International Journal of
Recent Research and Applied Studies

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Impact of Rhythmic Exercise on Body Fat Percentage of School Students

Dr.K.Divya

Assistant Professor, Alagappa University College of Physical Education, Karaikudi, Tamilnadu, India.

Abstract

The present study was investigated the Impact of rhythmic exercise on body fat percentage school students. Randomly 40 (forty) school going students aged 14-18 years were selected and divided into two equal groups consist of twenty subjects each. Group A underwent rhythmic exercise and group B without any activities as control group. Rhythmic exercise training of one hour per day thrice a week for 8 weeks was given. Pretest and posttest were tested for body fat percentage (Biceps, Triceps, Suprailliac and Subscapula). The data will be collected before and after the experimental treatment. The data obtained from the experimental period will be statistically analyzed with dependent 't' – test and Analysis of covariance (ANCOVA). The level of significance will be fixed at .05 level of confidence for all the cases.

Keywords: Aerobic Exercise, Body Fat Percentage.

Introduction

Aerobic exercise is physical exercise of relatively low intensity that depends primarily on the aerobic energy generating process with intensity between 60 and 85% of maximum heart rate without rest in between. Step aerobics is performed on an elevated platform or the step for the aerobic outcomes distinguished from other forms of aerobic exercise by its use of an elevated platform (the step).

Methodology
Selection of Subjects

To achieve the purpose of this present study 40 school students are selected from, sivagangai district, Tamil Nadu state, India. School boys are selected randomly as subject and their age group between 14 to 18 years.

Experimental Design

The selected subjects (N=40) were divided into two groups equally and randomly of which Experimental Group I underwent Rhythmic exercise and Group II acted as Control Group (CG). The experimental groups were treated with their respective training for one hour per day for three days a week for a period of eight weeks.

Selection of Variables
Independent variables
- Rhythmic exercise
Dependent variables
- Body Fat Percentage

Table 1
Selected Variables and Test Items

S. No	Variables	Test Item	Unit
1	Body Fat Percentage	Skin fold caliper	Centimeters

Statistical Technique

To study the influence of Rhythmic exercise group (experimental group) along with control group and to find out the significant mean differences among them, the analysis of covariance (ANCOVA) technique was employed. To study the impact of Rhythmic exercise group (experimental group) along with control group and to find out the mean difference, the Analysis of covariance technique was employed.

Analysis of the Data

The significance of the difference among the means of experimental group was found out by pre-test. The data were analyzed dependent 't' test and analysis of covariance (ANCOVA) technique was used with 0.05 levels as confidence. Analysis was performed using SPSS 20.0 (SPSS Inc Software).

Correspondence
Dr.K.Divya
E-mail: dhivya_phy_edu@yahoo.co.in, Ph. +9182204 36393

Results and Discussion

Table 2

Analysis of Covariance for Biceps, Triceps, Suprailliac and Subscapula for Rhythmic exercise Group and Control Group

Variables Name	Group Name	Rhythmic Exercise Group	Control Group	'F' Ratio	P Value
BICEPS	Pre-test Mean μS.D	16.50 μ 1.43	15.10 μ 1.07	154.68*	0.00
	Post-test Mean μS.D	12.50 μ1.19	15.05 μ 1.05		
	Adj.Post Mean SEM	12.04 ; 0.19	15.51 ; 0.19		
TRICEPS	Pre-test Mean μS.D	14.95 μ 1.28	16.65 μ 1.27	214.45*	0.00
	Post-test Mean μS.D	11.65 μ 0.88	16.65 μ 1.27		
	Adj.Post Mean SEM	12.22 ; 0.17	16.08 ; 0.17		
SUPRAILLIAC	Pre-test Mean μS.D	18.80 μ 0.17	19.20 μ 1.20	237.37*	0.00
	Post-test Mean μS.D	14.85 μ 0.99	19.30 μ 1.30		
	Adj.Post Mean SEM	15.00 ; 0.19	19.15 ; 0.19		
SUBSCAPULA	Pre-test Mean μS.D	17.85 μ 0.99	18.20 μ 1.15	246.91*	0.00
	Post-test Mean μS.D	14.35 μ 1.18	18.20 μ 1.15		
	Adj.Post Mean SEM	14.50 ; 0.16	18.05 ; 0.16		

*Significant at 0.05 level; Number of subject in each group is 20

Table 2 shows that there were significant differences between experimental and control group on all the four sites selected for assessing fat percentage. As the improvement was in favour of experimental group, it can be concluded that involvement in eight weeks of aerobic exercise programme resulted insignificant decrease in the fat percentage of subjects.
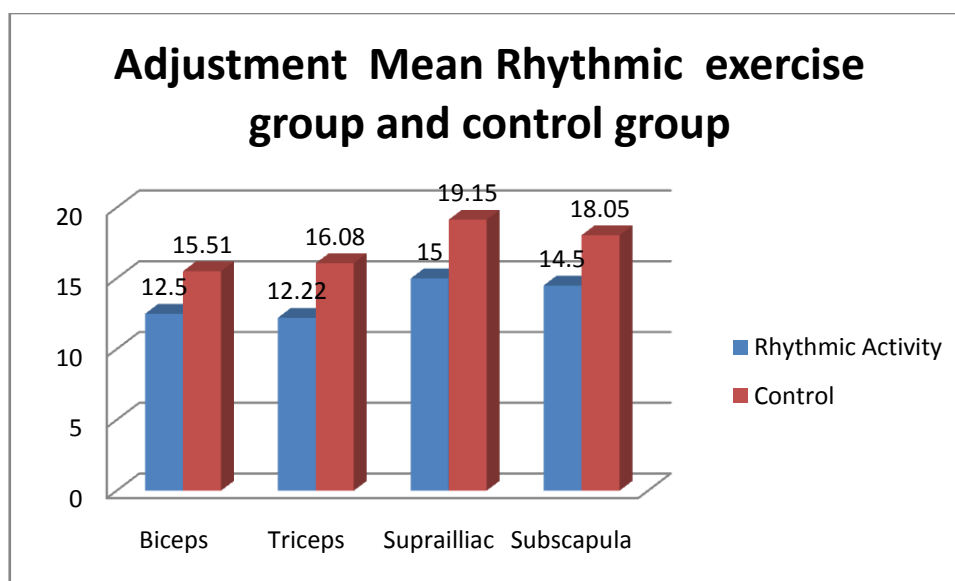

Figure I

Graphical Representation of Adjustment Mean Rhythmic exercise group and control group in Relation to Biceps, Triceps, Suprailliac and Subscapula

Conclusion

The experimental study is to provide sports and recreational program me for children. The objective of the study is to improve the physical fitness of the students incorporate opportunities for the children to learn sports, practice and develop the skills independently. The programme also serves as strategic lead to involve in sports and physical exercise.

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