

VOLUME 8 (SPECIAL ISSUE) 2022

ISSN 2454-3055

Manuscripts under Special issue are published with the Theme
"Modern Perspectives of Biological Sciences"

Guest Editor: Dr. S. Mohanasundaram
Assistant Guest Editor: Dr. S.S. Syed Abuthahir

INTERNATIONAL JOURNAL OF ZOOLOGICAL INVESTIGATIONS

***Forum for Biological and
Environmental Sciences***

Published by Saran Publications, India



International Journal of Zoological Investigations

Contents available at Journals Home Page: www.ijzi.net

Editor-in-Chief: Prof. Ajai Kumar Srivastav

Published by: Saran Publications, Gorakhpur, India



ISSN: 2454-3055

Yogic Practices and Sinusitis Risk Factors in Adult Men

Sivaraman M.* and Murugesan S.

Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research, No.12, Vembuliamman Koil Street, West K.K. Nagar, Chennai-78, Tamil Nadu, India

*Corresponding Author

Received: 20th August, 2022; **Accepted:** 27th October, 2022; **Published online:** 16th November, 2022

<https://doi.org/10.33745/ijzi.2022.v08i0s.032>

Abstract: For the random group experimental investigation, 30 sinusitis adult males aged 35 to 45 were randomly recruited from Chennai and allocated into two groups of 15 each. Yogic activities were anticipated to reduce sinusitis patients' pulse rate and anxiety compared to the control group. Before the training programme, Groups A and B were pre-tested on the dependent variables. Group A practised Yogic techniques and Group B (Control) rested actively. After eight weeks, A and B were retested on the same dependent variables. ANCOVA was used to compare experimental and control groups. Yogic techniques lowered adult men's pulse rate and anxiety with 0.05 confidence. Yoga helps older males manage pulse rate and anxiety.

Keywords: Yoga, Anxiety, Adult Men, Sinusitis, Pulse rate

Citation: Sivaraman M. and Murugesan S.: Yogic practices and sinusitis risk factors in adult men. Intern. J. Zool. Invest. 8(Special Issue): 265-269, 2022.

<https://doi.org/10.33745/ijzi.2022.v08i0s.032>



This is an Open Access Article licensed under a Creative Commons License: Attribution 4.0 International (CC-BY). It allows unrestricted use of articles in any medium, reproduction and distribution by providing adequate credit to the author (s) and the source of publication.

Introduction

There are a few different varieties of sinuses. They suffer from a condition known as para nasal sinusitis. The nasal cavities are located toward the back of the face. The lining of the nose can also be found in the paranasal sinuses. Headaches are often brought on by thin secretions. Sinusitis causes inflammation and swelling of the tissue in the sinuses. Sinuses that are healthy are filled with air (Edy, 2006), when the airway is blocked by mucus. The nose is notorious for harbouring filth and bacteria. Stress, physical or mental fatigue,

fatigue, melancholy, worry, extreme heat or cold, dizziness, suppressed natural desire, insufficient or too much sleep, and infections are all potential causes of headaches (Heately *et al.*, 2001). Headaches can also be caused by fatigue, which can be caused by too much sleep. Some of the potential causes include a cold, allergic rhinitis, a nasal polyp, and a deviated septum.

This study was conducted: (i) to determine whether Yogic Practices affect some physiological characteristics in sinusitis-affected males, and

Table 1: Computation of analysis of covariance of training groups and control group on pulse rate (in numbers)

TEST	Experimental Group	Control Group	Source of Variance	Degree of freedom	Sum of Squares	Mean Sum	F Ratio
Pre	80.22	80.72	Between	1	5.47	4.37	1.84
			With in	28	79.84	2.87	
Post	73.86	76.84	Between	1	242.28	118.76	34.28*
			With in	28	162.7	12.09	
Adjusted Post	73.57	75.33	Between	1	282.09	139.28	47.78*
			With in	27	123.90	4.78	
Mean Gain	-6.36	-3.88					

*Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 28(df) = 4.2, 1 and 27(df) = 4.21)

(ii) to determine whether Yogic Practices affect some psychological characteristics in sinusitis-affected males. It is expected that yoga will have a considerable effect on physiological factors like pulse rate and psychological variables like anxiety. The research included only 35-45-year-old men with sinusitis. The research solely included Tirunelveli sinusitis patients. Yoga practises were the only independent factors. Only the dependent factors, BP and anxiety were studied. This research doesn't address lifestyle, physical shape, or social activities. Environment, climate, economic background, and daily job are not considered. Medication and personal behaviours are disregarded.

Materials and Methods

For the random group experimental investigation, 30 sinusitis adult males aged 35 to 45 were randomly recruited from Tirunelveli and allocated into two groups of 15 each. Yogic activities were anticipated to reduce sinusitis patients' pulse rate and anxiety compared to the control group. Before the training programme, Groups A and B were pre-tested on the dependent variables. Group A practised Yogic techniques (Stretching, Suryanamaskar, Halasana, Adhomugasuvangasana Paschimottanasana, Janusirasana, Kapalabhati, Basthirika Nadishodana, Meditation) and Group B (Control) rested actively. After eight weeks, A and B were retested on the same dependent variables. ANCOVA was used to compare experimental and control groups. Changes in lifestyle stress and

strain human systems, causing organ malfunction. Some asanas help sinusitis. Yoga helps sinusitis in two ways. The paranasal sinus is the nose's lining. They secrete mucus. It cleans and protects nasal passages.

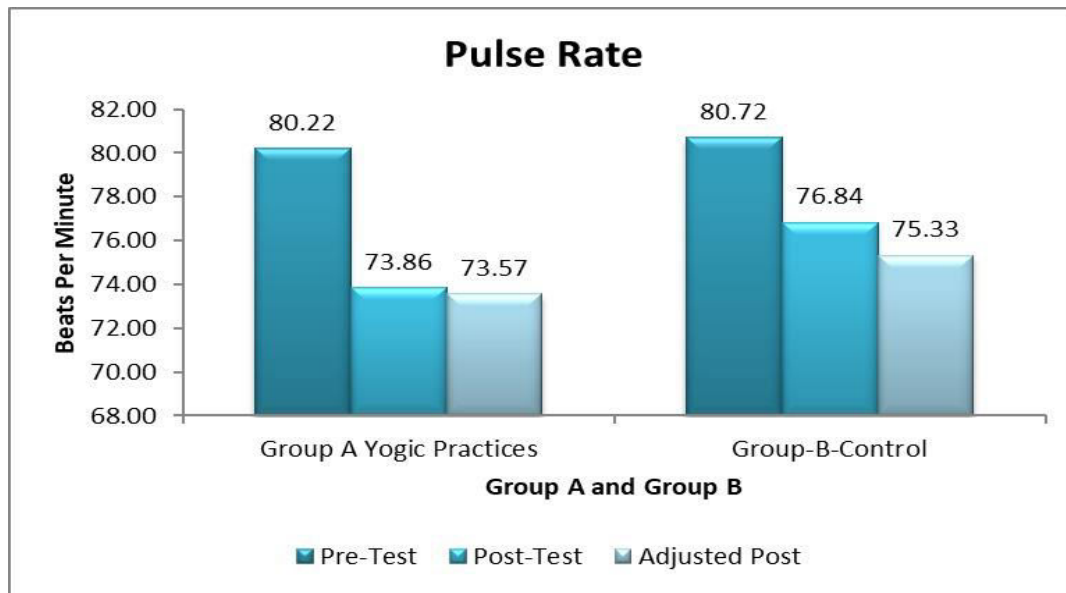
The data from the three groups before and after training were statistically evaluated using Analysis of Co-variance (ANCOVA) to find significant differences at 0.05 level of significance.

Results

Table 1 and Figure 1 present ANCOVA analysis of pulse rate via yoga practises with and without mud treatment and control group. As demonstrated in Table 1, the F value on post-test means was 47.78, which was more than the necessary table value of 4.27. Using pre-test and post-test means, adjusted post-test means were established, and analysis of covariance was performed. The F value of 32.28 was more than the needed table value of 4.2. Therefore, substantial differences between treatment groups were acknowledged.

As demonstrated in Table 2, the F value on post-test means was 54.24, which was more than the necessary table value of 4.2. Adjusted post-test means were established and an analysis of covariance was performed. The F value of 128.90 was more than the necessary table value of 4.21. Therefore, substantial differences between treatment groups were acknowledged.

Yogic practises would reduce Pulse Rate and



*Significant at 0.05 level of confidence.(Table F ratio at 0.05 level of confidence for 1and 28 (df) = 4.2; 1 and 27(df) = 4.21)

Fig. 1: Bar diagram showing the mean difference of experiment groups and control group on pulse rate (in numbers).

Table 2: Analysis of co-variance (ANCOVA) of the means of yogic practices group and control group on anxiety

TEST	Experimental Group	Control Group	Source of Variance	Degree of freedom	Sum of Squares	Mean Sum	F Ratio
Pre	27.26	31	Between	1	30.00	30.00	2.79
			With in	28	288.93	10.32	
Post	18.70	28.97	Between	1	653.33	653.33	54.24*
			With in	28	338.53	12.09	
Adjusted Post	17.94	30.67	Between	1	1069.06	1069.06	128.9*
			With in	27	-194.38	-7.20	
Mean Gain	-8.56	-2.03					

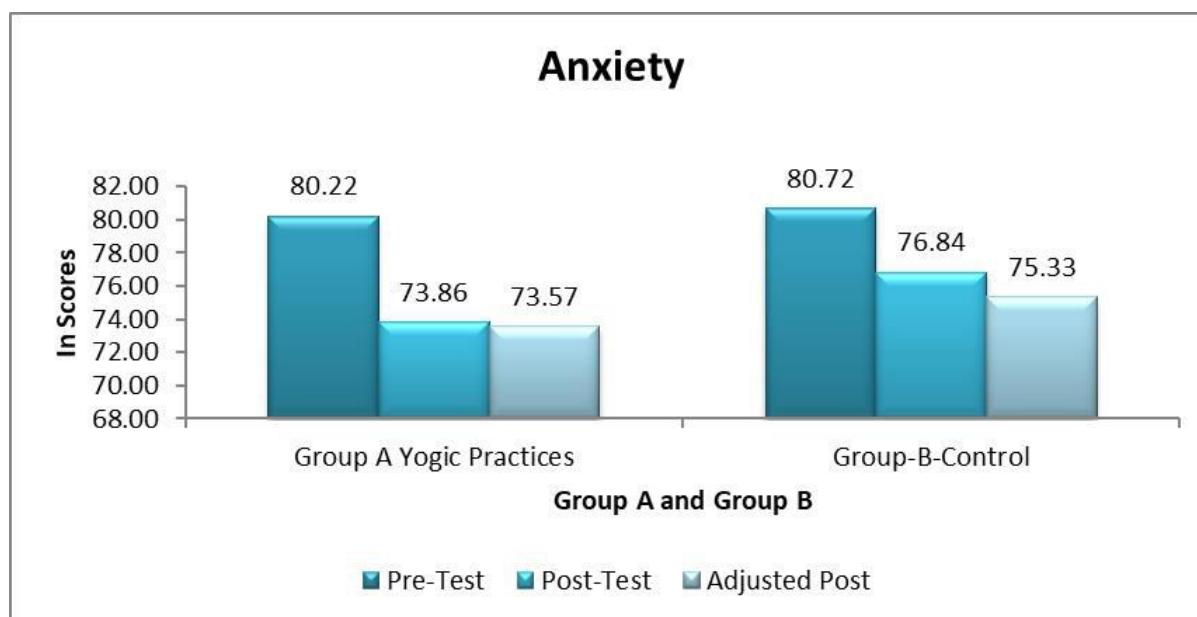
*Significant at 0.05 level of confidence. (TableF ratio at 0.05 level of confidence for 1 and 28 (df)=4.2; 1 and 27(df) = 4.21)

Anxiety in adult males with sinusitis compared to the Control group (Fig. 2). At a 0.05 level of confidence, yoga practises lowered Pulse Rate and Anxiety in Obese Middle-Aged Men.

Discussion

Each chronic rhinosinusitis therapy includes adverse effects and compliance concerns. Bhramari pranayama, a yoga breathing technique, is affordable and side-effect-free (Abishek *et al*, 2019). This research evaluated Bhramari pranayama's effectiveness in alleviating chronic sinusitis symptoms. 60 patients with chronic

sinusitis were randomly assigned into two groups; one got conventional therapy and the other learned Bhramari pranayama. Patients were told to do this breathing exercise twice a day and were tracked at 1, 4, and 12 weeks using the Sino-Nasal Outcome Test (SNOT-22 score). The mean SNOT-22 score in the Bhramari pranayama breathing exercise group improved from 39.13 9.10 to 24.79 8.31 ($P = 0.0002$) after 4 weeks and persisted until the 12th week of evaluation. They have concluded that Bhramari pranayama is more beneficial than conventional treatment alone for chronic rhinosinusitis.



*Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 28(df) = 4.2; 1 and 27(df)=4.21).

Fig. 2: Bar diagram showing the mean difference among yogic practices group and control group on anxiety

Psychosomatic disorders are aberrant expressions of biological, mental, and social health and sickness criteria, while Yogic techniques bind these natural interrelationships. Yoga, a mystic way of life that started 2,800 years ago in India and was codified by Patanjali in the fourth century, is energetic, distinctive, and effective in managing psychosomatic ailments (Kosugi *et al.*, 2016). Yoga denotes integration of individual self (jiva-atman) with Self-realization (parama-atman). Patanjali defined yoga as "limitation of awareness and path of blissful self-transcendence". Yoga therapy promotes self-regulation and somatopsychic functioning. Yoga's spiritual journey is examined, and its therapeutic usefulness in psychosomatic disorders is emphasised (Rudmik *et al.*, 2013). We evaluated new studies on yoga therapy and compare it to other psychosomatic treatments. Yogic techniques have been utilised to treat bronchial asthma, essential hypertension, mucous colitis, peptic ulcer, cervical spondylosis, chronic sinusitis,

intractable pain, personality disorder, anxiety, depression, gastritis, and rheumatism.

Conclusion

In adults, chronic sinusitis is an illness that is often recognised. Patients with chronic sinusitis generally have advanced stages of the disease and persistent changes to the sinus mucosa. It is essential to have a solid knowledge of the natural background of chronic sinusitis when formulating treatments that are intended to stop or slow the progression of the disease. Patients suffering from sinusitis who participated in either Group I or Group II of yogic practises had a reduction in their pulse rate and anxiety.

References

- Abishek K, Bakshi SS and Bhavanani AB. (2019) The efficacy of yogic breathing exercise bhamari pranayama in relieving symptoms of chronic rhinosinusitis. *Int J Yoga* 12(2):120-123.
- Eby GA. (2006) Strong humming for one hour daily to terminate chronic rhinosinusitis in four days: a case

report and hypothesis for action by stimulation of endogenous nasal nitric oxide production. *Med Hypotheses*. 66(4): 851-854.

Heatley DG, McConnell KE, Kille TL and Levenson GE. (2001) Nasal irrigation for the alleviation of sinonasal symptoms. *Otolaryngol Head Neck Surg*. 125(1): 44-48.

Kosugi EM, Moussalem GF, Simões JC, Souza Rde P, Chen VG, Saraceni Neto P and Mendes Neto JA. (2016) Topical therapy with high-volume budesonide nasal irrigations in difficult-to-treat chronic rhinosinusitis. *Braz J Otorhinolaryngol*. 82(2): 191-197.

Rudmik L, Hoy M, Schlosser RJ, Harvey RJ, Welch KC, Lund V and Smith TL. (2013) Topical therapies in the management of chronic rhinosinusitis: an evidence-based review with recommendations. *Int Forum Allergy Rhinol*. 3(4): 281-298.