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**Daksh Sharma**

Assistant Professor of Phy.Edu  
SGGS Khalsa College Mahilpur,  
Punjab, India

## A comparative study on vital capacity among yoga students and Bachelor of Arts students

**Daksh Sharma**

### Abstract

To fulfill the purpose of the study, total 40 students, included 20 Yoga students (male) and 20 Bachelor of Arts students (male) were randomly selected from different colleges of Punjab University. The subjects were ranged from 19 to 25 years of age. The purpose of the study was to find out the comparison of vital capacity among Yoga students and Bachelor of Arts students.

The parameter selected for the purpose of the study was vital capacity. The mean, standard deviation and 't' test was used to compare the parameter within the group. Data was analyzed using SPSS version 16.0 (statistical package for the social sciences, version 16.0, SPSS Inc, Chicago, USA). After the study was completed, it was found that the Yoga had significant effect on the vital capacity of Yoga students in comparison with Bachelor of Arts Students.

**Keywords:** Vital capacity, statistical, parameter, randomly

### Introduction

Breathing is life. The ancient yogis in India knew the intimate connection between breath and mind. For example, when your mind is angry, watch your breathing. It will be disturbed and similarly if you hold your breath for long, mind will be agitated. Pranayama or control or regulation of the life force is the fourth step in the Ashtanga yoga system of Patanjali. The control of breath leads to the control of the life force or prana.

Training to yoga respiration selectively increased the respiratory sensation, perhaps through its persistent conditioning of the breathing pattern. It is based on ancient theories, observations and principles of mind-body relationships.

Substantial research has been conducted to look at the numerous health benefits of yoga postures (asana), yoga breathing (pranayama) and meditation. The physiological and psychological benefits of yoga have been presented in several studies (Bal; 2010) [1]. Yoga and pranayama may be as effective as or better than exercise at improving a variety of health-related outcome measures.

Vital capacity is a parameter of respiration. It is the amount of air forcefully expelled after a maximal inspiration. The vital capacity of a normal individual ranges from 3 to 4 liters where as the trained athletes vital capacity ranges from 5 to 6 liters.

### Material and Methods

#### Subjects

Forty randomly selected male students which included 20 Yoga Students and 20 Bachelor of Arts students from different colleges of Punjab University were volunteered to participate in the study. The subject's age was between 19-25 years. A written consent was obtained from the subjects. All were doing Bachelor degree in arts and Yoga. The subjects were highly motivated to participate in the study.

#### Vital Capacity Measurement

The vital capacity of the subjects was measured by using Spiro-meter. The subjects were asked to take a deep breath and then to blow hard into mouthpiece of the Spiro-meter with a sharp blast. Three recordings were taken at one-minute intervals and the average of three highest readings was noted.

**Correspondence**

**Daksh Sharma**

Assistant Professor of Phy.Edu  
SGGS Khalsa College Mahilpur,  
Punjab, India

### Data Analysis

Values are presented as mean values and SD. The Student paired 't' test was used to compare parameters within group. Data was analyzed using SPSS Version 16.0 (statistical package for the Social Sciences, version 16.0, SPSS Inc. Chicago, IL, USA)

### Results

**Table 1:** MEANS, SD and 't' Values Of Vital Capacity (Liters) of Yoga Students and Bachelor of Arts Students

Group	N	Mean	SD	't' Value
Yoga Students	20	4.73	0.4	6.51**
Bachelor of Arts Students	20	3.92	0.27	

t = 0.01

This table, showed the mean, S.D and 't' values of vital capacity of the group of Yoga Students and Bachelor of Arts Students. Yoga Students mean and S.D value has been calculated as  $4.73 \pm 0.4$  whereas mean and S.D value of Bachelor of Arts students were found to be  $3.92 \pm 0.27$  when 't' test was applied, it has shown the 6.51\*\* value which is significant at 0.01.

### Discussion

Yoga practices are known to improve the health, reduces stress and anxiety significantly. From the results it is evident that the Yoga had significant effect on the vital capacity of the Yoga students in comparison with Bachelor of Arts Students. The findings are supported by the study conducted by Upadhyay *et al.* (2008). The findings are also supported by the study conducted by Bal (2008), "The study showed significant improvement in vital capacity and maximal ventilator volume with the training programme of bhastrika and anulom vilom pranayama." The results of the present study demonstrated the beneficial effects of Yoga on pulmonary function of the respiratory system.

### Conclusion

The Conclusion of the study was that the Yoga had significant effect on the vital capacity of Yoga students in comparison with Bachelor of Arts Students. Therefore, such type of Yogic Practices may be recommended for the Bachelor of Arts students to improve their physical and psychological fitness. The significant results found in the study might also help the sports person to improve their physiological efficiency.

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