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Effect of Yogic Practices on Tidal Volume and Anxiety among Middle Aged Men

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Abstract

The purpose of the present study was to find out the effect of yogic practices on tidal volume and anxiety among middle aged men. For this purpose, thirty middle aged men around Arokkanam Town, Vellore District, Tamilnadu in the age group of 35 – 40 years were selected. They were divided into two equal groups, each group consisted of fifteen subjects, in which group – I underwent yogic practices and group – II acted as control that did not participate in any special activities apart from their regular day-to-day activities. The training period for this study was six days in a week for twelve weeks. Prior to and after the training period the subjects were tested on tidal volume and anxiety. Tidal volume and anxiety were tested were assessed by using expirograph and Taylor's Manifest Anxiety Scale. The Analysis of Covariance (ANCOVA) was used to find out any significant difference between the pre-test mean and post-test means and significant difference that was exists between the yoga practice group and control group on selected criterion variables. It was concluded from the results of the study that yogic practice has increased the tidal volume and decreased the anxiety significantly ($P > .05$). It was found that there was a significant difference was occurred between the yoga practice group and control group on tidal volume and anxiety.

Keywords: Yogic Practice, Diabetic Patients, Tidal Volume, Anxiety, ANCOVA.

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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.[1] Yoga is a complete science of life that originated in India many thousands of years ago.[2] Yoga is an exact science. It is a perfect, practical system of self-culture. It is the discipline of the mind, senses and the physical body.[3] The anxiety disorder and depression may be treated with yoga. Researchers found that yoga is an superior to other forms of exercise in positive effect on anxiety and mood status. The volume of air inspired and expired per unit time is tightly controlled, both with respect to the frequency of breaths and to tidal volume. Breathing is regulated so the lungs can maintain the Pa_{O_2} and Pa_{CO_2} within normal range, even under widely varying conditions such as exercise.[4] psychology as the “study of behaviour”, our wisdom is in including that education and psychology are the observe and reverse side of the same coin, two subjects with one aim and soul.[5]

Methods

Thirty middle aged men living around Arokkanam Town, Vellore District, Tamilnadu were

selected as subjects and their age ranged between 35 and 40 years.

They were divided into two equal groups, such as, Group - I underwent yogic practices ($n = 15$) and Group - II acted as control ($n = 15$), which did not undergo any special exercises apart from their day-to-day activities. The yoga practice period was six days (Monday to Saturday) per week for twelve weeks. Self regulation in diet was followed and a regular interrogation about the subjects' diet was also followed. The researcher consulted with the yoga experts, selected the following variables as criterion variables: 1. tidal volume and 2. anxiety. Tidal volume and anxiety were tested were assessed by using expirograph and Taylor's Manifest Anxiety Scale for pre and post-test for measuring the tidal volume and anxiety. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the experimental group and control group on selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate.

Result and Discussion

The data collected prior to and after the yoga practice period on tidal volume and anxiety on yoga practice group and control group were analysed and presented in the following Table – 1.

Table 1

Analysis of Covariance and 'F' ratio for Tidal volume and Anxiety for Yoga Practice Group and Control Group

Variable Name	Group Name	Yoga Practice Group	Control Group	'F' Ratio
Tidal volume (in Ltrs)	Pre-test Mean \pm S.D	0.327 \pm 0.012	0.328 \pm 0.014	0.019
	Post-test Mean \pm S.D.	0.399 \pm 0.021	0.315 \pm 0.015	163.43*
	Adj. Post-test Mean	0.400	0.315	226.05*
Anxiety (in points)	Pre-test Mean \pm S.D	14.93 \pm 1.22	14.47 \pm 1.25	1.072
	Post-test Mean \pm S.D.	12.67 \pm 1.23	14.53 \pm 1.41	14.91*
	Adj. Post-test Mean	12.459	14.741	66.177*

* Significant at .05 level of confidence. (The table values required for significance at .05 level of confidence with df 1 and 28 and 1 and 27 were 4.20 and 4.21 respectively).

Result

After applying the analysis of covariance, the result of this study showed that there was a significant increase in tidal volume for the yoga practice group and also there was a significant decrease in the anxiety level after the experimental period. Further, comparing the adjusted post-test means of the criterion variables, such as the tidal volume (F- ratio – 226.05 p > 0.05) and anxiety (F-ratio – 66.177 p > 0.05) it was found yoga practices has significantly increased the tidal volume and decreased the anxiety. The result of the study also shows that there was a significant difference in tidal volume and anxiety level between the yoga practice group and control group.

Conclusions

1. It was concluded the results of the study that there was a significant increase in tidal volume (Eveline Beutler *et al* (2016).[6] Kadu and Deshpande (2014)[7] and Sayyed *et al* (2013)[8]) and a decrease in anxiety (Shokri, Khoshnam and Nikseresht (2014)[9] and Rocha *et al* (2012)[10] among middle aged men after the twelve weeks of yogic practice.
2. It was also concluded from the results of the present study that there was a significant difference was occurred between the yoga practices group and control group on tidal volume and an increase in anxiety.

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