

IMPACT OF LOW INTENSITIES AEROBIC EXERCISE ON SELECTED HEALTH RELATED PHYSICAL FITNESS CHANGES OF OBESE ADULTS

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Abstract

The purpose of the study was to find out the effect of low intensity aerobic exercises on selected health related physical fitness of obese adults. To achieve the purpose of the present study, thirty obese adults were randomly selected from Chennai district, Tamilnadu, India and their age ranged from 18 to 21 years. The selected subjects were divided into two groups of fifteen subjects in each. Group I acted as low intensity aerobic exercises group and Group II acted as control group. The Low intensity aerobic exercises group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups paired 't' test was used. The result reveals that the low intensity aerobic exercises group showed better performance on cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index than the control group.

Key words: Aerobic, Strength, Endurance, Flexibility, BMI.

Introduction

For every moment, the body uses energy. The body can procure this energy in two different ways: Without oxygen (anaerobic) – when there is not enough oxygen, waste

products will pile up in the muscles with oxygen (aerobic) – this means that the exercise is performed under circumstances where there is enough oxygen in the muscles. To improve endurance the practitioner should train aerobic system and move to lactate threshold. Aerobic training can be divided into three overlapping training intensity areas: low, moderate and high intensity training. The overall purpose of aerobic training is to: improve the oxygen transport in the circulation improve the muscle's ability to use the available oxygen improve the ability to recuperate after hard exercise (Wong, 2008).

Methodology

To achieve the purpose of the present study, thirty obese adults were randomly selected from Chennai district, Tamilnadu, India and their age ranged from 18 to 21 years. The selected subjects were divided into two groups of fifteen subjects in each. Group I acted as low intensity aerobic exercises group and Group II acted as control group. The Low intensity aerobic exercises group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups paired 't' test was used.

Results and Discussions

The primary objective of the paired 't' ratio was to describe the differences between the pre-test and post-test mean.

Table – 1

Summary of 't' ratio on selected health related physical fitness of experimental group

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ D M	't' Ratio
1	Cardio Respiratory Endurance	185.020	215.185	301.65	131.42	29.38	10.17*
2	Muscular Strength	21.90	31.60	9.70	3.77	0.84	11.55*
3	Muscular Endurance	34.80	43.55	8.75	3.19	0.71	10.84*
4	Flexibility	24.06	30.83	6.77	4.50	1.00	6.76*
5	Body Mass Index	25.01	22.22	2.81	1.78	0.40	7.03*

An examination of table - I indicates that the obtained 't' ratios were 10.17, 11.55, 10.84, 6.76 and 7.03 for cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index respectively. The obtained 't' ratios were found to be greater than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be significant.

Figure – 1

pre and post test differences of the experimental group on selected health related physical fitness

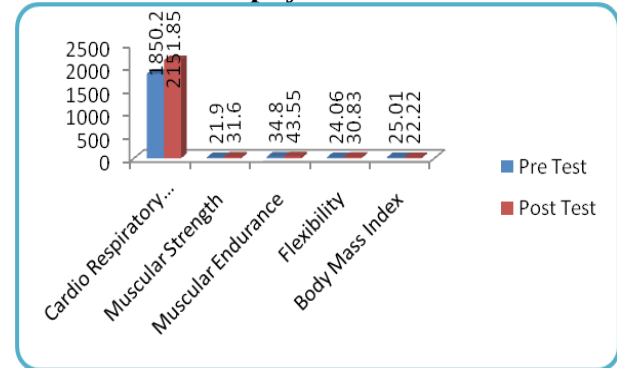


Table – 2

Summary of 't' ratio on selected health related physical fitness of control group

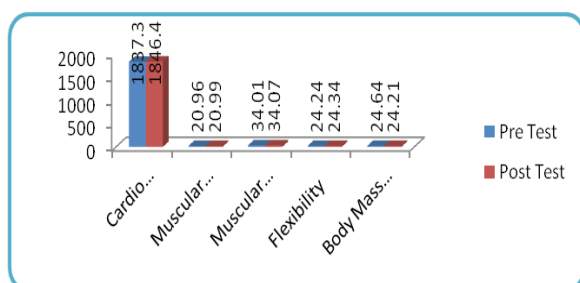
S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ D M	't' Ratio
1	Cardio Respiratory Endurance	183.730	184.640	9.10	96.44	21.56	1.64
2	Muscular Strength	20.96	20.99	0.03	3.36	0.75	0.32
3	Muscular Endurance	34.01	34.07	0.06	3.63	0.81	0.07
4	Flexibility	24.24	24.34	0.10	2.27	0.50	0.14
5	Body Mass Index	24.64	24.21	0.43	1.90	0.42	0.97

An examination of table - II indicates that the obtained 't' ratios were 1.64, 0.32, and

0.97 for cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index respectively. The obtained 't' ratios on all the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be insignificant. The results of this study showed that the control group was statistically insignificant.

Figure – 2

pre and post test differences of the control group on selected health related physical fitness



Discussions and Conclusions

In case of health related physical fitness i.e. cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index the results between pre and post (8 weeks) test has been found significantly higher in experimental Group in comparison to control group. The findings of the present study have strongly indicates that eight weeks of low intensity aerobic exercises group had significant influence on selected health related physical fitness i.e. cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index of obese adults. Hence the hypothesis earlier set that low intensity aerobic exercises would have been significant influence on selected health related physical fitness in light of the same the hypothesis was accepted. The result reveals that the low intensity aerobic

exercises group showed better performance on cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body mass index than the control group.

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