

Influence of Aerobic Exercise on Maximum Expiratory Power among School Level Women Students

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ABSTRACT

The purpose of the present study was to investigate the influence of aerobic exercise on maximum expiratory power among school level women students. To achieve the purpose of the study thirty school level women students were selected from N.M.S.S.V.N school, Nagamalai puthukottai, Madurai, during the year 2020. The subject's age ranges from 14 to 17 years. The selected players were divided into two equal groups consists of 15 women students each namely experimental group and control group. The experimental group underwent an aerobic exercise programme for six weeks. The control group was not taking part in any training during the course of the study. Maximum expiratory power was taken as criterion variable in this study. The selected subjects were tested on maximum expiratory power was measured through peak flow meter test. Pre-test was taken before the training period and post- test was measured immediately after the six week training period. Statistical technique 't' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference is found due to aerobic exercise given to the experimental group on maximum expiratory power when compared to control group.

KEYWORDS: Aerobic Exercise, Maximum expiratory power and 't' ratio

INTRODUCTION

Now a day's more and more individuals particularly boys and girls are affected by sports activities and increasing the number that are representing in the sports area. As preventive and curative health measures, it has become more successful throughout the world and, millions of teenagers should have chance of enjoying sports. During the last decade we have discovered that good health is no longer a matter of chance, but rather a matter of choice. If you choose to take responsibility for your health by exercising regularly and by consistently adopting other positive life style habits, you can not only promote better health, but also you can decrease your risk of disease, disability and premature death.

Aerobic exercise strengthens your heart and lungs (which make up the cardiovascular system). During exercise, your muscles demand more oxygen-rich blood and give off more carbon dioxide and other

waste products. As a result, your heart has to beat faster to keep up. When you follow a consistent aerobic exercise plan, your heart grows stronger so it can meet the muscles' demands without as much effort. Everyone, regardless of their weight, age, or gender, can benefit from aerobic exercise.

METHODOLOGY

The purpose of the study was to find out the influence of aerobic exercise on maximum expiratory power among school level college women students. To achieve this purpose of the study, thirty school level women students were selected as subjects at random. The age of the subjects were ranged from 14 to 17 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as an aerobic exercise group (Experimental Group) and control group. The experimental group underwent aerobic exercise for three days per week for six

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weeks. Control group, which they did not undergo any special training programme apart from their regular physical activities as per their curriculum. The following physical variable, namely maximum expiratory power was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable Maximum expiratory power was measured through peak flow meter test at prior and immediately after the training programme. The ‘t’ test

was used to analysis the significant differences, if any, in between the groups respectively. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

ANALYSIS OF THE DATA

The significance of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent ‘t’ test was used with 0.05 levels as confidence.

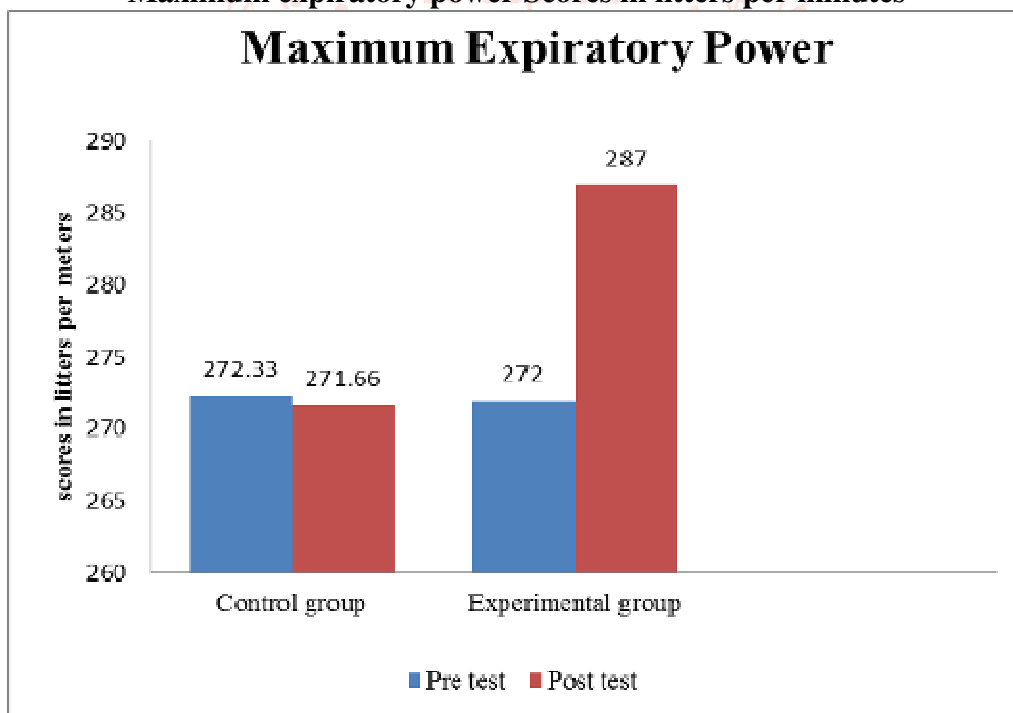
Table I Analysis of t-ratio for the Pre and Post Tests of Experimental and Control Group on Maximum expiratory power Scores in liters per minutes

Variables	Group	Mean		SD		Sd Error		df	‘t’ ratio
		Pre	Post	Pre	Post	Pre	Post		
Maximum Expiratory Power	Control	272.33	271.67	16.46	14.96	4.25	3.86	14	0.30
	Experimental	272.00	287.00	11.31	12.07	2.92	3.12		10.25*

**Significance at .05 level of confidence.*

The Table-I reveals that the mean values of pre-test and post-test of the control group on maximum expiratory power were 272.33 and 271.67 respectively. The obtained ‘t’ ratio was 0.30, since the obtained ‘t’ ratio was less than the required table value of 2.14 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of the experimental group on maximum expiratory power were 272.00 and 287.00 respectively. The obtained ‘t’ ratio was 10.25*since the obtained ‘t’ ratio was greater than the required table value of 2.14 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in maximum expiratory power. It may be concluded from the result of the study that experimental group improved in maximum expiratory power due to six weeks of aerobic exercise

Figure-1 Bar Diagram Showing the Pre and Post Mean Values of Experimental and Control Group on Maximum expiratory power Scores in liters per minutes



DISCUSSIONS ON FINDINGS

The result of the study indicates that the experimental group, namely aerobic exercise group had significantly improved the selected dependent variable, namely maximum expiratory power, when compared to the control group. It is also found that the improvement caused by aerobic exercise when compared to the control group.

CONCLUSIONS

1. There was a significant difference between experimental and control group on maximum expiratory power after the training period.
2. There was a significant improvement in maximum expiratory power. However the improvement was in favour of experimental group due to six weeks of aerobic exercise.

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