



## **EFFECT OF PARCOURSE TRAINING PROGRAMME ON CARDIO RESPIRATORY ENDURANCE AND AGILITY**

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### **Abstract**

The purpose of the study was to find out the effect of parcouse training programme on cardio-respiratory endurance and agility among women students. To achieve this purpose, 20 women students were randomly selected as subjects from the Department of Physical Education and Sports Sciences, Annamalai University studying in various classes. The age of the subjects were ranged from 18 to 23 years. The subjects were further classified at random into two equal groups of 10 subjects each in which group - I underwent parcouse training programme for three days per week for eight weeks and group - II acted as control who were not undergo any special training programme. The selected criterion variables such as cardio-respiratory endurance and agility were assessed before and after the training period. The collected data were statistically analysed by using Analysis of Covariance (ANCOVA). The cardio-respiratory endurance was assessed by using Cooper's 12 minutes run/walk test and agility was assessed by administering the shuttle run test. From the results of the study, it was found that there was a significant improvement on cardio-respiratory endurance and agility for parcouse training group when compared with the control group.

**Keywords:** Parcouse training programme, cardio-respiratory endurance, agility, ANCOVA.

### **INTRODUCTION**

In sports the word "Training" is generally understood to be a synonym of doing physical exercises. In a narrow sense, training is doing physical exercises for the improvement of performance. Sports training is a scientifically based and pedagogically organized process which through planned and systematic effect on performance ability and performance readiness aims at sports perfection and performance improvement as well as at the contest in sports competition. A new concept of circuit training developed in Europe has been adopted recently in the United States and Canada called 'parcouse'. It consists of a series of stations set up over a one to two and a half mile path, to provide a recreational exercise circuit for individuals of all ages and abilities.

Strength is a vital factor on which the sports performance depends. Depending upon the magnitude and type of resistance to be tackled in various sports, the sportsman of different sports and different level and type of strength to achieve good performance. Agility is generally defined as the ability to change the direction quickly and effectively while moving as nearly as possible at full speed. It is depended primarily on strength, reaction time, speed of movement and specific muscle co-ordination.

### **METHODOLOGY**

The purpose of this study was to find out the effect of parcouse training on cardio-respiratory endurance and agility. To achieve the purpose of the present study, 20 college women students who were studying in the Department of Physical Education and Sports Sciences, Annamalai University during the academic year 2017-2018 were randomly selected as subjects. The age of the subjects were ranged from 18 to 23 years. The selected subjects were divided into two groups of ten subjects each. Group I considered as experimental group who underwent parcouse training and Group II considered as control that did not undergo any special training programme. The experimental group underwent parcouse training programme for 3 days per week for 8 weeks. The control group did not participate in any special training programme on strenuous physical activities apart from their day to day activities. The experimental group underwent their parcouse training under the instruction and supervision of the investigators. The data were collected on selected criterion variables such as cardio-respiratory endurance and agility were measured by using leg lift with the Cooper's 12 minutes run/walk test and shuttle run at before and after the eight weeks of parcouse training as pre and post test. Analysis of covariance (ANACOVA) was applied to find out significant difference if any between the experimental and control group.

**TABLE – I**  
**ANALYSIS OF COVARIANCE FOR CARDIO-RESPIRATORY ENDURANCE AND AGILITY FOR PARCOURSE TRAINING GROUP AND CONTROL GROUP**

Variable Name	Group Name	Parcouse Training Group	Control Group	F' Ratio
<b>Cardio-respiratory endurance (in meters)</b>	<b>Pre-test Mean ± S.D</b>	1555.67 ± 11.35	1152.93 ± 11.45	0 .859
	<b>Post-test Mean ± S.D.</b>	1692.13 ± 10.41	1155.73 ± 12.51	3 5.96*
	<b>Adj. Post-test Mean</b>	1708.367	1153.86	7 9.51*
<b>Agility (in Seconds)</b>	<b>Pre-test Mean ± S.D</b>	14.67 ± 0.035	14.90 ± 0.013	0 .54
	<b>Post-test Mean ± S.D.</b>	13.07 ± 0.022	14.93 ± 0.091	4 .66*
	<b>Adj. Post-test Mean</b>	13.01	14.901	5 .01*

\* Significant at 0.05 level of confidence.

(The table values required for significance at 0.05 level of confidence for 1 and 18 & 1 and 17 are 4.41 and 4.45 respectively).

## RESULTS

Table-I showed that the results of the study there was a significant difference between experimental and control group on cardio-respiratory endurance and agility. Further the results of the study showed that there was a significant improvement in the performances of cardio-respiratory endurance and agility due to eight weeks of parcouse training programme. However the improvement was in favour of experimental group.

## CONCLUSIONS

- There was a significant improvement in cardio-respiratory endurance and agility after the parcouse training programme. However this improvement was in favour of experimental group due to eight weeks of parcouse training.
- There was a significant difference between experimental and control groups on cardio-respiratory endurance and agility.

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