

## A Study on Effect of Circuit Training on Various Skills of Kabaddi Players of Warangal

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**ABSTRACT :**The present study was designed to evaluate the effect of circuit training on the various skills of Kabaddi players in Warangal. The researcher defined the population for the study as 50 male Kabaddi players in Warangal. The researcher has taken a sample that represents the population in all relevant aspects. The methodology used in this research involves the choice of a specified group of subjects, the selection of variables, Speed the administering of standard tests using the relevant tools, obtaining predetermined information about certain factors, and subjecting them to a statistical analysis. Test the finding of this study could provide insights into the potential benefits of circuit training on physical aspects of Kabaddi players, aiding in the Development of effective training programmes, for enhancing performance of Kabaddi players. The speed training group showed remarkable development due to twelve weeks of training on motor fitness training for 50 meters. Speed refers to the capacity to develop speed and some of the training methods employed to enhance speed. The circuit training group of Kabaddi players has shown significant improvement in speed, hand touch skill due to twelve weeks of training practice on hand touch skill. The control group did not show significant improvement after the final test in speed and hand-touch skill in Kabaddi.

**KEYWORDS:** Circuit Training, Speed, Flexibility, Agility, Muscular Power, Muscular strength, Balance and Kabaddi Skills

### **INTRODUCTION:**

The main objective of games and sports is to promote physical wellbeing. The famous quote, “**A sound mind in a sound body,**” illustrates the importance of physical wellness to achieve mental stability. Games and sports play a significant role in modeling and developing one’s personality.

### **CIRCUIT TRAINING:**

Circuit training is a superb way to improve mobility, strength, and stamina. The circuit training comprises 6 to 10 strength exercises that are completed

one after another. Each exercise is performed for a specified number of repetitions or for a specific time before moving on to subsequent exercises.

**Abhishek Verma, Devpal Rana, and Abhimanyu Singh (2011)** conducted a study to develop the physical profile of Kabaddi players. For this study, the investigators selected 100 male Kabaddi players from the West-Zone Inter-University Championship as the subjects of the study. Their ages ranged from 18 to 23 years old. Keeping feasibility in mind, speed, agility, and explosive power were selected for this study. Speed and agility were assessed by administering a 50-yard dash, and the performance was recorded in seconds and shuttle runs, respectively. To determine the explosive power, a standing board jump was used, and the reading was recorded in meters. To develop the physical profile of Kabaddi players, descriptive analysis was applied. The results of the study indicate that in the 50-yard dash, standing broad jump, and shuttle run, Kabaddi players had average scores. In the case of standing broad jump kabaddi, players scored above average. It was concluded that West-Zone University Kabaddi players were average in speed and shuttle run, and in the case of standing broad jump, they were above average.

**Madhukar singh, Dr. Rajeev Choudary and Rakesh kumar Patel :** The objective of the study was to constructive Hand touch skill test in Kabaddi for the purpose of the study 100 male Kabaddi players were slected as subjects for the study age of the subjects was ranging 18-28 years for the present study was test items selected Hand touch to construct skill test in Kabaddi. Factors analysis was used. Level of significance et at 0.5 level. As per the norms the present study, sample adequacy was found mediocre. The present study BTS was found significant ( $p=000$ ). Thus show that correlation matrix is not on identity matrix. The component is as Kabadi performance much strengthens.

### **Method:**

The researcher defined the Population for the study as 50 male Kabaddi players of Warangal district. The age group of 18 to 22 years was acted as the subjects. Then they were separately divided in to two equal groups randomly consisting of 25 subjects in each group. The Groups were named randomly by lot Circuit Training group and Control Group. They were tested before and after training period to measure the Speed and Hand Touch skills applying the following test.

**Speed:** 50 mts Sprint test was used to measure the effect of Circuit training on improvement of Speed.

**Hand Touch Skill:** The skill refers to develop the stretching ability.

The purpose of the study is to determine the effect of circuit training on the improvement of Speed and Hand Touch Kabaddi Skill.

**DESCRIPTIVE ANALYSIS 50 METERS RUN IN PRE AND POST-TEST OF PLAYERS IN CONTROL GROUP**

**TABLE -1**

	Pre test (in sec.)	Post test (in sec.)
Mean	7.84	7.76
Std. Deviation	0.69	0.88
Mean Difference	0.08	

**Result and discussions:**

The 50 Mtrs Speed test (seconds) Table 1 Mean and the standard deviation graph show the difference in speed between pre-test and post-test players in the control group. The mean and standard deviations were 7.84, 0.69 and 7.76, 0.88, respectively. It is clear that the average difference in speed between pre-test and post-test of players in the control group was 0.08.

**DESCRIPTIVE ANALYSIS 50 METERS RUN IN PRE AND POST-TEST OF PLAYERS IN CIRCUIT TRAINING GROUP**

**TABLE- 2**

<b>50 Meters Run</b>	<b>Pre-test</b>	<b>Post-test</b>
Mean	7.36	6.08
Std. Deviation	0.64	1.04
Mean diff.	1.28	

**Result and discussions:**

The 50 Mtrs Run test (seconds) Table 2 Mean and the standard deviation graph show the difference in speed between pre- and post-test players in the Training group. The mean and standard deviations were 7.36, 0.64 and 6.08, 1.04, respectively. It is clear that the average difference in speed between pre- and post-test of players in the Training student group was 1.28.

**HYPOTHESIS TEST ON PAIRED MEAN DIFFERENCE OF 50 METERS SPEED (in sec) IN PRE AND POST-TEST OF PLAYERS IN CONTROL GROUP**

**Results and Discussion on Hypothesis - I:**

Results pertaining to the Hypothesis- I, the null hypothesis is there is no significant difference of speed in pre-test and post-test of players in Control Group.

**TABLE -3**

50 METERS	Mean	SD	Paired Differences				t	Df	Sig.
					95% C. I of the Diff.				
			Mean	SD	Lower	Upper			
PRE	7.84	0.69							
POST	7.76	0.88	.08	0.909	-0.295	.455	0.44	24	0.66400

\*Critical value  $t=2.093$  not significant at 0.05levels

**Result and discussions:**

Table -3 Average, standard deviation, mean deviations are added, standard deviation, CI, 'T' value, DF and P-values are tested for 50 meters (seconds) before and after speed in the control group test.

Speed is measured using test data of 50meters dash (seconds) before and after the test. The data were analyzed and the results are presented in Table 4.2.0.

The T-test value observed in the speed control group between pre- and post-test was 0.44, which was lower than the required statistical value of 2.093 at the level of 0.05 ( $p = 0.286$ ). The result indicates no significant improvement in between the speed pre-test and the post-test of the control group. Therefore, the hypothesis is accepted.

**HYPOTHESIS TEST ON PAIRED MEAN DIFFERENCE OF 50 METERS SPEED IN PRE AND POST-TEST OF PLAYERS INCIRCUIT TRAINING GROUP**

**Results and Discussion on Hypothesis - I:**

Results pertaining to the Hypothesis-1 the hypothesis is there is no significant difference of 50 Meters speed in pre-test and post-test of player students in CIRCUIT Training Group.

**Table-4**

50 METERS SPEED	Mean	SD	Paired Differences				t	Df	Sig.
					95% C. I of the Diff.				
			Mean	SD	Lower	Upper			
PRE	7.36	0.64							
POST	6.08	1.04	1.28	0.936	0.894	1.666	6.835	24	0.000000

\*Critical value  $t=2.093$  t significant at 0.05levels

**Result and discussions:**

Table -4 Average, standard deviation, added average differences, standard deviation, CI, 'T' value, DF and P-values 50 meters before and after in the training group test.

Speed is measured using data from a 50 Meters (seconds) test pre and post training for the CIRCUIT training group. The data were analyzed and the results are presented in Table 4.3.0.

The T-test value observed in the CIRCUIT training group on the 50 meters speed between pre-test and post-test was 6.835, which is higher than the required statistical value of 2.093 at the level of 0.059 ( $p = 0.016$ ). The

result indicates the significant improvement in the speed between importance pre and post speed test of the CIRCUIT training group. Therefore, the hypothesis is rejected.

**DESCRIPTIVE ANALYSIS RAW SCORE ON HAND TOUCH IN PRE AND POST TEST OF PLAYERS IN CONTROL GROUP**

**TABLE- 5**

	Pre test (in sec.)	Post test (in sec.)
Mean	11.56	11.67
Std. Deviation	1.00	0.95
Mean Difference	0.12	

**Result and discussions:**

The Hand Touch Test (seconds) Table 5 Mean and the standard deviation graph show the difference in speed between pre- and post-test players in the control group. The mean and standard deviations were 11.56, 1.00 and 11.67, 0.95, respectively. It is clear that the average difference between pre- and post-test of players in the control student group was -0.12.

**DESCRIPTIVE ANALYSIS HAND TOUCH TEST IN PRE AND POST-TEST OF PLAYERS IN TRAINING GROUP**

**TABLE- 6**

<b>Hand Touch</b>	<b>Pre-test</b>	<b>Post-test</b>
Mean	12.4	6.92
Std. Deviation	1.00	0.76
Mean diff.	5.48	

**Result and discussions:**

The Hand Touch test (seconds) Table 6 Mean and the standard deviation graph show the difference in Hand Touch between pre-test and post-test players in the Training group. The mean and standard deviations were 12.4, 1.00 and 6.92, 0.76, respectively. It is clear that the average difference in Hand Touch between pre-test and post-test of players in the Training student group was 5.48.

**HYPOTHESIS TEST ON PAIRED MEAN DIFFERENCE OF HAND TOUCH IN PRE AND POST-TEST OF PLAYERS IN CONTROL GROUP**

**Results and Discussion on Hypothesis -VII:**

Results pertaining to the Hypothesis-VII, the null hypothesis is there is no significant difference of Hand Touch in pre-test and post-test of players in Control Group.

**Table-7**

HAND TOUCH	Mean	SD	Paired Differences				t	Df	Sig.
			Mean	SD	95% C. I of the Diff.				
PRE	11.56	1.00			Lower	Upper			
POST	11.68	0.95	-0.12	0.6	-0.368	0.128	-1	24	0.327000

0.0\*Critical value  $t=2.093$  not significant at 5levels

**Result and discussions:**

Table 7 Average, standard deviation, mean deviations are added, standard deviation, CI, 'T' value, DF and P-values are tested for Hand Touch (seconds) before and after in the control group test.

Test is measured using test data of Hand Touch (seconds) before and after the test. The data were analyzed and the results are presented in Table 4.2.6.

The T-test value observed in the control group between pre- and post-test was -1, which was lower than the required statistical value of 2.093 at the level of 0.05 ( $p = 0.286$ ). The result indicates that there is no improvement Hand Touch test between pre-test and the post-test of the control group. Therefore, the hypothesis is accepted.

**HYPOTHESIS TEST ON PAIRED MEAN DIFFERENCE OF HAND TOUCH IN PRE AND POST-TEST OF PLAYERS INCIRCUIT TRAINING GROUP**

**Results and Discussion on Hypothesis -VII:**

Results pertaining to the Hypothesis-VII, the hypothesis are there is significant difference of Hand Touch in pre-test and post-test of players in CIRCUIT Training Group.

**Table-8**

HAND TOUCH	Mean	SD	Paired Differences				t	Df	Sig.
			Mean	SD	95% C. I of the Diff.				
PRE	12.4	1.00			Lower	Upper			
POST	6.92	0.76	5.48	0.872	5.12	5.84	31.43	24	0.000000

\*Critical value  $t=2.093$  not significant at 0.05levels

**Result and discussions:**

Table -8 Average, standard deviation, mean deviations are added, standard deviation, CI, 'T' value, DF and P-values are tested for Hand Touch (seconds) before and after in the in the training group test.

Test is measured using test data of Hand Touch (seconds) before and after the test. The data were analyzed and the results are presented in Table 4.3.6.

The T-test value observed in the control group between pre-test and post-test was 31.43, which was higher than the required statistical value of 2.093 at the level of 0.05 ( $p = 0.286$ ). The result indicates the improvement in the pre and post Hand Touch test of the CIRCUIT training group. Therefore, the hypothesis is rejected.

**References:**

Prasad Rao, E ***Modern Coaching in Kabaddi*** (D.V.S. Publications New Delhi 1994).

Bucher. Charles A, ***Foundations of Physical Education*** (St Louis: The C.V. Mosby Company, 1968) P-239.

Cowell, C.C. ***Scientific Foundation of Physical Education*** (New York: Harper and Row Publishers INC., 1953) P-95.

**Clark, H. H. and Clark, D. H. (1975)**, “Research Process in Physical Education”, Englewood cliffs, New Jersey: Prentice Hall, Inc.

**Dick, F. W. (1992)**, “Sports Training Principles”, Great Britain: University Press Cambridge. Field, A. (2009),

**J. P. (2000)**, “A Text Book on Sports Statistics”, Gwalior: Venus Publications