

Flexibility and agility level comparison between the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra

Dr. Tejinder Singh

Assistant Professor,

Govt. College of Physical Education Patiala, Punjab, India,

[E-mail—tejinderbillu@gmail.com](mailto:tejinderbillu@gmail.com)

Abstract- The purpose of this study was to compare the flexibility and agility level between the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra. A total one hundred twelve (N=104) circle style male kabaddi players of eight teams of both universities were selected. In this study the bridge test and shuttle run test were used to measure the flexibility and agility level of the players. The study had been analyzed with the help of mean, SD, SE_D and the comparison between groups was done with the help of 't' ratio. For Statistical Description the Statistical Package for Social Sciences (SPSS), version 21.0 was used. The study revealed that on the basis of the finding both the teams were possessing same degree of Agility. But players of Kurukshetra University Kurukshetra were better in flexibility level than the players of Punjabi University Patiala.

Key words- Flexibility, Agility, Circle Style Kabaddi.

Introduction-

“Fitness is that state which characterizes the degree to which a person is able to function efficiently. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potentialities. Ability to function depends upon the physical, mental, emotional, moral and components of fitness; all of which are related to one another and are mutually inter-dependent.”(AAHPER, 1965).

The “circle kabaddi” or Punjab style, for which the World Cup was organized, is quite different from the “national style”. As the name suggests, it is played in a circular ground instead of the rectangular one as is the case in the “national style”. After a raider and a defender tag, it is the display of strength and skill of the two players from the opposite sides.(The Hindu, 2012).

Circle kabaddi is becoming a popular game in many parts of the world and there is an increasing demand with regard to fitness skill and related capabilities of the circle style kabaddi players. The promotion and evaluation of the level of physical fitness is considered essential in Circle Style Kabaddi. (Singh T., 2018).

So many studies has been completed on this game or physical fitness or comparative study of physical fitness components between the players of many games.,

Singh, T. (2019) conducted a Comparative analysis of speed and muscular power between the male raiders and stoppers of circle style kabaddi, Singh T. (2019) conducted a Comparative Analysis of Agility and Reaction Ability between the male Raiders and Stoppers of Circle Style Kabaddi, Kumar K., et.al.(2018) conducted a comparative study of sports achievement motivation of national level circle style kabaddi players, Singh, T. (2018) Constructed and standardized a specific physical fitness test battery for circle style kabaddi players, Rani, S. (2018) conducted a comparative study of flexibility between kabaddi and kho-kho games players, Singh, T. (2018) conducted a comparative study of cardio-vascular endurance, agility and flexibility level between the circle style male kabaddi players of Panjab University

Chandigarh and kurukshetra University kurukshetra, Singh, S. Dr. (2017) conducted a comparative study of selected motor fitness components between interuniversity and inter-college male Kabaddi players.

Flexibility - "Flexibility is the ability to execute movement with greater amplitude". (Singh, 1984).

For touching or caching to the opponent in this game, a optimum range is required, that can be achieve through a good ability of flexibility. A circle kabaddi player which has the ability to move the trunk and limbs through a wide range of positions has an advantage over the less flexible circle kabaddi player. So, flexibility plays an important role for better performance in circle kabaddi.

Agility- "Agility is revealed by the ability of the body or parts of the body to change directions rapidly and accurately". (Barrow and McGee, 1979).

Fast direction changing is a common action in this game. So, agility also plays an important role for better performance in circle style kabaddi.

Objective of the study: To assess the significance difference in flexibility and agility level between the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra.

Delimitations of the study

1. The Study was delimited to the male players of Circle style Kabaddi.
2. The Study was delimited to the players of 18 to 25 years.
3. The Study was delimited to only two selected universities namely Punjabi University Patiala and Kurukshetra University Kurukshetra. The players of 8 teams which were in the last four teams of the inter-college completion of Circle style Kabaddi in their respective Universities.
4. The Study was further delimited to the following Physical Fitness Components: Flexibility and Agility.

Limitations of the study

1. Some factors like diet, rest, sleep etc. were beyond the control of the investigator. These factors were considered as limitations of the study.
2. During the tests, the aptitude of the players might had influenced the results of the study, this was considered as the limitation of the study.
3. No Motivational (psychological) technique was applying during the tests. Due to lack of motivation, therefore the difference that might have occurred in performance which can be considered as the limitation of the study.
4. The players were from different socio-economic groups, their life style, dietary habits, routine of study and play were different which were considered as limitations of the study.

Method and procedure:

Sample- One hundred four (104) subjects for this study were selected with the purposive sampling technique from eight teams which were qualified for the league stage of the inter college tournament of selected universities i.e. Punjabi University Patiala (N=53) and Kurukshetra University Kurukshetra (N=51).

Hypothesis- The players of Kurukshetra University Kurukshetra are better in flexibility and agility level than the players of Punjabi University Patiala.

Method -All participant were informed of the procedure and purpose the experiment and were required to sign and important consent to participate in the study. Keeping in view the research criteria of availability, reliability and validity the following tools were used to collect the data. The selected physical fitness components- Flexibility and Agility were measured by different means and methods. The bridge test and shuttle run test were used to measure the flexibility and agility level of the players. The tests were selected from the specific physical fitness test battery for circle style kabaddi players (Singh T. 2018). For Statistical Description the Statistical Package for Social Sciences (SPSS), version 21.0 was used.

Analysis of data-: In the present study analysis and interpretation of the data and result obtained through the application of statistics. This part is devoted to the comparative result of selected physical fitness components of Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra. The results had been discussed in two sections. Section-I deals with the statistical

description of means and Std. Deviation of the scores of the players of both Universities and comparative result of the players of both Universities of flexibility and agility level have been discussed with the help of t-ratio in section II.

Section:- I

Statistical Description of Mean and Std. Deviation of the tests of Circle Style Male Kabbadi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra

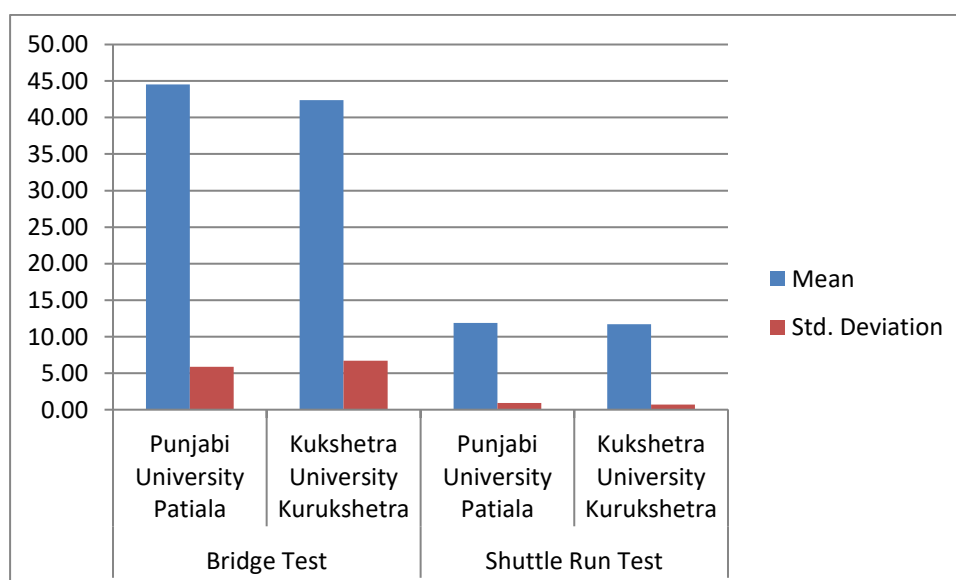
Table:-1

Group Statistics					
Group		N	Mean	Std. Deviation	Std. Error Mean
Bridge Test	Punjabi University Patiala	53	44.55	5.86	0.80
	Kukshetra University Kurukshetra	51	42.40	6.72	0.94
Shuttle Run Test	Punjabi University Patiala	53	11.86	0.93	0.13
	Kukshetra University Kurukshetra	51	11.69	0.71	0.10

For Flexibility (Bridge Test), the mean of the performance of the Players of Punjabi University Patiala was 44.55 centimeters and the mean of the performance of Kurukshetra University Kurukshetra was 42.40 centimeters. So simple difference between means of the players of both universities was 02.15 centimeter. Std. Deviation of the score of the Players of Punjabi University Patiala was 5.86 and the Std. Deviation of the score of Kurukshetra University Kurukshetra was 6.72.

For Agility (Shuttle Run Test), the mean of the performance of the Players of Punjabi University Patiala was 11.76 seconds and the mean of the performance of Kurukshetra University Kurukshetra was 12.50 seconds. So simple difference between means of the players of both universities was 0.74 second. Std. Deviation of the score of the Players of Punjabi University Patiala was 0.97 and the Std. Deviation of the score of Kurukshetra University Kurukshetra was 0.87.

Graphical presentation of Mean and SD of the tests of the Circle Style Male Kabbadi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra



Section:- 2

This section presents the comparison of the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra on the selected physical fitness components. The comparisons with the significance of difference between means score of the players of both universities on selected variables are presented in Table No. 2.

Statistical Description- Significance of difference between means score with ‘t’ value of the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra

Table -2

		Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower		
Bridge Test	Equal variances assumed	2.680	0.105	1.744	102	0.084	2.153	1.234	-0.295	4.601	
	Equal variances not assumed			1.740	98.99	0.085	2.153	1.238	-0.303	4.609	
Shuttle Run Test	Equal variances assumed	6.566	0.012	1.062	102	0.291	0.173	0.163	-0.150	0.496	
	Equal variances not assumed			1.067	97.29	0.288	0.173	0.162	-0.149	0.495	

The sig. of “Levene’s Test for Equality of Variances was more than 0.05 for the Shuttle Run Test and Bridge Test . So the first rows (Equal variances assumed) were selected for the both tests.

Interpretation of the t-test results- t-test was employed to find out the significance difference between the means. The significance level was set at 0.05 levels. The t value for the Bridge Test was 1.744 and for the Shuttle Run Test was 1.062. The p-value for the Bridge Test was 0.084 and for the Shuttle Run Test was 0.291. The p-value given by SPSS is 2-tailed, but according to hypothesis there was a need to divide it in half for a 1-tailed test. According to the table-2 the 1-tailed p-value for Bridge Test is $0.084 / 2 = 0.042$ and for Shuttle Run Test is $0.291 / 2 = 0.145$.

Findings:

1. As per the results depicted in Table-2 shows that the p-value for bridge test was less than 0.05. So, there was a statistical significance difference between the male players of circle style kabaddi of Punjabi University Patiala and Kurukshetra University Kurukshetra in Flexibility level. The players of Kurukshetra University Kurukshetra were better in Flexibility level than the players of Punjabi University Patiala.
2. The hypothesis for Flexibility level was accepted.

3. As per the results depicted in Table-2 shows that the p-value for shuttle run test was more than 0.05. So, there was not a statistical significance difference between the players of circle style kabaddi of Punjabi University Patiala and Kurukshetra University Kurukshetra in Agility level.
4. The hypothesis for Agility level was rejected.

Conclusion: The findings of the study can be concluded as under: On the basis of t -test applied the finding of the study concluded that there was a statistical significance difference on Bridge Test with p-value 0.042. So the players of Punjabi University Patiala and Kurukshetra University Kurukshetra have not the same Flexibility level. But there was not a statistical significance difference in Shuttle Run Test with with p-value 0.291. So the players of Punjabi University Patiala and Kurukshetra University Kurukshetra have the same Agility level. The male players of Kurukshetra University Kurukshetra were better in Flexibility level than the players of Punjabi University Patiala.

References-

1. AAHPER. AAHPER Youth Fitness Test Manual Revised; Washington, D.C., American Alliance for Health, Physical Education, and Recreation. 1965, P. 79
2. Barrow, H.M. & McGee, R. A practical approach to measurement in physical education, Lee and Fibiger, Philadelphia, USA, 1979,. P. 112, 91.
3. Singh, H.. Sports Training, General Theory and Methods, 1984, NSNIS, Patiala.
4. Bhullar, V. S. Historical Development of Circle Style Kabaddi, Unpublished Doctoral Thesis, Panjab University, Chandigarh, 2006.
5. Kumar K., Himanshu H. and Kumari H. (2018). A comparative study of sports achievement motivation of national level circle style kabaddi players, International Journal of Physiology, Nutrition and Physical Education; 3(1): 1621-1624.
6. Kumar K., Himanshu H. and Kumari H. (2018). A comparative study of sports achievement motivation of national level circle style kabaddi players, International Journal of Physiology, Nutrition and Physical Education; 3(1): 1621-1624.
7. Mr. Jaskarn Singh. Agility level comparison among female circle style kabaddi players of Punjabi University Patiala and Panjab University Chandigarh, History Research Journal, 2019, Volume 5, Issue -6. 4.
8. Rani, S. (2018). A comparative study of flexibility between kabaddi and kho-kho games players, International Journal of Yoga, Physiotherapy and Physical Education, Vol. 3, Issue 2.
9. Singh T. A Comparative Study of Cardio-Vascular Endurance, Agility and Flexibility Level between the Circle Style Male Kabaddi Players of Panjab University Chandigarh and Kurukshetra University Kurukshetra, Online International Interdisciplinary Research Journal, {Bi-Monthly}, 2018;08(02):271-277.
10. Singh T. Construction and Standardization of Specific Physical Fitness Test Battery for Circle Style Kabaddi Players, International Journal of Physical Education and Sports Sciences 2018;13(07).
11. Singh T. Comparative analysis of Speed and Muscular Power between the male raiders and stoppers of circle style kabaddi, International Journal of Physical Education, Sports and Health 2019;6(4):148-153.
12. Singh T. Comparative Analysis of Agility and Reaction Ability between the male Raiders and Stoppers of Circle Style Kabaddi, ICPSHF 2019, organized by Physical Education Department of Punjabi University Patiala, 2019,
13. The Hindu Newspaper (Dec. 16, 2012). Punjab's kabaddi goes global.

Raw data of the players of Panjab Uni. Chandigarh
and Guru Nank Dev University Amritsar

	PBI U P		KUK		
	Br. T.	S. R>	Br. T.	S. R.	
Sukhdeep Singh	42.1	10.92	Sonu Kumar	34.3	11.09
Avtar Singh	42.6	11.21	Anil Kumar	42.7	11.12
Sandeep singh	46.7	12.18	Naresh Kumar	33.9	10.94
Parminder Singh	38.4	10.7	Vikram	35.2	11.2
Gurpreet Singh	37.3	10.72	Gurdeep Singh	34.5	11.11
Rajakaranveer Singh	45.7	12.63	Ankush	50.5	12.52
Satnam Singh	46.9	11.79	Sonu	44.8	11.89
Asif Mohmmad	36.3	11.45	Tinka	49.4	12.12
Harmanpreet Singh	41.8	13.08	Parveen	44.6	11.94
Pardeep Singh	49.7	12.85	Yadvinder Singh	43.8	12.08
Balkarn Singh	50.2	11.28	Harinder Singh	54.5	13.15
Jaskirat singh	46	11.65	Gourav	52.7	13.02
Mandeep Singh	48.9	10.69	Gurjinder Singh	37.5	11.14
Gagandeep Singh	51.6	10.87	Ravi Parkash	34.3	11.13
Karanbarinder Singh	39.4	11.07	Ramesh	33.7	11.32
Gagandeep Singh	36.4	10.78	Amandeep	35.2	11.2
Gursimran Singh	45.8	12.93	Naresh Kumar	38.1	11.28
Gursewak Singh	35.2	10.84	Naresh	42.4	12.3
Rajwinder Singh	53.9	12.09	Sonu	34.9	11.19
Sandeep Singh	51.8	12.97	Anuj	38.8	11.27
Jaspinder Singh	47.3	11.72	Ramesh Kumar	52.4	13.14
Vatandeep Singh	49.6	10.71	Mohan	47.6	12.41
Harmanjit Singh	51.5	12.64	Deepak	51.8	13.01
Hardeep Singh	33.9	11.11	Vikki Singh	53.3	13.11
Jasmeet Singh	48.1	12.67	Mohan	40.2	11.25
Ramanpreet Singh	52.3	13.15	Anuj Lohan	35.7	11.12
Preetpal Singh	53.1	13.58	Jaydeep	33.7	11.09
Manjot Singh	52.8	13.36	parveen	46.5	11.32
Jaskirt Singh	40.2	12.59	Ashish	38.1	11.17
Darshan Singh	38.9	12.05	Naveen	41.6	11.23
Baljit Sharma	45.7	11.78	Vijay Goyat	40.2	11.13
Harmeet Singh	41.3	11.39	Jagdeep	47.9	12.24
Karanpreet Singh	42.7	12.65	Robin	50.4	12.21
Jagmeet Singh	44.6	11.77	Rakesh	51.1	12.31
Balwant Singh	50.4	12.38	Sukhbir	41.7	11.36
Balwant singh	40.7	13.14	Parvesh	37.3	11.12
Amtojsran	48.3	13.51	Amit Kumar	36.5	11.09
Parminder Singh	44.4	13.27	Ankit Kumar	36.4	12.25
Satnam Singh	38.8	11.59	Amit	52.7	13.02
Shyam Sunder	44.6	10.65	Kuldeep	35.8	11.13
Sarabjit Singh	42.5	10.78	Ajay	41.4	11.3
Mandeep Singh	50.8	11.25	Dinesh	42.5	11.18
Karmjit Singh	42.3	10.92	Hari Ram	37.2	11.16

Tejinder Singh	47.6	11.5
Major Singh	46.5	13.07
Amanpreet Singh	46.3	10.92
Rupinder Singh	55.1	13.11
Kuldeep Singh	33.7	10.63
Sukhwant Singh	49.8	11.21
Karanbir Singh	44.2	11.08
Arandeep Singh	37.6	12.21
Akashdeep Singh	35.1	11.13
Raman Kumar	33.8	12.45

Mohit Shukla	49.6	11.43
Nikit	47.1	11.15
Sahil	49.9	11.35
Hemant Kumar	36.7	11.1
Subham	38.1	11.18
Sunny	33.4	11.08
Aman Kumar	50.1	12.65
Gaurav Kamboj	49.6	12.82

