EFFECT OF YOGIC PRACTICES ON PHYSIOLOGICAL VARIABLES AMONG ADULT MEN SUFFERING WITH SINUSITIS

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ABSTRACT

For the experimental random group study, 30 adult males with sinusitis were selected between the age group of 35- and 45-years using Tirunelveli's random sample group design and they were divided into two groups A and B with 15 subjects each. It was hypothesized that there would be significant differences in systolic and diastolic blood pressure in adult men suffering from sinusitis than in the control group due to yoga practices. For the two groups (A and B), a pre-test for the selected dependent variables was performed before the start of the training program. Group A received yoga practices; Group B (control group) received no specific treatment but was in active rest. After the eight-week trial period, the two groups (A and B) were retested for the same selected dependent variables. "t" test was used to find out the significant differences between the experimental group and the control group. The results proved that yoga practices reduced systolic and diastolic blood pressure in adult males with a 0.01 confidence level. It is concluded that yoga practices are beneficial for adult men to reduce systolic and diastolic blood pressure.

Key words: yogic practice, Systolic and Diastolic blood pressure, Adult Men, Sinusitis

INTRODUCTION

Sinus is a cavity in the body. There are many types of sinuses. But sinusitis affects the paranasal sinuses. The spaces behind the face lead to the nasal cavity. The paranasal sinuses have the same mucous membrane as the nose. They produce a thin secretion that can cause headaches. Sinusitis is the inflammation and swelling of the tissues that line the sinuses. Healthy sinuses are filled with air. But when they become clogged and filled with fluid called mucus. This best holds back the nasal passages and traps dirt particles and germs. Headaches are quite common, causing multiple and complex stresses, physical or mental fatigue, fatigue, depression, anxiety, extreme heat or cold, dizziness, insufficient natural instinct suppression, or oversleeping. Germs can grow and cause infection. The causes are common cold, allergic rhinitis, nasal polyps septum deviation

AIMS & OBJECTIVES OF THE STUDY

To find out if there would be a significant difference in selected physiological variables due to yoga practices.

SIGNIFICANCE OF THE STUDY

Mind and body are connected. Any malfunction of one would affect the other. Blocking the energy level leads to a delay in the functional efficiency of the system. This would in turn affect individual efficiency and productivity. When this is properly and effectively controlled through yogic practices, the expense of manufacturing medicines for this purpose, the loss of man-hours in this regard, are curbed or controlled. Also, the individual can live a peaceful, healthy and happier life free from the effects of the disease.

HYPOTHESIS

It is hypothesized that there would be significant differences due to the practices of yoga. Physiological Variables among adult men suffering with sinusitis than the control group.

DELIMINATIONS

- The study is to be delimited only on adult man suffering with sinusitis of age 35 to 45 years only
- The study is delimited to sinusitis patients residing in Tirunelveli only.
- The studies are to be delimited to Yoga practices as independent variables only.
- The studies are to be delimited to the dependent variable Systolic and Diastolic blood pressure only

LIMITATIONS

- The factors like life style, body structure, and social activities are not to be taken in to consideration for this study
- Certain factor like environmental and climatic conditions and economical background are not taken into consideration and also day to day work.
- The factors like medication and personal habits are not to be taken in to consideration.

METHODOLOGY

For the experimental random group study, 30 adult men with sinusitis were selected from Chennai between the age group of 25 and 35 years using a random sample group design, and they were divided into two groups A and B with 15 subjects each. It was hypothesized that there would be significant differences in systolic and diastolic blood pressure in adult men suffering from sinusitis than in the control group due to yoga practices. For the two groups (A and B), a pre-test for the selected dependent variables was performed before the

start of the training program. Group A received yoga practices; Group B (control group) received no specific treatment but was in active rest. After the eight-week trial period, the two groups (A and B) were retested for the same selected dependent variables. t test was used to find out the significant differences between the experimental group and the control group. Nowadays, due to lifestyle change, human systems are subjected to a lot of stress and strain, resulting in organ malfunction. And there are certain asanas that are specifically beneficial for sinusitis. The following yoga practices are given:

- Loosening Exercises
- Suryanamaskar
- Asana: adhomugasuvangasana, halasana Paschimottanasana, supta vajrasana, janu sirasana
- Pranayama: Kapalabhati, Basthirika Nadishodana.
- Yoga Nidra

The yoga practices work in two different ways to overcome sinusitis. First, the sinus is the mucous membrane that lines the nose. They produce a slingshot secretion. It keeps the nasal passages clear and traps dirt particles.

RESULTS AND DISCUSSION ON SYSTOLIC AND DIASTOLIC BLOOD PRESSURE

The data relating to the variables collected from the three groups before and after the training period were statistically analyzed using t test to determine the significant difference and tested at a significance level of 0.05. The analysis of systolic blood pressure by yoga practices and the control group was analyzed and is presented in Table I

TABLE I : Mean and Standard Deviation of Pre-test and Post Test Values of Systolic Blood Pressure for Yoga Group and Control Group

TEST	YOGA GROUP	CONTROL GROUP
Pre-Test	(Mean)126.10 (SD) 9	(Mean) 125.40 (SD) 7.8
Post-Test	(Mean)116.8 (SD) 12.5	(Mean) 122 (SD) 8.2

Note: - $p<0.01$, *** Level of Significant, N.S. – Not Significant

As shown in Table I and II, mean difference of 9.30, which was greater than the control group 3.19. Taking into consideration of the pretest means and posttest means adjusted posttest means were determined and analysis of t test was done and the obtained p value 0.02 was greater than the required table value of 0.5 and hence it was accepted that there was significant differences in the treated groups.

As shown in Table III and IV, mean difference of 10.97, which was greater than the control group 3.20. Taking into consideration of the pretest means and posttest means adjusted posttest means were determined and analysis of t test was done and the obtained p value 0.001 was greater than the required table value of 0.5 and hence it was accepted that there were significant differences in the treated groups as substantiated by (**Telles, S 2017**)

TABLE II : Computation of Paired t-test between the Pre-test and Post Test Values of Systolic Blood Pressure among Yoga Group and Control Group

GROUPS	Pre-Test	Post-Test	Effectiveness	Paired t test
DIET GROUP	Mean)126.10 (SD) 9	Mean)116.8 (SD) 12.5	(Mean) 9.30 (SD) 14.02	t= 2.6 p = 0.02***
CONTROL GROUP	(Mean) 125.4 (SD) 7.8	(Mean) 122 (SD) 8.2	(Mean) 3.19 (SD) 8.49	t=1.5 p =.167 (N.S)

Note: - p<0.01, *** Level of Significant, N.S. – Not Significant

TABLE III : Mean and Standard Deviation of Pre-test and Post Test Values of Diastolic Blood Pressure for Yoga Group and Control Group

TEST	YOGA GROUP	CONTROL GROUP
Pre-Test	**(Mean)88.20 (SD) 6.9**	**(Mean) 86.2 (SD) 5.9**
Post-Test	**(Mean)77.2 (SD) 6.5**	**(Mean) 83 (SD) 5.2**

Note: - p<0.01, *** Level of Significant, N.S. – Not Significant

TABLE IV : Computation of Paired t-test between the Pre-test and Post Test Values of Diastolic Blood Pressure among Yoga Group and Control Group

GROUPS	Pre-Test	Post-Test	Effectiveness	Paired t test
DIET GROUP	(Mean)88.20 (SD) 6.9	(Mean)77.2 (SD) 6.5	(Mean) 10.97 (SD) 10.21	t= 4.2 p = 0.001***
CONTROL GROUP	(Mean) 86.2 (SD) 5.9	(Mean) 83 (SD) 5.2	(Mean) 3.20 (SD) 8.12	t=1.5 p =.146 (N.S)

Note: - p<0.01, *** Level of Significant, N.S. – Not Significant

"Reports suggest that being alert or sustained attention increases sympathetic activity. A sustained increase in sympathetic activity can lead to an increase in blood pressure. Yoga breathing with alternating nostrils has been shown to be useful for (i) improving alertness and (ii) lowering systolic and diastolic blood pressure. Previous studies did not report simultaneous recordings of blood pressure and performance in vigilance tests following nasal-switching yoga breathing. With this in mind, the present study was designed to determine whether 15 minutes of alternate nostril yoga breathing could improve performance in a vigilance test without an increase in blood pressure. 4 years). Participants were assessed in 3 different sessions on 3 different days. These were (i) alternate nostril yoga breathing, (ii) breath awareness, and (iii) sitting still as a control. Blood pressure and the digit vigilance test were assessed simultaneously before and after each session. Systolic blood pressure ($p<0.01$), mean arterial blood pressure ($p<0.05$), and time required to complete the digit vigilance test ($p<0.05$). significantly reduced after yoga breathing with alternating nostrils.

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CONCULSIONS

It was concluded that Yogic practices (Group I) and Yogic practices decreased Systolic and Diastolic blood pressure than the Control group among adult men suffering with sinusitis than Control Group (Group II)

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