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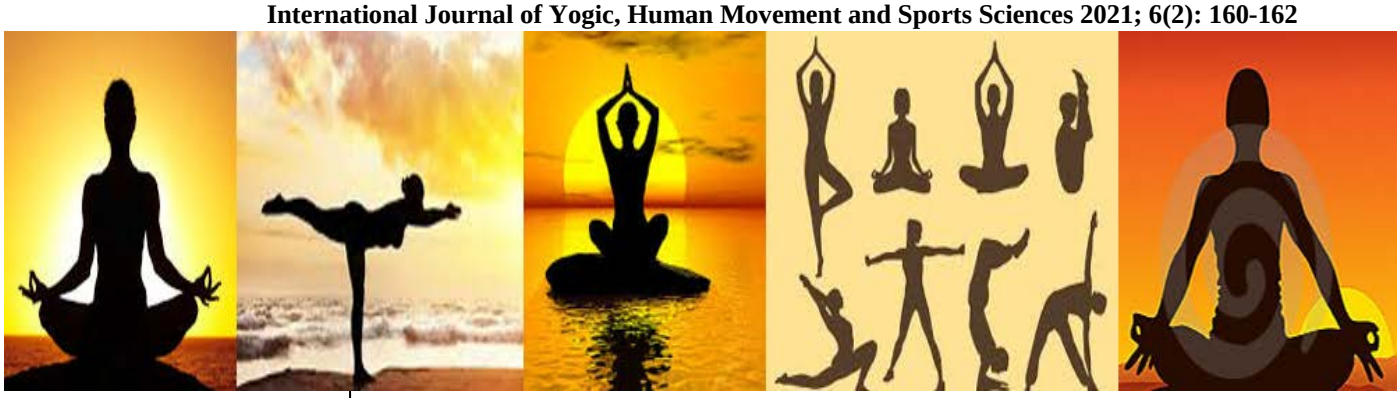

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Dr. Manju
Associate Professor, Physical Education, R.B.D. Mahila Mahavidyalaya, Bijnor, Uttar Pradesh, India

Corresponding Author:
Dr. Manju
Associate Professor, Physical Education, R.B.D. Mahila Mahavidyalaya, Bijnor, Uttar Pradesh, India

A comparative study of selected physical fitness variable between Kabaddi and Kho-Kho inter university female players of Bijnor

Dr. Manju

Abstract
The purpose of the study was to compare the selected physical fitness variables between Kabaddi and Kho-Kho players. A total of 60 female subjects (30 each in Kabaddi and Kho-Kho) age ranges from 18 to 26 were selected purposively for the study from different colleges of Bijnor (up) who have participated in inter university tournaments. The data were collected for different physical fitness variable by administering AAHPER youth fitness test i.e. arm and shoulder strength in terms of flex elbow hang, abdominal strength and endurance in terms of number of completed bent knee sit ups in one minute, agility in terms of nearest tenth of seconds using shuttle run test, power in terms of feet & inches using standing broad jump test, speed in terms of nearest tenth of second using 50 yard dash run, cardio-respiratory endurance in terms of nearest tenth of second using 600 yard run/ walk. For the analysis of data, independent t-test has been employed. The level of significance was set at 0.05. The significant differences was not found between Kabaddi and Kho-Kho players on all variables abdominal strength and endurance, agility, power, speed and cardio-respiratory endurance.

Keywords: Kabaddi, Kho-Kho, arm and shoulder strength, abdominal strength, agility, power, speed, cardio-vascular endurance

Introduction
Physical fitness refers to the organised capacity of the individual to perform the normal task of daily living without undue tiredness or fatigue having reserve of strength energy available to meet satisfactorily any emergency demands suddenly placed upon him. Physical fitness includes the elements of muscular strength, cardio respiratory endurance, flexibility and freedom from obesity.
Kabaddi is a combative team game, played with absolutely no equipments. The game requires a high level of motor fitness and neuromuscular coordination in order to perform very complex movement of the game. Speed, endurance, power, flexibility and other aspect of coordinative ability are the demands of this game.
Kho-Kho game was originated in India and has considerably long traditions. This team game is also played with absolutely no equipments. Kho-Kho game also requires a high level of motor fitness and neuromuscular coordination and the skills of dodging, feinting and bursts of speed because the game is vigorous and combative in nature.
Physical fitness is important in both Kabaddi and Kho-Kho at all levels of the game whilst being essential for top level players. It is beneficial for beginners who will improve both their effectiveness and enjoyment through good standard of fitness.

Purpose of the study
The main purpose of the study was to compare the selected physical fitness component of Kabaddi and Kho-Kho inter university female players of Bijnor.

Methodology
Selection of subjects
To achieve the purpose of the study 60 subjects (n-60) out of thirty players from Kabaddi and

thirty players from Kho-Kho discipline who were representing Rohilkhand University, Bareilly in Inter University and belonging to Bijnor were selected. The purposive simple random technique was used for selection of subjects. The age of the subject chosen for this study were ranging from 18 to 26 years.

Test Administration

Physical fitness variables of each subject was obtained by administering AAHPER youth fitness test. Arm and shoulder strength was measured in term of flexed arm hang for number of seconds. Abdominal strength and endurance was measured in terms of number of completed, bent knees it ups in one minute. Measurement of agility was obtained in terms of nearest tenth of second using shuttle run test. Power was measured in terms of feet and inches using standing broad jump test. Speed was measured in terms of nearest tenth of second using 50 yard dash run. For measuring cardio respiratory endurance 600 yard run/walk test was administered in of minute and nearest tenth of second.

Analysis of the data

The obtained data were statistically analyzed by using 't' test to compare the selected physical fitness components of Kabaddi and Kho-Kho female players.

Results of the study

The data was analyzed by 't' test. The significance of mean difference found between score obtains on physical fitness components of Kabaddi and Kho-Kho Inter University female players of Bijnor.

Table 1: Comparison of means of selected physical fitness components (Arm and shoulder strength) of Kabaddi and Kho-Kho inter university female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Arm and shoulder strength	Kabaddi	30	10.66	2.68	1.22
	Kho-kho	30	9.6	2.41	

*significant at 0.05 level (58 = 2.000)

Above table shows that the comparison of means of selected physical fitness component (arm and shoulder strength) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 10.66 and Kho-Kho players is 9.6. The data reveals that there was no significant difference between Kabaddi and kho kho players in relation to arm and shoulder strength. Since the obtained value of 't' 1.22 was lower than tabulated value 2.000.

Table 2: Comparison of means of selected physical fitness components (Power) of Kabaddi and Kho-Kho inter university female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Power	Kabaddi	30	1.84	0.33	0.47
	Kho-kho	30	7.92	0.54	

*significant at 0.05 level (58 = 2.000)

Above table shows that the comparison of means of selected physical fitness component (Leg strength) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 1.84 and Kho-Kho players is 7.92. The data reveals that there was no significant difference between Kabaddi and Kho-Kho players in relation to power. Since the obtained value of 't' 0.47 was lower than tabulated value 2.000.

Table 3: Comparison of means of selected physical fitness components (Speed) of Kabaddi and Kho-Kho inter university female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Speed	Kabaddi	30	12.34	1.16	1.16
	Kho-kho	30	10.54	1.10	

*significant at 0.05 level (58 = 2.000)

Above table shows that the comparison of means of selected physical fitness component (Speed) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 12.34 and Kho-Kho players is 10.54. The data reveals that there was no significant difference between Kabaddi and Kho-Kho players in relation to speed. Since the obtained value of 't' 1.16 was lower than tabulated value 2.000.

Table 4: Comparison of means of selected physical fitness components (Abdominal strength) of Kabaddi and Kho-Kho inter university female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Abdominal strength	Kabaddi	30	32.36	5.75	0.509
	Kho-kho	30	33.3	4.92	

*significant at 0.05 level (58 = 2.000)

Above table shows that the comparison of means of selected physical fitness component (Abdominal strength) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 32.36 and Kho-Kho players is 33.3. The data reveals that there was no significant difference between kabaddi and kho kho players in relation to abdominal strength. Since the obtained value of 't' 0.509 was lower than tabulated value 2.000.

Table 5: Comparison of means of selected physical fitness components (Shuttle run) of Kabaddi and Kho-Kho Inter University female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Agility	Kabaddi	30	12.62	0.96	1.223
	Kho-kho	30	10.72	0.73	

*significant at 0.05 level (58 = 2.000)

Above Table shows that the comparison of means of selected physical fitness component (Agility) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 12.62 and Kho-Kho players is 10.72. The data reveals that there was no significant difference between Kabaddi and Kho-Kho players in relation to agility. Since the obtained value of 't' 1.223 was lower than tabulated value 2.000.

Table 6: Comparison of means of selected physical fitness components (cardio-respiratory endurance) of Kabaddi and Kho-Kho inter university female players.

Component	Players	Numbers	Mean	S.D.	t - Test
Cardio- respiratory endurance	Kabaddi	30	3.55	0.41	0.001
	Kho-kho	30	3.17	0.42	

*significant at 0.05 level (58 = 2.000)

Above table shows that the comparison of means of selected physical fitness component (600 Yard run/Walk) of Kabaddi and Kho-Kho players mean value of Kabaddi players is 3.55 and Kho-Kho players is 3.17. The data reveals that there was no significant difference between kabaddi and kho kho players in relation to cardio-respiratory endurance. Since the obtained value of 't' 0.001 was lower than tabulated value 2.000.

Conclusion

Within the limitations of the study the following conclusions may be drawn:

1. There was no significant difference found between Kabaddi and kho-kho female players in relation to arm and shoulder strength.
2. The results revealed that no significant difference was obtained in power between Kabaddi and kho-kho female players.
3. The above findings revealed no significant relationship of speed between Kabaddi and kho-kho players.
4. The significant difference was not found in agility between Kabaddi and kho-kho female players.
5. The above results also depict no significant difference in abdominal strength and cardio-respiratory endurance between Kabaddi and kho-kho female players.

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