

Effect Of Yogic Practices And Aerobic Training On Vital Capacity Among Physical Education Students

Dr. A. Palanisamy

Professor and Head, Department of Physical Education, Bharathidasan University, Tiruchirappalli, Tamilnadu, India.

ABSTRACT

The purpose of the study was to find out the effect of yogic practices and aerobic training on vital capacity among physical education students. To achieve the purpose of the present study, forty five physical education students from Department of Physical Education, Bharathidasan University, Tiruchirappalli, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as yogic practices, aerobic training and control group in an equivalent manner. The two training groups participated for a period of twelve weeks and the post-tests were conducted. The Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. When the adjusted post-test was significant, the Scheffe's post-hoc test was used to find out the paired mean differences. The experimental groups had achieved significant improvement on vital capacity of physical education students when compared to control group.

KEYWORDS: Yogic Practices, Aerobic Training, Vital capacity, Physical Education Students.

INTRODUCTION

Yoga is one of the most ancient cultural heritage of India. The word yoga in sanskrit means "to unite", and so yoga can be said to connote a unitive discipline. In this sense it is an exercise in moral and mental cultivation that generates good health (arogya), contributes to longevity (chirayu), and the total intrinsic discipline culminates into positive and perennial happiness and peace. Therefore, yoga is said to be indispensable of the ultimate accomplishment in life. It is a science that affects not only the conscious self but the subconscious as well. It is a practical physiological training (kriya yoga), which if practiced can exalt man to the 'supra mundane level'. The word Yoga automatically calls to mind sage "Patanjali" the founder and father of Yoga. He lived around three centuries before Christ, and was a great philosopher and grammarian. He was also a physician and a medical work is attributed to him. However this work is now lost in the pages of time. His best known work is Patanjali Yoga Sutras of Aphorisms on Yoga. The path outlined is called Raja Yoga or the sovereign path. It is so called because of the regal, noble method by which the self is united with the overself. 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. When you wish to improve your endurance fitness, you should train your aerobic system and move your 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 your circulation improve the muscle's ability to use the

available oxygen improve the ability to recuperate after hard exercise (Lofrano-Prado et al. 2012).

METHODOLOGY

The purpose of the study was to find out the effect of yogic practices and aerobic training on vital capacity among physical education students. To achieve the purpose of the present study, forty five physical education students from Department of Physical Education, Bharathidasan University, Tiruchirappalli, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as yogic practices, aerobic training and control group in an equivalent manner. The two training groups participated for a period of twelve weeks and the post-tests were conducted. The Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. When the adjusted post-test was significant, the Scheffe's post-hoc test was used to find out the paired mean differences.

RESULTS

TABLE – I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON VITAL CAPACITY OF YOGIC PRACTICES, AEROBIC TRAINING AND CONTROL GROUPS

	Yogic Practices Group	Aerobic Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	1.80	1.79	1.77	BG	0.007	2	0.004	0.13
				WG	1.12	42	0.027	
Post Test Mean	2.43	2.36	1.71	BG	4.78	2	2.39	92.37*
				WG	1.08	42	0.026	
Adjusted Post Test Mean	2.43	2.36	1.70	BG	4.78	2	2.39	90.56*
				WG	1.08	41	0.026	

* Significant at 0.05 level

Table value for df 2, 42 was 3.21 and 2, 41 was 3.22

The above table indicates the adjusted mean value of vital capacity of yogic practices, aerobic training and control groups were 2.43, 2.36 and 1.70 respectively. The obtained F-ratio of 90.56 for adjusted mean was greater than the table value 3.22 for the degrees of freedom 2 and 41 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among the experimental and control groups on vital capacity. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted post test mean values of

vital capacity of both experimental and control groups are graphically represented in the figure - I.

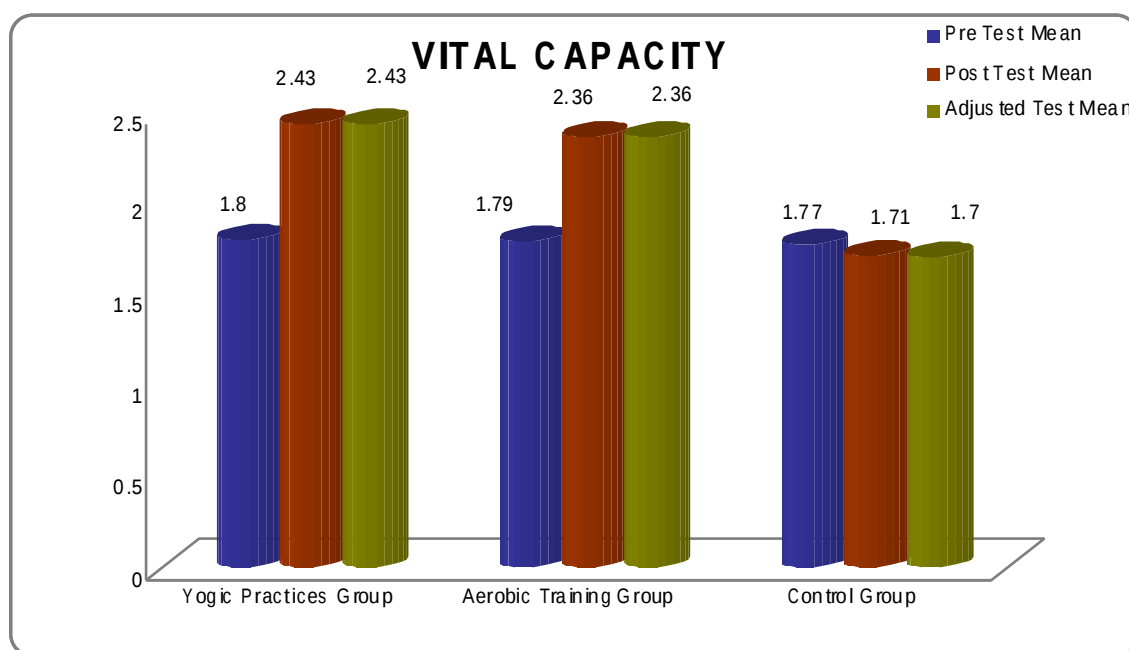


FIGURE – I
SHOWS THE MEAN VALUES ON VITAL CAPACITY OF YOGIC PRACTICES AND AEROBIC TRAINING AND CONTROL GROUPS

TABLE - II
ADJUSTED MEAN AND DIFFERENCES BETWEEN THE MEANS OF YOGIC PRACTICES, AEROBIC TRAINING AND CONTROL GROUPS ON VITAL CAPACITY

Yogic Practices Group	Aerobic Training group	Control Group	Mean Difference	CI Value
2.43	2.36	---	0.07	0.13
2.43	---	1.70	0.73*	
---	2.36	1.70	0.66*	

Table - II shows the adjusted means on vital capacity and difference between the means of the yogic practices, aerobic training and control group. The mean differences of yogic practices group and control group, aerobic training group and control group were 0.73 and 0.66 respectively was greater than the CI value 0.13. Hence there exists significant difference. The mean difference between yogic practices group and aerobic training group was 0.07 lesser than the CI value 0.13. Hence there exists no significant difference.

CONCLUSIONS

From the results obtained, the following conclusions were drawn:

1. It was observed that the twelve weeks of yogic practices have significantly improved the vital capacity of physical education students.
2. It was observed that the twelve weeks of aerobic training have significantly improved the vital capacity of physical education students.
3. The experimental groups had achieved significant improvement on vital capacity of physical education students when compared to control group.

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