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CIRCUIT AND INTERVAL TRAINING ON CHANGE OF SELF CONFIDENCE IN MEN KABADDI PLAYERS

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Abstract:- The present study was designed to evaluate the effect of circuit training on the change of self confidence in men Kabaddi player. The investigator has to obtain a sample of 60 men college Kabaddi players in Kerala state for the study. The population would represent in all relevant aspects and methodology used in this research involves the choice of a specified group of subjects, selection of variables, administering of standard tests, using of the relevant tools obtaining pre determined information in the certain chosen factors and subjecting them for a statistical analysis.

Introduction

Kabaddi is one of the most popular games in India and its unique origin can be traceable in the early Indian history. Many regions of India claim the credit for originating it and that would perhaps indicate that the game has been popular in many parts of the country for a long time ago. The present form of Kabaddi is entirely different from that of the ancient, as changes occurred in the rules and regulation of the game in different periods. At present the game turns more defensive in nature even though it demands a great deal of fitness from the players. Nowadays it is attaining wide popularity and soon the game Kabaddi may find an important place in the international sports calendar.

Kabaddi is essentially an Indian game, which commands huge popularity in India as well as in its hinterland. In India, Kabaddi is popular in different names. In the southern parts of India, the game is referred to as Chedugudu or Hu-Tu-Tu. In eastern India, it is fondly called Hadudu (for men) and Kit-Kit (for women). The game is known as Kabaddi in northern India. Breath control, raid, dodging and movement of hand and feet are the basic skills that one has to acquire, in order to play Kabaddi.

Circuit training

The term "circuit training" describes the way a workout is structured rather than the type of exercise performed. It typically consists of a series of exercises or stations completed in succession with minimal rest in between. Circuit routines allow the athlete or coach to create an endless number of workouts and add variety to routine training programs.

Interval training

Interval training developed out of training for traditional cardiovascular activities such as running. Running intervals were a way for you to practice running at a pace far above your race pace while allowing for recovery between fast-paced workouts. Interval training with resistance exercises follows the same principles, but allows you to use strength implements with minimum space. Interval training is appropriate for athletes in strength sports such as power lifting or Olympic weightlifting who desire a cardiovascular effect with equipment familiar to them.

Sports psychology

Sport psychology is a division of psychology aimed at better preparing the mind of an athlete for competition. Sports psychology has been defined as "The sub discipline of exercise science that seeks to understand the influence of behavioral processes on skilled movement" (Hatfield and Brody).

Self-confidence

Self-confidence in sports relies primarily on the athlete's ability to believe he can win and that he can be successful in his efforts. Consultants at the United States Tennis Association report that self-confidence is one of the most important attributes an athlete can possess and should be fostered by both athletes and their coaches.

Athletes must develop self-confidence within their own minds. It is not something they can receive from others. While coaches can encourage players with positive feedback, if the athlete does not identify with success, it doesn't matter how much praise she receives. Athletes must take ownership of their confidence and not allow outside circumstances to interfere with their self-image, even on bad days.

While self-confidence originates within the player, athletes must surround themselves with positive role models and supporters to keep up their internal self-talk. Athletes can look for inspiration in a number of arenas and use positive strategies to maintain their upbeat attitudes. Retired athletes, spiritual advisers, coaches and training partners all can provide positive support and reinforcement.

Selection of subjects

Good (1954) has defined a sample as "A finite number of observations or cases selected from all cases in a particular universe often assumed to be representative of the total group of universe of which it is a part". It is generally accepted that a representative sample is one that will provide results which can be generalized beyond the boundaries of the sample itself. Such a sample will help to extend the results obtained within the sample to the large population of which the sample is a part. Perhaps the most important factor that determines the dependability of any research findings is the efficiency of the sample used for collecting the research data. Keeping this in mind, the investigator worked out the procedures for sampling in such a way as to obtain highly dependable results.

Selected psychological variable Self-confidence and respective test for the study

Sl.no.	Variable	Test
1	Self confidence	Self-confidence scale

Reliability of the test

Reliability of a test refers to the degree of consistency and accuracy with which it measures what it is intended to measure. **Anastasi (1959)** considered, “The reliability of a test as the consistency of the scores obtained by the same individuals on different occasions or with different sets of equivalent forms”.

Test re-test method was followed in order to establish the reliability for the selected tests. Taking fifteen subjects at random all the dependent variables selected in the present study were tested twice for the subjects by the investigator under similar condition.

Item analysis for self-confidence scale

Item analysis is an important face of test construction through this item can be analyzed qualitatively in terms of their content and form, and quantitatively in terms of their statistical properties.

Validity and reliability of self-confidence scale

Reliability

The reliability of self-confidence scale was established into two viz. test re-test and split half method. The retest method was done on a sample of 50 students (males and females) selected randomly. The time interval for the two tests was one month. The reliability coefficient obtained for self-confidence was 0.81 which was significant at 0.01 level, and are verbally interpreted as high, showing that the variable indicate high reliability of measurement.

The split-half reliability has been found in the following way. The scale has been administered to a sample of 60 students. The scores on odd items and even items are obtained separately for the scale and the correlation was calculated using Spearman-Brown formula. The reliability coefficient was found 0.79, which was significant at 0.01 level. This showed that the variable have higher split-half reliability as in the case of test-retest reliability.

The validity of the test represents the extent to which a test measures what it purpose to measure. As far as the self confidence scale of this nature is concerned, content validity and criterion related validity are important.

Content validity is the degree a test measures and intended content area. Consideration of the subject matter will yield satisfactory validity with regard to the content and is maintained by careful reference to the literature as well as by consultation with experts.

The criterion validity of the scale was found out by correlating the present scale with an external criterion that in self confidence Scale (Mukundan 2003). Both tests were administered on a sample of 100 students and correlation was found out. The validity coefficient thus obtained was 0.761.

Thus the scale as a whole is reasonably valid and reliable instrument for the purpose of the present investigation.

Self-confidence

Description

The validated psychological tool devised is used for used to quantify the self-confidence scale of players. This scale consists of 25 statements. Each statement has three responses.

Among the three responses the most appropriate one is correct response. The respondents made a tick mark (✓) on any one of the three responses that fits to them best.

Instructions for scoring

The response sheets were collected and stencil method was used to evaluate the process skills such as observing, inferring, predicting, classifying and using number relations. The answer sheets were scored by giving marks for correct answers. The final scores of students were measured from the total scores obtained for all items.

Scoring

This scale was scored with the help of a scoring key. A score of three response given to the booklet in positive and negative, 2, 1, 0 and 0, 1, 2 respectively marks given to the answers. The total score constitutes the self confidence of the players.

The range of score is 0 to 50 for self confidence. The larger score is the higher self confidence of the, subjects.

The test can be scored by hand. For positive statement, scores of 2, 1 and '0' are given for the alternatives; *Always, Sometimes, Never* and negative statements, scores of '0', 1 and 2are given for the alternatives; *Always, Sometimes, Never* respectively.

Scoring key

Sl.no.	Responses	Scoring for positive statements	Scoring for negative statements
1	Always	2	0
2	Sometimes	1	1
3	Never	0	2

Statistical techniques used for the study

Following are the statistical techniques used for the study.

1. Percentage analysis
2. Means
3. Standard deviation
4. 'F' test (ANOVA & ANCOVA)
5. 't'-test
6. Correlation.

Self-confidence

The pre-test and post-test scores among control group, circuit training group and Interval training group of college men Kabaddi players in Kerala with respect to the level of self-confidence is given below

Level of self-confidence of college men of different group

Kabaddi players in Kerala

Test	Level	Control group		Circuit group		Interval group	
		N	%	N	%	N	%
Pre-test	Low	5	25.0	6	30.0	5	25.0
	Average	9	45.0*	9	45.0*	7	35.0
	High	6	30.0	5	25.0	8	40.0*
Post-test	Low	6	30.0	5	25.0	5	25.0
	Average	9	45.0*	10	50.0*	10	50.0*
	High	5	250.0	5	25.0	5	25.0

* indicates the level of self-confidence

It is clear that in the post-test the level of self-confidence is same in interval group and circuit group (50%) than the control group.

Effectiveness of circuit training and interval training on self-confidence of college men Kabaddi players.

The pre-test and post-test scores of the control, circuit and interval groups were subjected to the statistical technique, analysis of co-variance to find out the effectiveness of circuit and interval training on self-confidence of college men Kabaddi players in Kerala. The summary of analysis of variance over pre-test(x) and post-test(y) scores of players in the control, circuit and interval groups taken separately is given below

Summary of analysis of variance of pre-test and post-test scores on self-confidence among the control, circuit and interval group

Source of variance	df	SS_x	SS_y	$MS_x(V_x)$	$MS_y(V_y)$	F_x	F_y
Among group mean	2	17.43	130.43	8.72	65.22	0.31	2.46
Within group mean	57	1616.75	1511.75	28.36	26.52		
Total	59	1634.18	1642.18				

From table of F ratio, For df (2/57);

F at 0.05 level = 3. 16

F at 0.01 level = 5.00

The F ratio for the pre-test and post-test scores was tested for significance. F_x value obtained 0.31 (F_x = 0.31). It is less than F at 0.05 level (i.e, 3.16). So it can be interpreted that the experimental groups (circuit and interval) and control group do not differ significantly with regard to pre-testing self-confidence. The three groups are more or less equal with regard to pre-test scores of self-confidence.

The obtained value of F_y is 2.46 (F_y = 2.46). It is less than F at 0.01 level (i.e, 5.00). Hence it can be interpreted that the experimental groups (circuit and interval) and control group do not differ significantly with regard to post-test in self-confidence.

The summary of analysis of co-variance of pre-test and post-test scores of players in experimental (circuit and interval) and control groups is given below.

Summary of analysis of co-variance of pre-test and post-test scores on self confidence among players in experimental (circuit and interval) and control groups (ANCOVA).

Source of variance	df	SS_x	SS_y	SS_{xy}	SS_{yx}	$MS_y(V_{yx})$	F_{yx}	SD_{yx}
Among group mean	2	17.43	130.43	-45.47	229.82	114.91	103.71	
Within group mean	56	1616.75	1511.75	1530.95	62.05	1.11		1.05
Total	58	1634.18	1642.18	1485.48	291.87			

From table of F ratio, for df (2/56);

F at 0.05 level = 3. 16

F at 0.01 level = 5.00

F_{yx} = 103.71

The obtained value of F is 103.71(F_{yx}=103.71). It is greater than the table value at 0.01 level (i.e.,=5.00). This shows that the final mean scores of treatment groups differ significantly after they have been adjusted for differences in the post-test scores of self-confidence.

The data for adjusted means of post-test scores of players in experimental and control groups is given below

Data for adjusted means of post-test scores in experimental and control groups

Groups	N	M_X	M_Y	Adjusted Y Mean M_{YX}(adj)
Control	20	35.60	36.70	36.08
Circuit	20	34.30	39.90	40.52
Interval	20	34.75	39.75	39.94
Groupmeans	20	34.95	38.30	

From table 't' for df=56,

't' at 0.05=2.005;

't' at 0.01=2.67

Minimum significant difference required at 0.01 =0.889

Minimum significant difference required at 0.05 =0.667

The difference between adjusted means (M_{yx}) of post-test scores of players in experimental (circuit and interval) and control groups is given below

Difference between adjusted means (M_{yx}) of experimental (circuit and interval) and control groups

	M_{YX}(adj)	**Difference**	**RM**
Control	36.08	4.431	Sig
Circuit	40.52		
Control	36.08	3.855	Sig
Interval	39.94		
Circuit	40.52	0.576	NS
Interval	39.94		

*NS- Not significant

Difference between adjusted means (M_{yx}) of control and circuit training groups =4.431 which is greater than 0.889 implies that the both the groups differ significantly at 0.01 level. Difference between adjusted means (M_{yx}) of control and interval training groups =3.855 which is greater than 0.889 implies that the both the groups differ significantly at 0.01 level and difference between adjusted means (M_{yx}) circuit and interval training groups =0.576 which is less than 0.889 implies that the both the groups do not differ significantly at 0.01 level.

It can be interpreted from the analysis of co-variance among adjusted means of experimental and control groups that there is significant difference between experimental and control groups with respect to self-confidence i.e, circuit training group(M_{yx} =40.52) is significantly superior to control (M_{yx} = 36.08) and interval training group (M_{yx} =39.94) with regard to their post-test scores.

Comparison of pre-test and post-test scores of self-confidence among the control, circuit and interval group Kabaddi players

In order to find out the significance difference between pre-test and post-test means of experimental and control groups, the critical ratio of the pre-test and post-test scores were calculated. For this, the mean and standard deviation of the groups were calculated. The data and the result of the test of significance are given in below

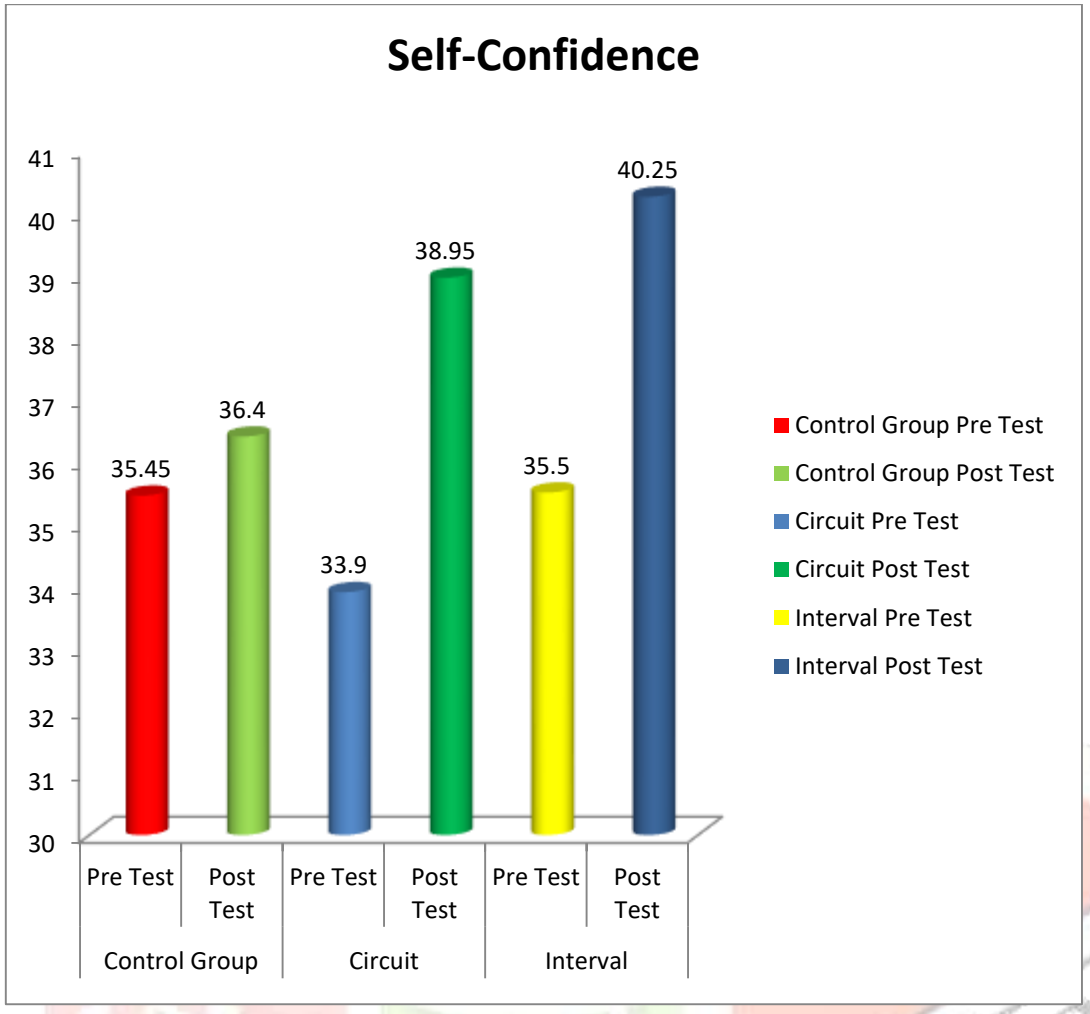
Comparison of pre-test and post-test scores of self-confidence among the control, circuit and interval group Kabaddi players

Group	Test	Mean	S.D	r Value	Calculated 't' value	P Value
Control	Pre-test	35.45	5.52	0.99	8.23	0.00
	Post-test	36.40	5.17			
Circuit	Pre-test	33.90	5.96	0.93	32.90	0.00
	Post-test	38.95	5.96			
Interval	Pre-test	35.50	6.82	0.99	8.53	0.00
	Post-test	40.25	5.98			

$p<0.01$ indicates significant at 1% level

As the *p* value of the table is less than 0.05, there is significant difference between pre-test and post-test scores of reaction time among the control group, circuit and interval group Kabaddi men players of Kerala. From the mean value it is clear that all the groups seem to have more self-confidence scores in post-test than that of the pre-test. The above findings revealed that the treatment given to the players and various training made the individual to have more self-confidence than that of the before the training programmes. This is illustrated below

Difference between pre-test and post-test scores of self-confidence among the control, circuit and interval group Kabaddi players



This figure shows that psychological variable self-confidence had improved on both experimental groups, in comparison to control group after a 10 weeks training programme and the circuit group showed significant improvement in self-confidence as compared to interval training group.

Correlation between circuit group and interval group in self-confidence

In order to find out the correlation between circuit group and interval group in self-confidence, the mean and standard deviation of the data were calculated and the correlation were computed to see whether there is any relationship between them.The result and correlation coefficient are shown in the Table below

Relationship between circuit group and interval group in self-confidence of pre-test and post-test

Test	Group	No	Mean	S.D	'r' value	'P' Value
Pre-test	Circuit	20	33.90	5.96	0.41	0..06
	Interval	20	35.50	6.82		
Post-test	Circuit	20	38.95	5.96	0.35	0.12
	Interval	20	40.25	5.98		

$p<0.01$ indicates significant at 1% level

As the 'r' value of the table 4.70 is positive, the proposed hypothesis i.e., the circuit and interval training will have a positive correlation with variable- self-confidence is **accepted.**

Conclusions

This study found that the psychological variable of self confidence in comparison to control group after ten weeks training program of circuit and interval training

The study found that the psychological variable self confidence improved on both experimental groups, in comparison to control group after a 10 weeks training programme.

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