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# STUDY ON VITAL CAPACITY OF YOGA PRACTICES AND PHYSICAL ACTIVITIES AMONG MIDDLE AGED MEN

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## ABSTRACT

The purpose of the study was to study on vital capacity of yoga practices and physical activities among middle aged men. To achieve the purpose of this study, thirty middle aged men from Karaikudi, Tamilnadu, India. The age, height and weight of the subjects ranged from 35 to 40 years, 155 to 165 centimetres and 60 to 70 kilograms respectively. They were divided into two groups; each group consisted of fifteen subjects. Group-I underwent yoga practice and physical activity and group-II acted as control who does not participate in any training programme. The data collected from the two groups prior to and post experimentation were statistically analyzed by analysis of covariance (ANCOVA). The experimental group had significant improvement on vital capacity when comparing to the control group.

**Key words:** Yoga practice, Physical activities and Vital capacity.

## INTRODUCTION

Fitness improves general health and it is essential for full and vigorous living. The physically fit child will be more alert and eager to do things. Children are the future citizens of our country. The wealth of a nation depends entirely upon the health of every citizen of the country. Hence physical fitness of school children is a major important factor to be considered. Training aims at improving the fitness of persons. Tudor O. Bompa (1994), Training is not a novelty or a recent discovery. Frequent and regular physical exercise boosts the immune system, and helps to prevent the "diseases of affluence" such as heart disease, cardiovascular disease, Type 2 diabetes and obesity (Stampfer, *et. al.*, 2000). Yoga is a re-education of one's mental process, along with the physical. Yoga has been practiced in India for over two millennia. Stories and legends from ancient times testify to the existence of yoga, and to the practitioners and divinities associated with it. Indian literature is a storehouse of knowledge about yoga covering every converging conceivable level.

## METHODOLOGY

The purpose of the study was to study on vital capacity of yoga practices and physical activities among middle aged men. To achieve the purpose of this study, thirty middle aged men from Karaikudi, Tamilnadu, India. The age, height and weight of the subjects ranged from 35 to 40 years, 155 to 165 centimetres and 60 to 70 kilograms respectively. They were divided into two groups; each group consisted of fifteen subjects. Group-I underwent yoga practice and physical activity and group-II acted as control who does not participate in any training programme. The experimental group subjects were participated in yoga practices and physical activities four days per week for twelve weeks, duration of the training programme on 40 minutes (including warm up and warm down) per day. Once in two weeks the training load was increased 5% of their HRR for physical activities and for the yoga practices one set increased. Vital capacity was measured by Wet-spirometer. The data collected from the two groups prior to and post experimentation were statistically analyzed by analysis of covariance (ANCOVA).

## RESULTS

Table-I shows that the pre test mean and standard deviation on vital capacity of yoga practices and physical activity training and control groups are 1750.66 + 77.68 and 1738.67 + 83.05 respectively. The obtained 'F' ratio value of 0.16 for pre test means on vital capacity of yoga practices and physical activity training and control groups were less than the required table value of 4.20 for the degrees of freedom 1 and 28 at 0.05 level of confidence. It reveals that there is statistically insignificant difference among the experimental and control groups during pre test period. It inferred that the random assignment of the subjects for the two groups is successful.

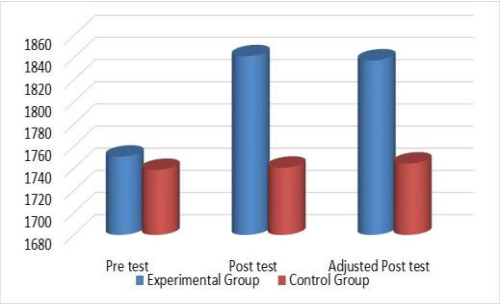
**Table - I** Analysis of Covariance on Vital Capacity of Yoga Practices and Physical Activity Training and Control Groups

| | Experimental Group | Control Group | SoV | Sum of Squares | df | Mean squares | 'F' ratio |
|---|---|---|---|---|---|---|---|
| Pre-test Mean | 1750.66 | 1738.67 | B | 1080.00 | 1 | 1080.00 | 0.16 |
| SD | 77.68 | 83.05 | W | 181066.67 | 28 | 6466.67 | |
| Post-test Mean | 1841.33 | 1740.66 | B | 76003.33 | 1 | 76003.33 | 16.02* |
| SD | 60.34 | 76.48 | W | 132866.66 | 28 | 4745.23 | |
| Adjusted Post-test Mean | 1837.54 | 1744.45 | B | 64600.71 | 1 | 64600.71 | 28.78* |
| | | | W | 60587.43 | 27 | 2243.97 | |

(The required table value for significance at 0.05 level of confidence with degrees of freedom 1 & 28 and 1 & 27 are 4.20 and 4.21 respectively) *Significant at .05 level of confidence

The post test mean and standard deviation on vital capacity of yoga practices and physical activity training and control groups are 1841.33 + 60.34 and 1740.66 + 76.48 respectively. The obtained 'F' ratio value of 16.02 for post test means on vital capacity of yoga practices and physical activity training and control groups were higher than the required table value of 4.20 for the degrees of freedom 1 and 28 at 0.05 level of confidence. The adjusted post test means on vital capacity of yoga practices and physical activity training and control groups are 1837.54 and 1744.45 respectively. The obtained 'F' ratio value of 28.78 for adjusted post test means on vital capacity of yoga practices and physical activity training and control groups were higher than the required table value of 4.21 for the degrees of freedom 1 and 27 at 0.05 level of confidence. It is observed from this finding that significant differences exist among the adjusted post test means of experimental and control groups on vital capacity. Due to the yoga practices and physical activity training the vital capacity of the subject's is significantly improved.

**Figure - II** Cylinder Diagram on Vital Capacity of Yoga Practices and Physical Activity Training and Control Groups




## DISCUSSION AND FINDINGS

The study result stated that the twelve weeks of the yoga practices and physical activity training influenced increased on vital capacity of the middle aged men. Rahul and Mahes (2015) revealed that eight weeks of pranayama practices had significant increase on vital capacity of the male kabaddi players. Sunil Rayat (2015) investigated the effect of yoga on selected physical and physiological variables of physical education students. The result of the study stated that the significant improvements on vital capacity due to the regular yoga practice. Tamal, *et. al*. (2013) found out the effects of simple yogic exercise programs (asanas and pranayamas) on selected pulmonary function tests of forty elders, the result showed that significant increase in forced vital capacity (FVC). Elavarasi and Gopinath (2012) found out the effect of yogic practices and physical exercise on muscular endurance and vital capacity. Their result showed that the yoga practice and physical exercise periods both training has improved the vital capacity.

## CONCLUSION

The conclusion of the study stated that the yoga practices and physical activity training had impact to enhance the performance on vital capacity of the middle aged men due to the twelve weeks training.

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