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Effect of Yogic Practices on Selected Lung Volumes among Asthmatic Men

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Abstract

The purpose of the study was to find out the effect of yogic practices on selected lung volumes among asthmatic men. To achieve the purpose of the present study, thirty asthmatic men from Ishwarya Yoga & Nature Care Centre, Salem district, Tamilnadu were selected as subjects at random and their ages ranged from 25 to 35 years. The subjects were divided into two equal groups of fifteen asthmatic men each. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=30) were randomly assigned to two equal groups of fifteen asthmatic men each. The groups were assigned as yogic practices and control group in an equivalent manner. The group I underwent yogic practices and group II acted as a control group. The experimental group was participated the training for a period of six weeks to find out the outcome of the training packages and the control group did not participated in any training programme. The variable to be used in the present study was collected from all subjects before they have to treat with the respective treatments. It was assumed as pre-test. After completion of treatment they were tested again as it was in the pre-test on all variables used in the present study. This test was assumed as post-test. Initially descriptive statistics and paired 't' test was applied to test the significance of mean gains made in each of the variables by the experimental groups. The primary objective of the paired 't' ratio was to describe the differences between the pre-test and post-test mean of asthmatic men. The yogic practices group produced significant improvement in selected lung volumes. The 't' values of the selected variables have reached the significant level. In the control group the obtained 't' value on all the variables were failed to reach the significant level.

Keywords: Yogic Practices, Lung Volumes, Asthma, Men.

Introduction

Health is the motto of yoga. Many people still think that yoga is religion: others believe it to be a kind of magic. In reality yoga is a system of physical, mental and spiritual development. Yoga does not mean just twisting and bending of the body. It is a comprehensive mode of culturing the body. It also secures a powerful tool in manifesting the hidden personality of man. Yoga may be the cheapest and most scientific method of ensuring soundness of the body and mind. Deviations in the spinal column are found commonly in both young and old. Usually these defects originate as functional and later become structural, because no early treatment was provided. It is possible to identify four main types of environment; namely, physical, mental, social and cultural environments. Yoga with its physical and mental disciplines can mould the behaviour of an individual promoting perfect harmony with his environment to relieve him from any suffering. Yoga is a discipline which seeks to bring the internal environment of an individual under his control thereby making a good adjustment of the individual with his surroundings.

Asanas and all yogic exercises are confined to minimum motions involved with everything done at a slow tempo (Isometric and Isokinetic) which is the direct opposite of gymnastics, calisthenics Swedish drills, all of which emphasize on speed and rhythm. Further by influencing the autonomic nervous system the Yogic exercises ensure better food utilization and improved nourishment besides proper relaxation and sleep due to superior voluntary control of such individuals**.** Asthma originates most commonly in infancy and less so in middle life. It occurs with equal frequency in both sexes during youth. However males are more susceptible in later life than females. There are hereditary factors causing asthma but these do not render a cure impossible. Nervousness is intimately with the disease. Worry, smoking and pollution are major contributing causes. Complication which can result from asthma include bronchitis and, in some cases, emphysema. Asthma itself is not fatal. The extreme case, status asthmaticus, results in serious illness but this condition is reversible.

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Methodology

The purpose of the study was to find out the effect of yogic practices on selected lung volumes among asthmatic men. To achieve the purpose of the present study, thirty asthmatic men from Ishwarya Yoga & Nature Care Centre, Salem district, Tamilnadu were selected as subjects at random and their ages ranged from 25 to 35 years. The subjects were divided into two equal groups of fifteen asthmatic men each. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=30) were randomly assigned to two equal groups of fifteen asthmatic men each. The groups were assigned as yogic practices and control group in an equivalent manner. The group I underwent yogic practices and group II acted as a control group. The experimental group was participated the training for a period of six weeks to find out the outcome of the training packages and the control group did not participated in any training programme. The variable to be used in the present study was collected from all subjects before they have to treat with the respective treatments. It was assumed as pre-test. After completion of treatment they were tested again as it was in the pre-test on all variables used in the present study. This test was assumed as post-test. Initially descriptive statistics and paired‘t’ test was applied to test the significance of mean gains made in each of the variables by the experimental groups. The primary objective of the paired ‘t’ ratio was to describe the differences between the pre-test and post-test mean of asthmatic men.

Results

Table I. Significance of mean gains & losses between pre and post test scores on selected variables of yogic practices group (YPG)

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	‘t’ Ratio
1	Inspiratory Reserve Volume	2.43	2.82	0.38	0.18	0.04	7.94*
2	Expiratory Reserve Volume	0.19	0.24	0.05	0.05	0.01	3.28*
3	Tidal Volume	0.67	0.81	0.13	0.12	0.03	4.08*

* Significant at 0.05 level

Table I shows the obtained ‘t’ ratios for pre and post test mean difference in the selected variable of inspiratory reserve volume (7.94), expiratory reserve volume (3.28) and tidal volume (4.08). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the means gain and losses made from pre to post test were significantly improved in selected lung volumes of inspiratory reserve volume (0.38, $p<0.05$), expiratory reserve volume (0.05, $p<0.05$) and tidal volume (0.13, $p<0.05$) thus the formulated hypothesis No 1 is accepted.

Table II. Significance of mean gains & losses between pre and post test scores on selected variables of control group (CG)

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	‘t’ Ratio
1	Inspiratory Reserve Volume	2.46	2.47	0.01	0.19	0.05	0.13
2	Expiratory Reserve Volume	0.16	0.19	0.03	0.08	0.02	1.23
3	Tidal Volume	0.65	0.66	0.01	0.08	0.02	0.27

* Significant at 0.05 level

Table II shows the obtained ‘t’ ratios for pre and post test mean difference in the selected variable of inspiratory reserve volume (0.30), expiratory reserve volume (0.22) and tidal volume (0.71). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically insignificant at 0.05 level of confidence. It was observed that the means gain and losses made from pre to post test were not significantly improved in selected lung volumes of inspiratory reserve volume (0.01, $p>0.05$), expiratory reserve volume (0.03, $p>0.05$) and tidal volume (0.01, $p>0.05$).

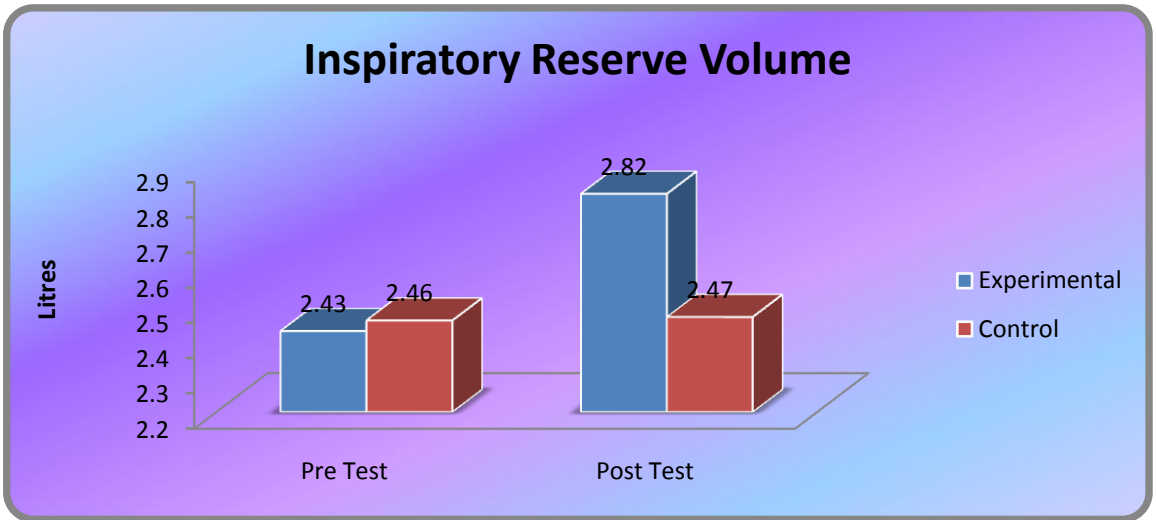

Figure I. Shows the Pre and Post mean values of YPG & CG on Inspiratory reserve volume

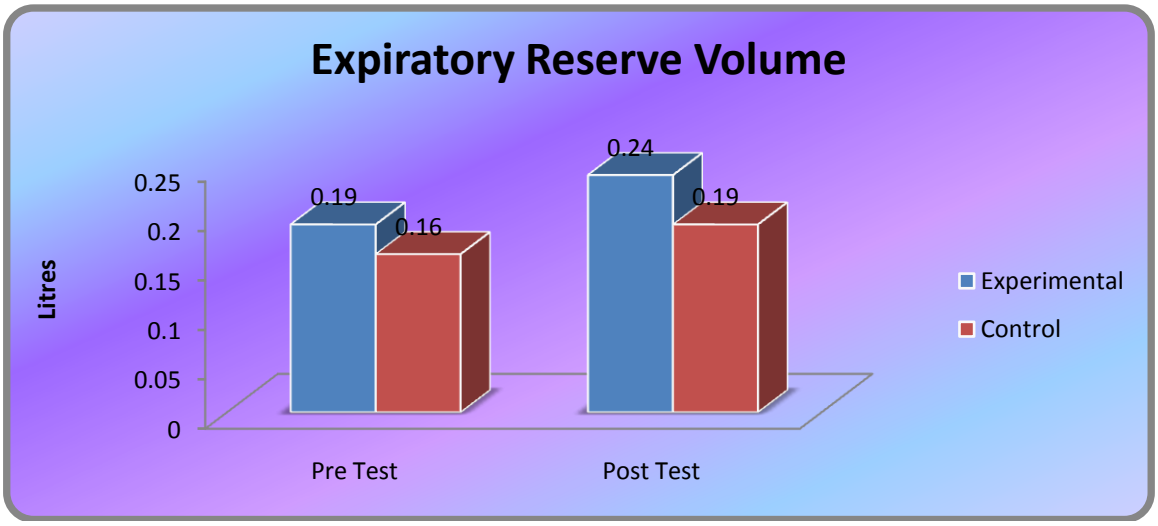

Figure II. Shows the Pre and Post mean values of YPG & CG on Expiratory reserve volume

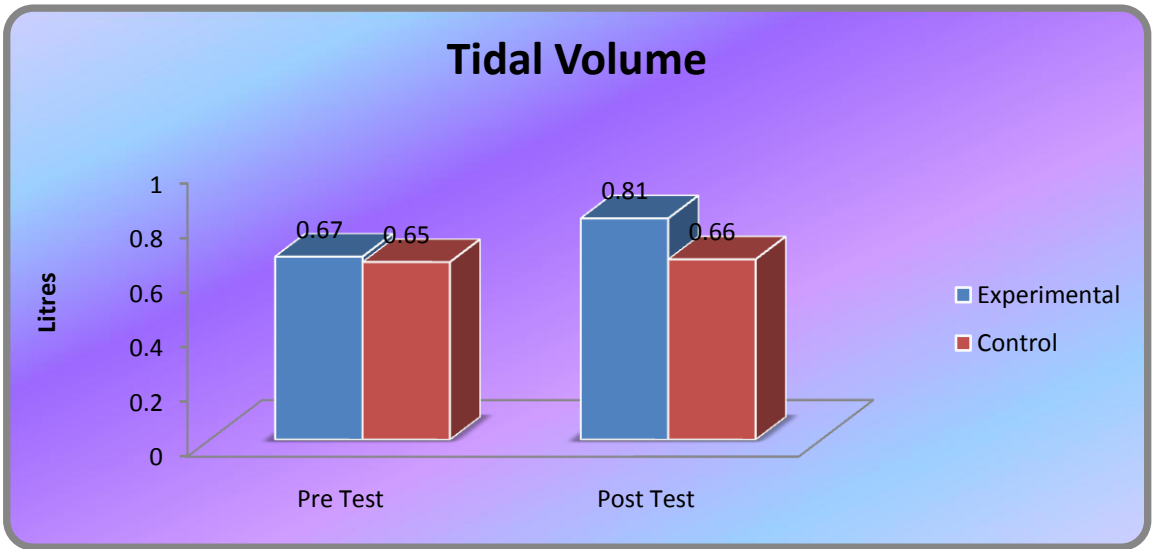

Figure III. Shows the Pre and Post mean values of YPG & CG on tidal volume

Results

1. The yogic practices group produced significant improvement in selected lung volumes. The 't' values of the selected variables have reached the significant level.
2. In the control group the obtained 't' value on all the variables were failed to reach the significant level.

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