Original Article

Effect Of Various Intensities Of Aerobic Training On Physiological And Biochemical Variables Among Middle-Aged Men

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Abstract

The research was to find out the effect of various intensities of aerobic training on physiological and biochemical variables among middle-aged men. To achieve the purpose of this study 30 middle aged men were randomly selected from Chennai region, Tamil Nadu, India, and their ages ranged between 35 and 45 years. All the subjects were divided into three equal groups with 10 subjects each. Bunch-A as 50% intensities of aerobic Training, bunch- B as 60% intensities of aerobic Training and bunch - C as the Control bunch. The Bunch-A and B were treated as experimental for 12 weeks. The training protocol was given in the morning section of alternate days of the week for 12 weeks. The vo2 max and haemoglobin were selected as dependent variables. The vo2max was measured by hardvard step test and haemoglobin was measured by blood test. Pre and post-test random group designs were used for this study. The data should be analyzed by IBM (SPSS Version 23.0) and the 3 groups were analyzed by the statistical technique of ANOVA which was used to find out the significant improvement in selected variables from the baseline to post. The result of the study on varied intensities of aerobic Training produced that there was a significant improvement in the physiological and biochemical variables among middle aged men.

Keywords: Varied Intensities of Aerobic Training, Middle Aged Men,Vo2 Max, Haemoglobin, Anova

Introduction

Training is a program of exercises designed to ameliorate the chops and increase the energy capacity of an athlete. Sport training is an introductory medication for better performance through physical exercise Badalzadeh, 2014. It's grounded on scientific principles and points to education and performance improvement. Intensity, the qualitative element of work an athlete performs in a given time, is also an important element of training. Intensity is a function of the strength of the whim-whams impulses the athlete employs in training Impellizzeri, 2005. The strength of an encouragement depends upon the cargo, speed of performance, and the variation of intervals or rest between reiterations. Aerobic fitness refers to the abidance or the capability to sustain work for dragged ages Almeida, 2003. Aerobic use of oxygen in the body's metabolic or energy-generating process Almeida, 2003.

Regular exercise can also affect in dropped blood position of low-viscosity lipoprotein cholesterol and triglycerides Deeva, 2020. Thus regular exercise can reduce the development of coronary heart complaints, cardiac events, and deathUma Devi, 2021. In aerobic exercise, glycogen is broken down to produce glucose also broken down with the help of oxygen to induce energy Lortie, 1984. An aerobic energy system with intensity controlled grounded may lead to good physical medication. The high position of particularity in the response to the training of the power and of the capacity of the aerobic energy metabolism Impellizzeri, 2005. Intensity for abidance or speed is calculated according to the speed in Maximum Strength or the frequency of movement. The demand of outside and elastic strength must work through a particular extent of lading in the competition-specific range of intensity in order to stabilize athletic fashion corresponding to the demands of events Varalakshmy, 2020.

Proclamation of the problematic

To find out the effect of various intensities of aerobic training on physiological and biochemical variables among middle-aged men.

Methodology

In this research, the 30middlemen were taken from the Chennai region, Tamil Nadu, India. 30middlemen are implemented in this study and their age range is between 35 to 45 years. They are divided into three bunches namely, bunch – A as 50% intensity aerobic training, bunch- B as 60% intensity aerobic training and bunch - C as the Control bunch. The Bunch-1 and 2 were treated as experimental for 12 weeks. The training protocol was given in the morning section of alternate days of the week for 12 weeks. Before and after the training protocol of 12 weeks the data of subjects was collected for analysis of their performance.

The vo2max was measured by Harvard step test and haemoglobin was measured by blood Test(laboratory). The data should be analyzed by IBM (SPSS Version 26.0) and the 3 groups were analyzed by the statistical technique of ANOVA the confidence level is maintained at 0.05.

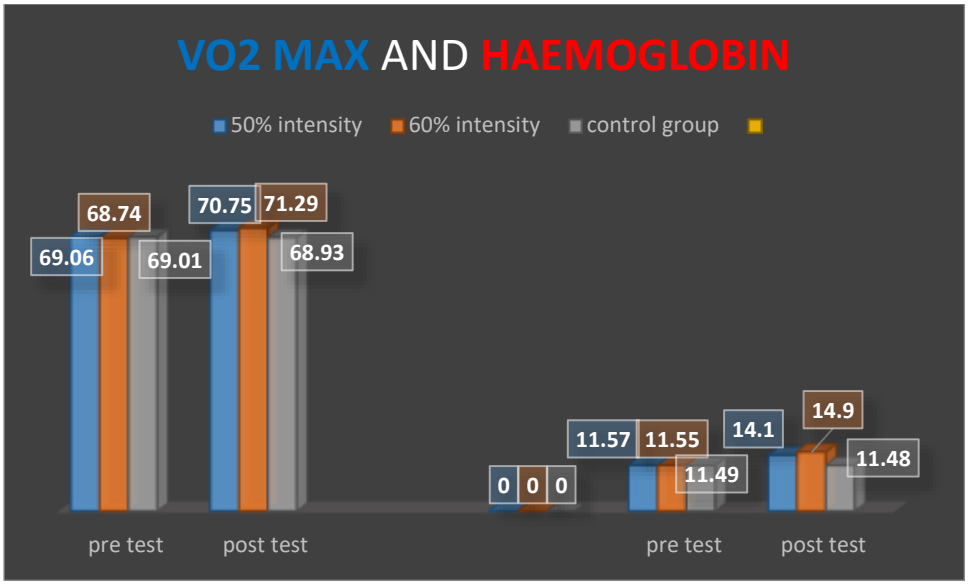
Table – 1 ANOVA OF EXPERIMENTAL BUNCHES AND CONTROL BUNCH ON VO2 MAX AND HEMOGLOBIN

Vo2 max							
Tests	**bunch-A**	**bunch-B**	**bunch-C**	**S.O.S**	**D.F**	**MS**	**F-Ratio**
Pre-Test	69.06	68.74	69.01	0.60	2	0.30	
				20.47	27	0.75	0.39
Post-Test	70.75	71.29	68.93	30.61	2	15.30	
				19.05	27	0.70	**21.69***
Haemoglobin							
Tests	**bunch–A**	**bunch–B**	**bunch-C**	**S.O.S**	**D.F**	**MS**	**F-Ratio**
Pre-Test	11.57	11.55	11.49	0.034	2	0.017	
				12.49	27	0.461	0.36
Post-Test	14.10	14.90	11.48	64.26	2	32.13	
				18.97	27	0.703	**45.70***

***Significant at 0.05 level df 2, 27 table value 3.23**

According to the ANOVA presented in table 1, the pre-test F-ratio value of vo2max (0.39) and haemoglobin (0.36). The obtained F-ratio value was found to be lesser than the table value hence indicating that there was an insignificant difference betweenthe experimental groups and the control group on vo2max and haemoglobinamong middle-aged men. The post-test F-ratio value of vo2max is **21.69*** and haemoglobin **45.70***. The obtained F-ratio value was found to be greater than the table value hence indicating that there was a significant difference among experimental groups on vo2max and haemoglobinamong middle-aged men.

BAR DIAGRAM OF VO2 MAX AND HAEMOGLOBIN VARIABLES OF VARIED INTENSITIES OF AEROBIC TRAINING



Conclusion

After the 12 weeks of varied intensities of aerobic training will develop the vo2max and haemoglobin of middle-aged men.

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