



## EFFECT OF ASANA PRACTICES ON VITAL CAPACITY AND FORCED VITAL CAPACITY AMONG OBESE SCHOOL BOYS

Dr. V.BALAMURUGAN<sup>1</sup> & Dr.M.SRINIVASAN<sup>2</sup>

<sup>1</sup>Physical Director, Swami Sivananda Hr Sec. School, Coimbatore, Tamilnadu, India.

<sup>2</sup>Assistant Professor, Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, SRKV Post, Coimbatore, Tamilnadu.

### ABSTRACT

The purpose of the study was to investigate the effect of asana practices on selected physiological variables among obese school boys. For the present study 30 obese boys from SRKV Higher secondary School (Tamil and English medium) and TAT Kalanilayam, Sri Ramakrishna Mission Vidyalaya, Coimbatore, Tamilnadu were selected as subjects at random and their age ranged from 12 to 17 years. The subjects were selected by the BMI value those who have higher than the 30 scores. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B' Group 'A' underwent asana practices and Group 'B' underwent no training. The data was collected before and after twelve weeks of asana practices. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) technique to find out the effect of asana practices on selected physiological variables among obese school boys. The level of significance was set at 0.05. The findings of the present study have strongly indicates that asana practices have significant effect on selected physiological variables i.e., vital capacity and forced vital capacity of obese school boys. Hence the hypothesis earlier set that asana practices would have been significant effect on selected physiological variables in light of the same the hypothesis was accepted. Significant effect of asana practices was found on vital capacity and forced vital capacity.

**KEYWORDS:** Asana, Vital Capacity Forced Vital Capacity, obese school boys.

### INTRODUCTION

Yoga provides one of the best means of self – improvement and helps to attain one's full potential. In the advanced stages of yoga the super conscious states are attained which results feeling of bliss, deep peace and the emergence of psychic powers. Yoga was developed and perfected over the centuries by the philosophers and the mystics in India. It is a basic method of increasing the body's supply of energy and removes any interference to the transmission of energy throughout the body. Yoga has specialized in this subject for thousands of years and stream lined the methods to attain the self improvements in all the way of human life style (Braj Bihari Nigam, 2001).

### OBJECTIVE OF THE STUDY

The purpose of the study was to investigate the effect of asana practices on selected physiological variables among obese school boys. It was hypothesized that there would have been a significant effect of asana practices on selected physiological variables among obese school boys.

### PROCEDURE AND METHODOLOGY

For the present study 30 school students from Tamilnadu were selected as subjects at random and their age ranged from 12 to 17 years. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent asana practices and Group 'B' underwent no training. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) technique to find out the effect of asana practices on selected physiological variables among obese school boys. The level of significance was set at 0.05.

### RESULTS AND DISCUSSIONS ON FINDINGS

The findings pertaining to analysis of co-variance between experimental group and control group on selected physiological variables among obese school boys for pre-post test respectively have been presented in table No.1 to 3.

**TABLE 1**  
**ANCOVA BETWEEN EXPERIMENTAL GROUP AND CONTROL GROUP ON VITAL CAPACITY OF OBESE SCHOOL BOYS FOR PRE, POST AND ADJUSTED TEST**

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	2.41	2.40	BG	0.01	1	0.01	0.01
			WG	1.06	28	0.03	
Post Test Mean	3.32	2.41	BG	6.21	1	6.21	79.49*
			WG	2.18	28	0.07	
Adjusted Post Mean	3.32	2.41	BG	6.22	1	6.22	77.34*
			WG	2.17	27	0.08	

\*\* Significant at 0.05 level.

df: 1/27= 4.21

Table No. 1 revealed that the obtained 'F' value of 77.34 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that

there was a significant difference in adjusted means of vital capacity of obese school boys between experimental group and control group.

**TABLE 2**  
**ANCOVA BETWEEN EXPERIMENTAL GROUP AND CONTROL GROUP ON FORCED VITAL CAPACITY OF OBESE SCHOOL BOYS FOR PRE, POST AND ADJUSTED TEST**

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	2.38	2.36	BG	0.003	1	0.003	0.068
			WG	1.231	28	0.044	
Post Test Mean	3.55	2.38	BG	10.325	1	10.325	515.04*
			WG	0.561	28	0.02	
Adjusted Post Mean	3.55	2.38	BG	10.29	1	10.29	495.46*
			WG	0.56	27	0.02	

\*\* Significant at 0.05 level.

df: 1/27= 4.21

Table No. 2 revealed that the obtained 'F' value of 495.46 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of forced vital capacity of obese school boys between experimental group and control group. In case of physiological variables i.e. vital capacity and forced vital capacity the results between pre and post (12 weeks) test has been found significantly higher in experimental group in comparison to control group. All the types of Asana work on a sound physiological basis, either stimulation or smoothing the cells. The respiratory rate, which is normally around 14 to 18 per minute, is reduced to the level of two to three per minute. Asana is the bridge between body and mind. It should be done gently, with awareness. Since, the asana practices specially develops the lung functions and direct it towards positive

self nature which, directly contribute to enhancement in their vital capacity and forced vital capacity and due to regular practice of asana which may also bring sudden spurt in physiological variables in obese school boys. The findings of the present study have strongly indicates that asana practices have significant effect on selected physiological variables i.e., vital capacity and forced vital capacity of obese school boys. Hence the hypothesis earlier set that asana practices would have been significant effect on selected physiological variables in light of the same the hypothesis was accepted.

**CONCLUSIONS**

On the basis of findings and within the limitations of the study the following conclusions were drawn: Significant effect of asana practices was found on vital capacity and forced vital capacity..

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