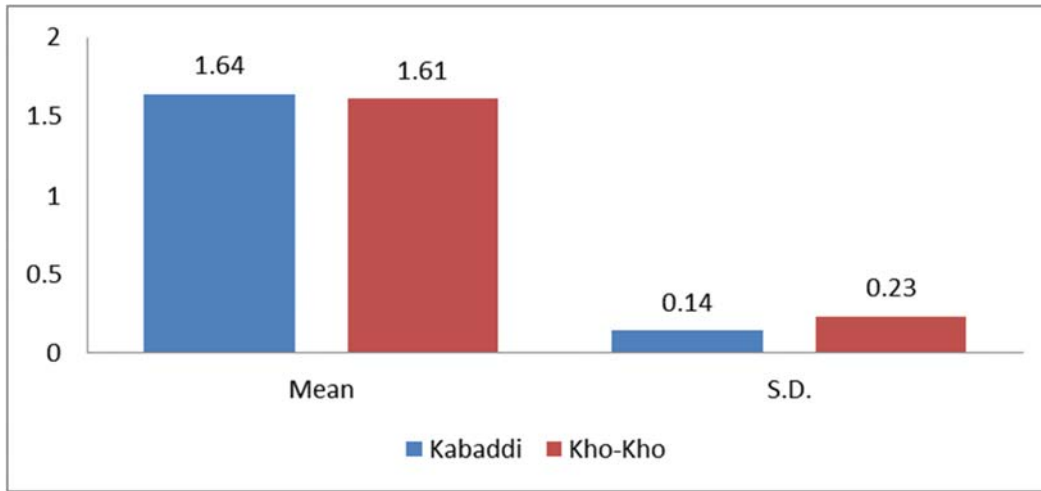


Fig 4.2: Graphic Representation of standing broad jump of Kabaddi and Kho-Kho Girls Players.

Table 4.3: Comparison of 12 Min Run/Walk Test component of Kabaddi & Kho-Kho Girls players

Component	Games	N	Mean (K)	Standard deviation (S.D.)	Standard error of difference (SED)	t-ratio
Endurance	Kabaddi	30	1.73	.51	0.10	3.51
	Kho-Kho	30	1.37	.25		

Significant at 0.01 levels

Table 4.1 Illustrates the mean scores of $1.73 \pm .51$ of Kabaddi girls player and mean score of $1.37 \pm .25$ Kho-Kho girls player on 12 Min Run/Walk test. The t-ratio is 3.51. It is significant at 0.01 levels. The mean score Kho-Kho girls

players is better than Kabaddi girls players. It is further implied that Kho-Kho girls players have better as compare to Kabaddi girls players. The hypothesis was rejected.

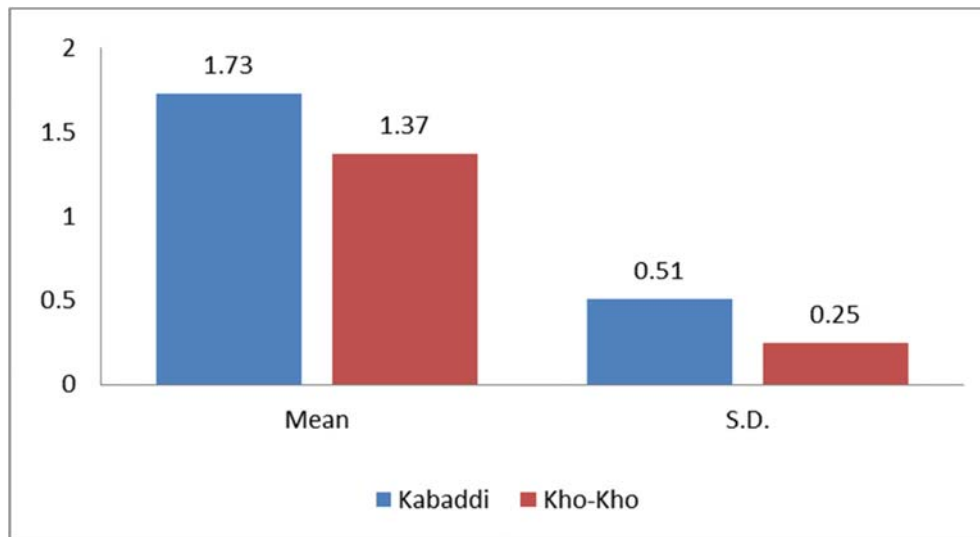


Fig 4.3: Graphic Representation of 12 Min Run/Walk of Kho-Kho and Kabaddi Girls Players.

Table 4.4: Comparison of Shuttle Run component of Kabaddi & Kho-Kho Girls players

Component	Games	N	Mean (M)	Standard deviation (S.D.)	Standard error of difference (SED)	t-ratio
Agility	Kabaddi	30	13.53	.57	0.28	1.31
	Kho-Kho	30	13.34	.50		

No Significant difference at 0.05 levels

Table 4.4 Illustrates the mean scores of $13.53 \pm .57$ of Kabaddi girls player and mean score of $13.34 \pm .50$ Kho-Kho girls player on Shuttle Run. The t-ratio is 1.31. It is no significant at 0.05 level. The mean score Kho-Kho girls

players is better than Kabaddi girls players. There is no significant difference between Kabaddi and Kho-Kho girls players on shuttle run. The hypothesis was accepted.

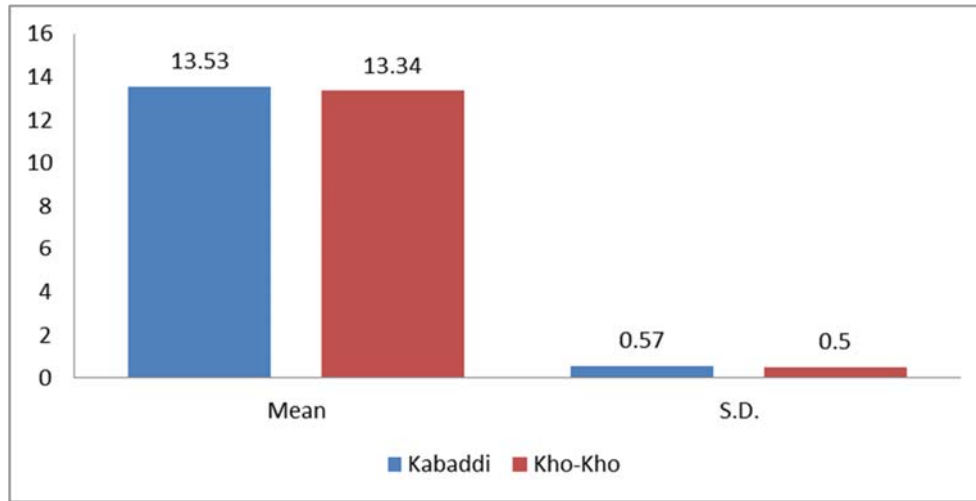


Fig 4.4: Graphic Representation of Shuttle Run of Kabaddi and Kho-Kho Girls Players.

Table 4.5: Comparison of forward Band and Reach Test component of Kabaddi & Kho-Kho Girls players

Component	Games	N	Mean (M)	Standard deviation (S.D.)	Standard error of difference (SED)	t-ratio
Flexibility	Kabaddi	30	5.69	1.02	0.25	1.66
	Kho-Kho	30	5.27	1.28		

No Significant difference at 0.05 levels

Table 4.5 illustrates the mean scores of 5.69 ± 1.02 of Kabaddi girl's player and mean score of 5.27 ± 1.28 Kho-Kho girl's player on forward band and reach test. The t-ratio is 1.66. It is no significant at 0.05 levels. The mean score

Kabaddi girl's players are better on forward band and reach test than Kho-Kho girl's players. There is no significant difference between Kabaddi and Kho-Kho girls players on forward band and reach test. The hypothesis was accepted.

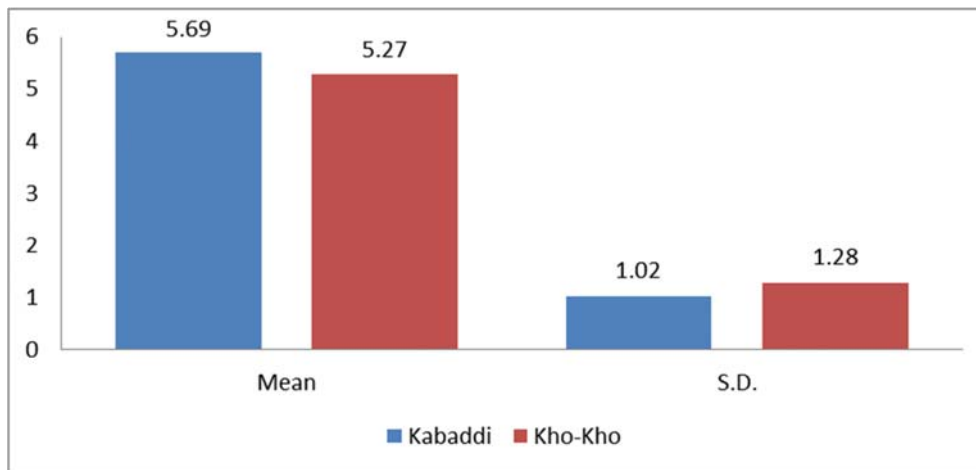


Fig 4.5: Graphic Representation of Forward Bend and Reach Test of Kabaddi and Kho-Kho Girls Players

5. Conclusion

On the basis of the analysis of data kho-kho girls players found with better mean value than kabaddi girls players on speed. Kabaddi girls players have better as compare to kho-kho girls players on endurance but there was no significant difference in strength, agility and flexibility between kabaddi and kho-kho girls players.

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