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Effect of Meditation Practices and Aerobic Training on Vital Capacity among College Men Players

Dr. B.Ramkumar

Assistant Professor, Department of Physical Education and Sports Sciences, Annamalai University, Chidambaram, Tamilnadu, India.

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Abstract

The purpose of the study was to determine the effect of Meditation practices and Aerobic training on Vital Capacity among college men players. The study was conducted on forty five (N=45) men College men players who were studying various affiliated colleges in Annamalai University, Annamalai nagar and participated various tournaments during the year 2013-2014 were selected as subjects. Subjects were randomly assigned equally into three groups, Group –I underwent Meditation Practices Group (n = 15), Group II underwent Aerobic Training Group (n=15) and Group-III acted as control Group (n=15). Vital Capacity was selected as a dependent variable and it was assessed by wet spirometer. The data was collected before and after the training period of 12 weeks. The data was collected from the Experimental and Control Groups were statically examined with Analysis of covariance (ANCOVA). Vital Capacity showed significant difference between the groups.

Keywords: Aerobic Exercises, Meditation Practice, Vital Capacity.

Introduction

Meditation is one of the techniques of yoga, which is supposed to bring about deep relaxation of the body, mind and spirit. It helps a great deal to relieve stress tension and establish harmony in one's life (Anyanwu,1999). Meditation is an appropriate means to overcome stress and the disorders caused by it. Meditation follows concentration and concentration merges into meditation. Concentration is holding the mind on to some particular object. A consistent flow of thought or knowledge with regard to the object of concentration. During meditation the fluctuation of mind is converted into focused and one pointed. According to Denniston and McWilliams (1975) meditation is a natural state of consciousness that is not 'learned' any more than you learn to sleep. When the mind becomes one-pointed and steady, it will naturally go beyond the normal mundane awareness into the state referred to as meditation.

Aerobic exercise (also known as cardio) is physical exercise of relatively low intensity that depends primarily on the aerobic energy-generating process. Aerobic literally means "living in air", and refers to the use of oxygen to adequately meet energy demands during exercise via aerobic metabolism.

Correspondence
Dr.B.Ramkumar,
Annamalai University

Generally, light-to-moderate intensity activities that are sufficiently supported by aerobic metabolism can be performed for extended periods of time. The intensity should be between 60 and 85% of maximum heart rate.

Aerobic exercise is a moderate intensity workout that extends over a certain period of time and uses oxygen in this process. Aerobics has become the most happening workout trend among the youth. Not only is performing aerobic exercise interesting, but also is very beneficial for health. There are different types of aerobics like fitness walking, jogging, swimming, kickboxing, inline skating, bicycling etcetera. In line skating or rollerblading is one of the most popular sports that are luring millions of people into trying it. It helps to strengthen lower back and works a great deal in enhancing cardiovascular development. Kickboxing is extremely useful for quick weight loss, as it helps in burning about 350-450 calories during a 50 minute workout session. At the initial level, kickboxing consists of some basic stretches and cardio warm up (Guidetti, 2010).

Methodology

The study was conducted on forty five (N=45) men College men players who were studying various affiliated colleges in Annamalai University, Annamalai nagar and participated various tournaments during the year 2013-2014 were selected as subjects. The age of the subjects ranges from 18-21 years. Subjects were randomly assigned equally into three groups, Group –I underwent Meditation Practices Group (n = 15), Group-II underwent Aerobic Training Group (n=15) and Group-

III acted as control Group (n=15). Among various physiological components vital capacity only selected as a dependent variable and it was assessed through wet spirometer. The training period was limited to twelve weeks. The data was collected from the Experimental and Control Groups were statically examined with Analysis of covariance (ANCOVA).

Results and Discussion

The data collected from the Experimental group and Control group prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. The level of significance was fixed at 0.05 level of confidence to test the 'f' ratio obtained by analysis of covariance.

Table I. The summary of mean and dependent 't' test for the pre and post tests on vital capacity of meditation practices group, aerobic training group and control group

	Meditation Practices Group – (I)	Aerobic Training Group – (II)	Control Group – (III)
Pre- test mean	40.60	40.73	40.87
Post-test mean	47.07	44.47	41.13
't'-test	12.47*	8.57*	0.41

** Significant at .05 level.*

(Table value required for significance at .05 level for 't'-test with df 14 is 2.15)

From Table-I the dependent't' test values between the pre and post test means of Meditation Practices Group, Aerobic Training Group and Control Group, were, 12.47, 8.57 and 0.41 respectively. Since the obtained 't'-test value of Experimental groups are greater than the table value 2.15 with df 14 at 0.05 level of confidence, it is concluded that Meditation Practices Group and Aerobic Training Group had registered significant improvement in performance of Vital Capacity. The Analysis of covariance (ANCOVA) on Vital Capacity of Meditation Practices Group, Aerobic Training Group and Control Group, have been analyzed and presented in Table -II.

Table II. Analysis of covariance on vital capacity meditation practices group, aerobic training group and control group

Adjusted Post-test Means			Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Meditation Practices Group-(I)	Aerobic Training Group – (II)	Control Group (III)					
47.15	44.47	**41.05**	**Between** **With in**	**278.37** **56.42**	**2** **41**	**139.18** **1.38**	**101.15***

** Significant at.05 level of confidence*

(Vital Capacity Scores in ml/kg/min)

(The table value required for Significance at 0.05 level with df 2 and 41 is 3.23)

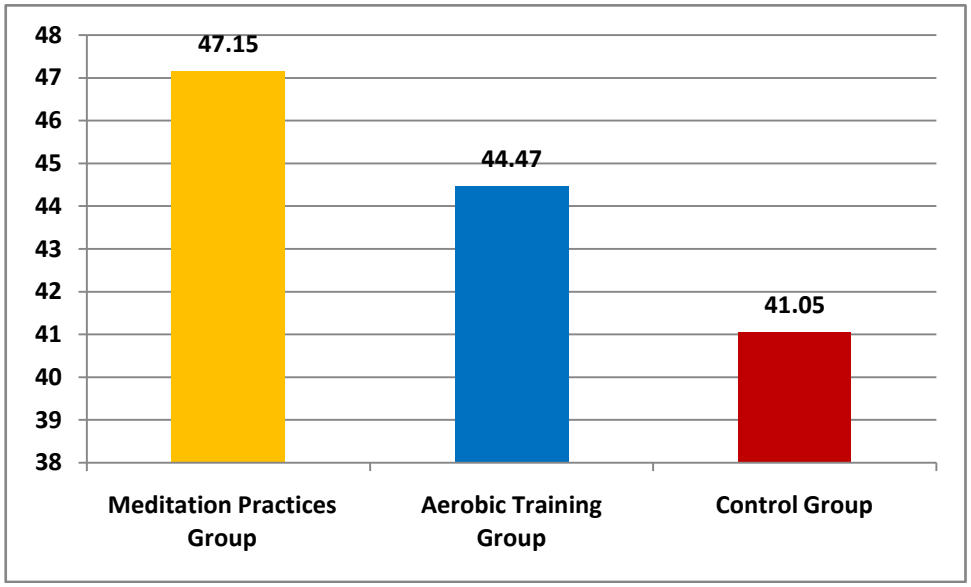
Table-II shows that the adjusted post test mean value of Vital Capacity for Meditation Practices Group, Aerobic Training Group and Control Group are 47.15, 44.47 and 41.05 respectively. The obtained F-ratio of 101.15 for adjusted post test mean is more than the table value of 3.23 for df 2 and 41 required for significant at .05 level of confidence. The results of the study indicate that there are significant differences among the adjusted post test means of Meditation Practices Group, Aerobic Training Group and Control Group on the development of Vital Capacity. To determine which of the paired means had a significant difference, the Scheffe's test was applied as Post hoc test and the results are presented in Table-III.

Table III. The scheffe's test for the differences between the adjusted post test paired means on vital capacity

Adjusted Post-test means			Mean Difference	Confidence Interval
Meditation Practices Group – (I)	Aerobic Training Group – (II)	Control Group - (III)		
47.15	**44.47**		**2.68***	**1.09**
47.15		**41.05**	**6.09***	**1.09**
	44.47	**41.05**	**3.41***	**1.09**

** Significant at.05 level of confidence*

Table -III shows that the adjusted post test mean difference on Meditation Practice, Aerobic Training Group and Control Group, Meditation are 2.68. 6.09 and 3.41 respectively. The values are greater than the confidence interval value 1.09, which shows significant differences at 0.05 level of confidence. It may be concluded from the results of the study that there is a significant difference in Vital Capacity between the adjusted post test means of Meditation Practice Group and Aerobic Training Group, Meditation Practice Group and Control Group, Aerobic Training Group and Control Group. However, the improvements of Vital Capacity were significantly higher for Aerobic Training Group than Meditation Practice Group and Control Group. The adjusted post test means values of Experimental groups and control group on Vital Capacity is graphically represented in the Figure -I.



Conclusions

1. The Experimental groups namely, Meditation Practices group and Aerobic Training group and had significantly improved in Vital Capacity.
2. Significant differences in achievements were found between Meditation Practices group, Aerobic Training group and Control group in Vital Capacity.
3. The Aerobic Training group was found to have greater impact on the group concerned than the Aerobic Training group, Aerobic Exercises group and Control group in enhancing the performance of Vital Capacity.

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