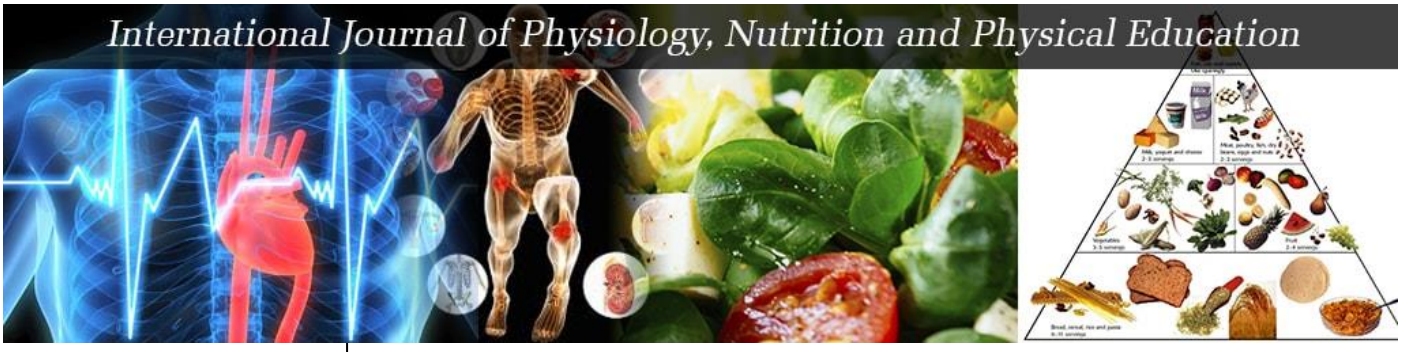

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Impact of super circuit training on cardio respiratory endurance among college men students

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Abstract
The purpose of present study was to find out the impact of super circuit training on cardio respiratory endurance among college men students. To achieve this purpose, Thirty male students were chosen as subjects from the Dr. Sivanthi Adithanar College of Physical Education in Tiruchendur, Tuticorin, Tamil Nadu, India. The selected thirty subjects were randomly divided into two groups of fifteen each, out of which group - I (n = 15) underwent super circuit training for three days (alternative days) per week, group - II (n = 15) remained as control. Prior to and after the training period the subjects were tested for, cardio respiratory endurance. cardio respiratory endurance was assessed by Cooper's 12 min run/walk test. The statistical tool were used for the present study is 't' ratio and Analysis of covariance (ANCOVA). The result of the study was a significant altered on cardio respiratory endurance after twelve weeks of super circuit training. However the different was favour of experimental group.

Keywords: Super circuit training, cardio respiratory endurance

Introduction
Sport training is also characterized by a continuous control and regulation. Systematic nature of the training process is reflected adequately by the fact that the various means and methods, *viz* load, dynamic training, tasks, etc. are all planned in order to achieve short or long term goals keeping in view the inter-relations of various training elements, cyclic nature of performance development and long term goal of the sports training.
Circuit training is an intensive form of fitness training in which a group of exercises are completed one after the other. Each exercise is performed for a specified number of repetitions or for a prescribed time by the exerciser before they move on to the next exercise. Circuit training will improve the mobility, stamina and strength of exercise.
Depending on the exercises you perform during the circuit, you may be able to build stronger and larger muscles. Muscle growth (hypertrophy) requires a person to lift moderate to heavy weights or perform a high number of reps just before failure, a point at which you can't do another rep, to stimulate muscle growth.
Cardio respiratory endurance is the heart and circulatory systems ability to provide adequate amounts of oxygen to the cells, to meet the demands of prolonged physical activity. This is the best physiological measure of total body endurance (David *et al*., 1997) [6].

Statement of the problem
The purpose of present study was to find out the impact of super circuit training on cardio respiratory endurance among college men students.

Methodology
The purpose of present study was to find out the impact of super circuit training on cardio respiratory endurance among college men students. To achieve this purpose, Thirty male students were chosen as subjects from the Dr. Sivanthi Adithanar College of Physical Education in Tiruchendur, Tuticorin, Tamil Nadu, India. The selected thirty subjects were randomly divided into two groups of fifteen each, out of which group - I (n = 15) underwent super circuit training for three days (alternative days) per week, group - II (n = 15) remained as control.

Analysis of Data

Table-1 presents pre and post-test means, standard deviations and dependent t-test values on cardio respiratory endurance of super circuit training and control group.

Table 1: Summary of means, standard deviation and dependent t-test values on cardio respiratory endurance of super circuit training and control group

Tests	Super circuit Training Group		Control Group	
	Mean	SD	Mean	SD
Pre test	2305.533	7.863	2298.933	5.139
Post test	2357.401	7.815	2305.221	5.149
T-Test	12.72*		0.56	

*Significant at .05 level. The table value required at .05 level with df 14 is 2.14.

From the table-1 shows that the obtained dependent t-test values between pre-test and post-test means of super circuit training and control group are 12.72 and 0.56 respectively. The table value required for significant difference with df 14 at .05 level is 2.14. Since, the obtained t-test value of super circuit training group is greater than the table value, it is understood that super circuit training programme had significantly improved the performance of cardio respiratory endurance and the control group has not improved as the obtained t-test value is lesser than the table value because they were not subjected to any specific training. The analysis of covariance on cardio respiratory endurance of super circuit training and control group have been analysed and presented in table-2.

Table 2: Analysis of covariance on cardio respiratory endurance of super circuit training and control group

Adjusted post-test mean		Source of variance	Sum of squares	Df	Mean square	F-ratio
Super circuit Training Group	Control Group	Between	63.124	1	28.384	13.150*
2356.944	2299.129	Within	6.897	27	0.126	

*Significant at .05 level of confidence. The table value required at 0.05 level with df 1 & 27 is 4.21.

Table- 2 shows that the adjusted post-test means of super circuit training and control groups are 2356.944 and 2299.129 respectively. The obtained f-ratio value is 13.150 which is higher than the table value 4.21 with df 1 and 27 required for significance at .05 level.

It was concluded that super circuit training is better than control groups in improving cardio respiratory endurance.

Figure 1: illustrates the pre, post and adjusted post-test means of super circuit training and control groups on cardio respiratory endurance among college men students.

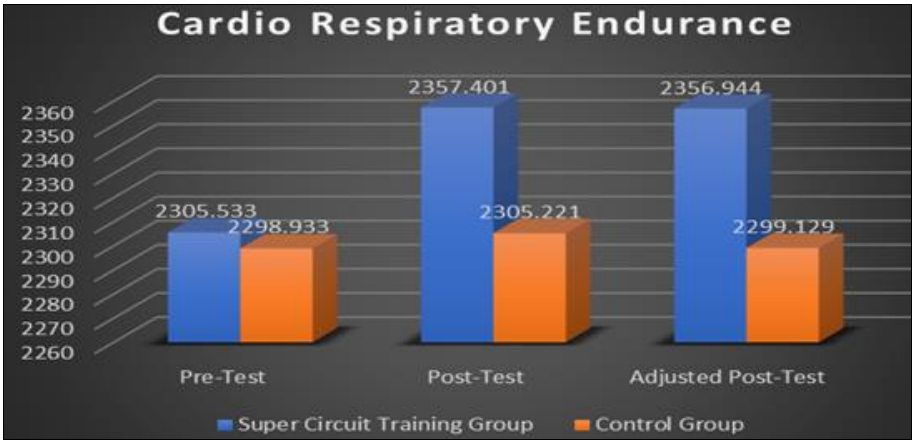

Fig 1: Pre, post and adjusted post-tests mean values of super circuit training and control groups on cardio respiratory endurance

Conclusions

The super circuit training group has remarkably increase cardio respiratory endurance when compared with the control group. In addition, the results of the tests shows that there was significant difference established between experimental and control groups.

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