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Comparison of muscular strength endurance among the male raiders and stoppers of circle style kabaddi

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Abstract

The purpose of this study was to compare the muscular strength endurance among the male raiders and stoppers of circle style kabaddi. With the purposive sampling technique a total two hundred sixteen (102 raiders and 114 stoppers) of circle style kabaddi were taken as subjects. The results were obtained through the SPSS version 21.0. In this study the dips Test was used to measure the muscular strength endurance of the players. This tool was taken from the specific physical fitness test battery for circle style kabaddi players, standardized by Singh T. (2018). The study had been analyzed with the help of mean, SD, Levene's test for equality of variances and the comparison between groups was done with the help of t-test. The study revealed that on the basis of the finding male raiders and stoppers were possessing same degree of muscular strength endurance.

Keywords: Muscular strength endurance, raider, stopper, circle style kabaddi

Introduction

Williams (1962) [12] cleared about physical fitness that physical fitness is essential not only in terms of general health, but also for the special physical requirements for competitive sports and certain highly specialized and demanding occupations.

There are different requirements of physical fitness for different games. A gymnast has different degree of flexibility than a basketball or volleyball player. Different degrees of different physical fitness components are required for different games or events. A player who has physical fitness according to his game can do better training of the game.

The greater degree of physical fitness is required for the high level performance in the sports and games. The player can be injured during the training or competition if he has not high level physical fitness. Circle style kabaddi requires a high level physical fitness. This game is a combative game and during the completion the body parts of the players take high level stressing. Due to the high level stressing the players are often injured in this game. For avoiding the injuries the player should be proper physically fit.

Physical fitness gives the good feeling to the players and it increases the self-confidence of the players. Self-confidence plays a very important role for the better performance in the games. Physical fitness is a ability to tolerate the more stress of physical load. A fit player can continue the training or play under difficult circumstances whereas unfit player would quit under difficult circumstances.

Circle Style Kabaddi is an indigenous game of the Punjab region. People were playing Kabaddi with some variations in different areas of Punjab and had entertained but now all types of Kabaddi which were played in ancient Punjab have merged into the Circle Style Kabaddi.

Circle Style Kabaddi is different from the National Style Kabaddi. This game is played in a circular type playfield instead the rectangular playfield of National Style Kabaddi. When a stopper touches the raider or raider touches any stopper, the other stopper can't touch or stop to the raider. The struggle will be only in two apposite sides' players.

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

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Singh, T. Dr. (2022) ^[10]. Conducted a comparison of speed and reaction ability level between the circle style male kabaddi players of Panjab University Chandigarh and Guru Nanak Dev University Amritsar.

Singh, T. Dr. (2022) ^[10]. Conducted a comparative study of muscular power and speed between the circle style male kabaddi players of Punjabi University Patiala and Kurukshetra University Kurukshetra.

Singh, T. Dr. (2020) ^[6]. Conducted a comparative study of Cardio-vascular endurance between the male raiders and stoppers of circle style kabaddi.

Singh, T. Dr. (2020) ^[6]. Conducted a comparative study of flexibility and agility level comparison between the Circle Style Male Kabaddi Players of Punjabi University Patiala and Kurukshetra University Kurukshetra.

Singh, T. Dr. (2021) ^[8]. Conducted a comparative study of muscular power and speed between the Circle Style Male Kabaddi Players of Punjabi University Patiala and Panjab University Chandigarh.

Singh, T. Dr. (2021) ^[8]. Conducted a comparative study of muscular power and muscular strength endurance level between the circle style male kabaddi players of Panjab University Chandigarh and Guru Nanak Dev University Amritsar.

Singh, T. (2019) ^[4]. Comparative analysis of speed and muscular power between the male raiders and stoppers of circle style kabaddi.

Singh, T. (2018) ^[2]. Constructed and standardized a specific physical fitness test battery for circle style kabaddi players, Suman Rani (2018) ^[13] conducted a comparative study of flexibility between kabaddi and kho-kho games players.

Singh, T. (2018) ^[2] 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) ^[1] conducted a comparative study of selected motor fitness components between inter-university and inter-college male Kabaddi players.

The muscular strength endurance component play very important role for better performance in Circle Style Kabaddi. The players of Circle Style Kabaddi should have higher rate of Strength Endurance of arms so that they can do continue efforts with arms strength in the competition that is required for better performance. The selected physical fitness test item is Dips Test that measures the muscular strength and endurance of the arms.

Method and procedure

Sample

Total two hundred sixteen (102 raiders and 114 stoppers) subjects of this study were selected with the purposive

sampling technique from eight teams which were qualified for the league stage of the inter college Kabaddi Circle Style tournament of selected universities i.e. Panjab University Chandigarh, Punjabi University Patiala, Guru Nanak Dev University Amritsar and Kurukshetra University Kurukshetra.

Selection of Variables

Muscular strength endurance level considered as a variable for this study. Dips test was selected for measuring Muscular strength endurance level of male raiders and stoppers of circle style kabaddi. This tool was taken from the specific physical fitness test battery for circle style kabaddi players, standardized by Singh T. (2018) ^[2].

Hypothesis

It was hypothesized that there would be significant difference between male raiders and stoppers of Circle Style kabaddi on Muscular strength endurance level.

Procedure of tests

All participant were informed of the procedure and purpose the experiment and were required to sign and important consent to participate in the study. Muscular strength endurance level was measured by dips test. Score for dips test was taken in numbers

Statistical Procedure

In order to compare the Muscular strength endurance level of male raiders and stoppers of circle style kabaddi, the independent t-test was employed. The level of significance chosen to test the hypothesis was 0.05, $p < 0.05$. 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 results obtained through the application of statistics. This part is devoted to the comparative result of the male raiders and stoppers of Circle Style Kabaddi of selected Muscular strength endurance component. The results had been discussed in two sections. Section-I deals with the statistical description of means and Std. Deviation of the scores of raiders & stoppers. Section II deals with the comparative result of Muscular strength endurance of the raiders & stoppers. This section have been discussed with the help of t-ratio.

Section: I

Table 1: Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Dips	Raiders	102	40.56	12.04	1.19
	Stoppers	114	40.04	11.83	1.11

Statistical Description of Mean and SD of the test of male raiders and stoppers of Circle Style kabaddi

Table-1 shows the mean & Std. Deviation of dips test of the

raiders and stoppers in group statistics. The output shows that the mean & Std. Deviation of score for dips test of raiders were 40.56 & 12.04 versus 40.04 & 11.83 for stoppers.

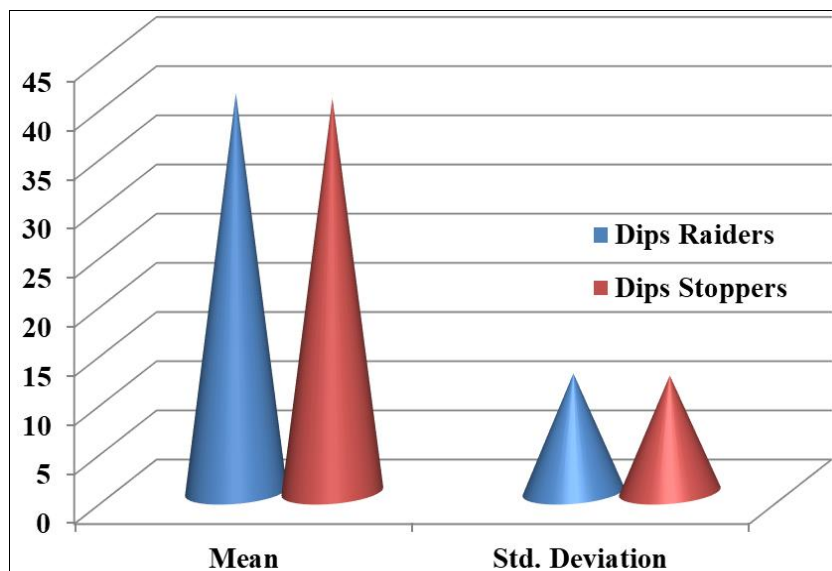


Fig 1: Graphical presentation of Mean and Std. Deviation of the test of male raiders and stoppers of Circle Style kabaddi

Section 2: This section presents the comparison of Muscular strength endurance between the male raiders and stoppers of Circle Style kabaddi. The comparisons with the significance of difference between means score of the raiders and stoppers on selected variable is presented in Table No. 2.

Statistical Description- Significance of difference between means score with t-test of male raiders and stoppers of Circle Style kabaddi

Table 2: Independent Samples Test

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Dips Test	Equal variances assumed	0.00	1.00	0.32	214	0.75	0.51	1.63	-2.69	3.72
	Equal variances not assumed			0.32	210.48	0.75	0.51	1.63	-2.69	3.72

The sig. of Levene’s test for equality of variances is more than 0.05 for Dips Test, So the first rows (Equal variances assumed) was selected for both tests.

Interpretation of the t-test results

t-test was employed to find out the significance difference between means. The significance level was set at .05 levels. 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 Dips Test is 0.75/2=0.375.

Findings

As per the results depicted in Table-2 shows that The p-values for Dips Test was more than 0.05. So, there was not a statistical significance difference between the male raiders and stoppers of Circle Style kabaddi in Muscular strength endurance.

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 not a statistical significance difference on Dips Test. So, raiders and stoppers have the same Muscular strength endurance level.

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Raw data of Raiders and Stoppers

Sr. No.	Raiders		Sr. No.	Stoppers	
1	Karanbarinder Singh	29	1	Gursewak Singh	20
2	Gagandeep Singh	55	2	Rajwinder Singh	50
3	Gursimran Singh	55	3	Sandeep Singh	65
4	Jaspinder Singh	24	4	Harmanjit Singh	26
5	Vatandeep Singh	50	5	Hardeep Singh	64
6	Jasmeet Singh	50	6	Ramanpreet Singh	40
7	Preetpal Singh	10	7	Jaskirt Singh	48
8	Manjot Singh	37	8	Darshan Singh	30
9	Baljit Sharma	25	9	Harmeet Singh	42
10	Jagmeet Singh	32	10	Karanpreet Singh	52
11	Balwant Singh	20	11	Balwant Singh	50
12	Parminder Singh	15	12	Amtojsran	34
13	Satnam Singh	50	13	Shyam Sunder	45
14	Sarabjit Singh	42	14	Karmjit Singh	30
15	Mandeep Singh	35	15	Major Singh	45
16	Tejinder Singh	40	16	Kuldeep Singh	48
17	Amanpreet Singh	36	17	Sukhwant Singh	50
18	Rupinder Singh	15	18	Karanbir Singh	32
19	Raman Kumar	30	19	Arandeep Singh	40
20	Ravandeep Singh	41	20	Akashdeep Singh	35
21	Ravinderpal Singh	41	21	Amritpal Singh	38
22	Mandeep Singh	34	22	Angrej Singh	31
23	Mandeep Singh	40	23	Mandeep Singh	24
24	Arabdeep Singh	41	24	Amritveer Singh	25
25	Jaimal Singh	40	25	Harmanpreet Singh	31
26	Paramjit Singh	31	26	Gurpinderjit Singh	43
27	Sandeep Singh	35	27	Jaskiranjit Singh	29
28	Manpreet Singh	36	28	Gurpreet Singh	25
29	Parminder Singh	35	29	Lovepreet Singh	50
30	Gurdeep Singh	31	30	Gursajjan Singh	27
31	Gurwinder Singh	24	31	Amritpal Singh	43
32	Sukhjeet Singh	21	32	Jasbir Singh	39
33	Lakhveer Singh	37	33	Manpreet Singh	29
34	Amarpreet Singh	19	34	khusdeep Singh	29
35	Gurtej Singh	26	35	Punjab Singh	21
36	Rupinder Singh	36	36	Kamalpreet Singh	28
37	Gurwinder Singh	19	37	Sheetal Singh	15
38	Harjaspreet Singh	23	38	Kulwinder Singh	33
39	Jashandeep Singh	25	39	Chand Singh	30
40	Jaspreet Singh	19	40	Gurik Singh	29
41	Ankush	24	41	Jagpal Singh	21
42	Harinder Singh	19	42	Harjinder Singh	31
43	Jagdeep	31	43	Gurkarpal Singh	18
44	Gurpreet Singh	54	44	Surinder Singh	19
45	Manjobanjeet Singh	52	45	Amandeep Singh	28
46	Manpreet Singh	51	46	Gourav	21
47	Nirmal Singh	50	47	Ramesh Kumar	12
48	Arjun Singh	56	48	Robin	29
49	Lovejinder Singh	47	49	Rakesh	19
50	Manjinder Singh	51	50	Amit	15
51	Kulwinder Singh	51	51	Ajay	31
52	Rajwant Singh	53	52	Mohit Shukla	30

53	Sukhpreet Singh	54	53	Nikit	31
54	Bhupinder Singh	54	54	Sahil	35
55	Ramandeep Singh	55	55	Parminder Singh	55
56	Sonu Kumar	54	56	Asif Mohmmad	46
57	Naresh Kumar	51	57	Hardeep Singh	54
58	Ravi Parkash	52	58	Sulinder Singh	52
59	Jaydeep	57	59	Maninder Singh	57
60	Kuldeep	65	60	Kulwinder Singh	50
61	Sunny	53	61	Sapinder Singh	48
62	Sukhdeep Singh	46	62	Harmandeep Singh	48
63	Saranpreet Singh	49	63	Amritpal Singh	56
64	Amansud	51	64	Gurmeet Singh	53
65	Honey Deol	46	65	Vikram	55
66	Gurlal Singh	50	66	Gurdeep Singh	35
67	Kulwinder Singh	51	67	Ramesh	54
68	Sukhpreet Singh	49	68	Amandeep	40
69	Naresh Kumar	51	69	Sonu	54
70	Parvesh	52	70	Anuj Lohan	50
71	Hemant Kumar	51	71	Avtar Singh	48
72	Harmanpreet Singh	23	72	Gurwinder Singh	47
73	Karanpreet Singh	44	73	Satpal singh	49
74	Jugraj Singh	39	74	Jaspal Singh	49
75	Malkit Singh	49	75	Jugraj Singh	42
76	Ramandeep Singh	41	76	Vizen Kumar	52
77	Devinder Singh	47	77	Rajwinder Singh	48
78	Hardavinder Singh	43	78	Parminder Singh	44
79	Sukhchain Singh	50	79	Gurparkash Singh	48
80	Anil Kumar	56	80	Anuj	53
81	Gurjinder Singh	45	81	Mohan	54
82	Vijay Goyat	47	82	Ashish	48
83	Sukhbir	45	83	Subham	49
84	Amit Kumar	54	84	Pargat Singh	51
85	Dinesh	47	85	Sarbjit Singh	49
86	Hari Ram	47	86	Balraj Singh	50
87	Rajakaranveer Singh	19	87	Kawaljit Singh	40
88	Pawandeep Singh	48	88	Mandeep Singh	50
89	Manjinder Singh	47	89	Randhir Singh	45
90	Dilsher Singh	38	90	Gurlamber Singh	46
91	Gurdas Singh	42	91	Naveen	43
92	Sukhveer Singh	40	92	Ankit Kumar	43
93	Manpreet Singh	45	93	Satnam Singh	41
94	Parveen	42	94	Sukhwinder Singh	42
95	Yadvinder Singh	47	95	Gurpreet Singh	45
96	Naresh	47	96	Karamjit Singh	57
97	Sandeep singh	30	97	Robinpreet singh	41
98	Jaspal Singh	47	98	Amritpal Singh	47
99	Iqbal Singh	43	99	Harman Singh	48
100	Mandeep Singh	29	100	Inderjeet Singh	43
101	Gagandeep Singh	38	101	Satnam Singh	47
102	Aman Kumar	24	102	Amanjot Singh	47
			103	Pawanvir Singh	51
			104	Jaspreet Singh	49
			105	Sonu	43
			106	Mohan	43
			107	parveen	41
			108	Jaskirat singh	48
			109	Tinka	46
			110	Pardeep Singh	32
			111	Balkarn Singh	34
			112	Vikki Singh	19
			113	Gaurav Kamboj	20
			114	Deepak	21