

VOLUME 9 (SPECIAL ISSUE 1) 2023

ISSN 2454 – 3055

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

Efficacy of Yogic Practices Oon Low-Density Lipoprotein and Stress Among Migraine Sufferers

Ramalingeswara Rao J.^{1*} and Jayasree R.²

¹Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), No.12, Vembuliamman Koil Street, West K.K. Nagar, Chennai 78, Tamil Nadu, India

²Department of Pharmacology, Sri Venkateswara Medical College and RI, Chennai 67, Tamil Nadu, India

*Corresponding Author

Received: 20th December, 2022; **Accepted:** 25th January, 2023; **Published online:** 5th February, 2023

<https://doi.org/10.33745/ijzi.2023.v09ispl1.007>

Abstract: To facilitate the random group experimental study, 90 men between the ages of 35 and 45 suffering from migraine were invited. 40 were screened and then randomly selected as volunteers using a random group sampling design. Patients were split into two groups of twenty. For 12 weeks, the experimental group received yoga therapy, while the control group did nothing. Before and after training, the treatment and sample groups had a pre-test and a post-test, and their Low-Density Lipoprotein (LDL) and Stress levels were measured. To determine the significant differences among the groups, the Analysis of Variance (ANOVA) was used. The study revealed that Yoga reduced Low-Density Lipoprotein and Stress. With a 0.05 level of confidence, the hypothesis was therefore accepted. The study concluded that Yogic practises helped to reduce Cholesterol level and stress in migraine sufferers.

Keywords: Yogic practices, Migraine, Middle aged men, Low-Density lipoprotein, Stress

Citation: Ramalingeswara Rao J. and Jayasree R.: Efficacy of yogic practices oon low-density lipoprotein and stress among migraine sufferers. Intern. J. Zool. Invest. 9(Special Issue 1): 46-49, 2023.

<https://doi.org/10.33745/ijzi.2023.v09ispl1.007>



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.

Introdution

Migraines often affect most commonly the left or right side of the head, although they can also affect the area around the eye or the back of the head. The pain can range from mild to severe, with a continuous throbbing to a dagger-like sharpness. Nausea and muscular discomfort are prevalent, and many patients feel watery eyes, a runny nose, or nasal congestion. A migraine

headache can endure from 4 to 24 h. Migraines typically occur in the evening or at night and are frequently accompanied by warning signs such as mood fluctuations, hunger, and level of activity. Auras were visual distortions that some people experienced before to an assault.

The aim of this study was to evaluate the efficacy of yoga therapy on low-density

lipoprotein (LDL) and stress among men suffering from migraines. Among migraine patients, there should be notable variations in Low Density Lipoprotein and Stress between the treatment group and the control group.

The delimitations of this study is people under the age of 35 and over the age of 45 who have headaches other than migraines. The study mainly included yoga practice as an independent variable. The limitations of this study are –(i) Associated with cardiovascular and renal diseases and other chronic systemic diseases and risk factors. Conditions affecting consciousness, cognition, mood, sensory motor function, and other major neurological or neuropsychological functional impairments are excluded, and (ii) The factors would not be taken into account such as: medication intake, personal habits and addictions, environmental conditions, family history, disabilities, climatic conditions.

Materials and Methods

A total of 90 migraine patients between the ages of 35 and 45 were enrolled; 40 of them were assessed before being randomly chosen as study participants using a random group sampling technique. Two groups of 20 participants each were formed from the competitors. While the control group did nothing, the experimental group received yoga instruction for 12 weeks. Prior to and following training, the levels of Low-Density Lipoprotein (LDL) and Stress were measured in the experimental and control groups. The significant differences between groups were evaluated using the Analysis of Variance (ANOVA) method.

Results and Discussion

Low-density lipoprotein (LDL) and stress were shown to be associated with the variables studied. Analysis of Variance (ANOVA) was used to statistically analyse the variables collected from the two groups before and after the training session to see if there was a significant difference. The assessment was made at the 0.05 level of confidence.

Bond *et al.* (2013) explained that Obesity and migraines are related. In women of reproductive age, obesity is associated with a higher prevalence of migraines and makes migraine episodes more frequent. These findings are supported by several conceivable explanations as well as mounting data showing a reduction in migraine frequency after weight loss, both surgical and non-surgical. Women who are overweight or obese ($n=140$; $BMI=25.0-49.9$ kg/m^2) and who have migraines would be randomly assigned to either group-based behavioural weight loss if they meet the international migraine diagnostic criteria and use a smartphone-based headache diary to record 3 migraines and 4-20 migraine days during a baseline period of 4 weeks. Total intervention was 16 weeks and pre and post test assessed accordingly.

Nayar *et al.* (2022) findings showed that around 7% of the population suffers from migraine headaches, a severe and incapacitating disorder. Long-term treatment for a persistent headache problem puts the sufferer at risk for a variety of mental illnesses, ischemic cerebrovascular disease, and medication-induced headaches. Non-pharmacological approaches to easing headache-related stress and pain might enhance general quality of life and lessen the impact of the condition. There have been consistent reports notwithstanding the drawbacks and the need for increased scientific rigour. Few studies have reported yoga's benefits on stress, anxiety, depression, and an enhanced quality of life, as well as better pain management in chronic conditions, despite limits and the need for more rigorous scientific analysis.

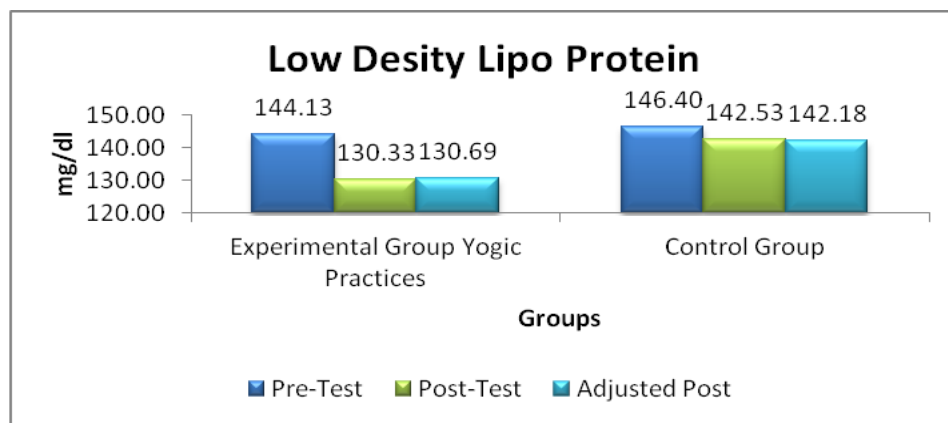
Effects of Yoga on Low-Density Lipoprotein (LDL):

The findings of the Analysis of Variance (ANOVA) on Low-Density Lipoprotein (LDL) for the Control Group and the Yogic Practices Group are displayed in Table 1. The F-ratio calculated from pretest data is 1.65 at a 0.05 level of confidence. Pre-test randomization was equal since there was no statistically significant difference between

Table 1: Analysis of Variance of the means of yogic practices group and control group on low-density lipoprotein (LDL)

Test	Yogic Practices Group	Control Group	Source of Variance	df	F Ratio
Pre test (Mean/SD)	144.13 ± 8.05	146.40 ± 10.01	between	1	1.65
			within	38	
Post test (Mean/SD)	130.33 ± 12.29	142.53 ± 11.79	between	1	7.18*
			within	38	
Mean gain	-13.80	-3.87	between	2	6.40**
			within	37	

*Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 38 (df) =4.2, 1 and 37(df) =4.21



*Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 38 (df) =4.2, 1 and 37(df) =4.21.

Fig. 1: Analysis of Variance of the means of yogic practices group and control group on low-density lipoprotein (LDL) (mg/dl).

groups with calculated F-scores of 7.18 and 6.40, respectively, above the required F-scores of 4.2 and 4.21. The means before, after, and adjusted after testing for the Yogic Practices group and the low density lipoprotein control group are shown in Figure 1.

Effects of Yoga on Stress:

Table 2 shows the results of the Analysis of Variance (ANOVA) on Stress of Yogic Practices Group and Control Group. The F-ratio of the pretest findings is 0.68 at a confidence level of 0.05. This revealed that there was no substantial change in pre-test stress among groups and that pre-test randomization was equal. The post-test

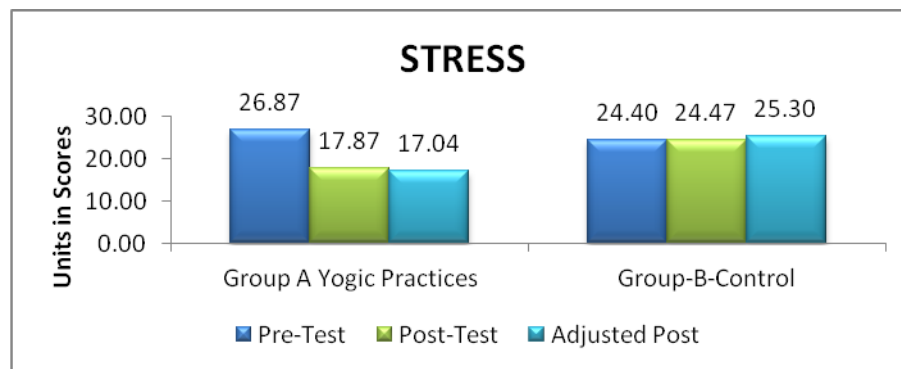
and adjusted post-test score analyses revealed a substantial difference between the groups, with F-scores of 7.70 and 18.04 being higher than the needed F-scores of 4, 2 or 4:21. Figure 2 depicts the pre-test, post-test, and adjusted post-test means of the Yogic Practices group and the stress control group, which accord with the findings of Nayar *et al.* (2022).

Conclusion

The therapeutic group low-density lipoprotein (LDL) values declined as a result of the yoga practices, and stress levels were much lower than in the control group among males suffering from migraine.

Table 2: Analysis of Variance of the means of yogic practices group and control group on stress (in Scores)

Test	Yogic Practices Group	Control Group	Source of Variance	df	F Ratio
Pre test (Mean/SD)	26.87 ± 6.03	17.87 ± 5.55	between	1	0.68
			within	38	
Post test (Mean/SD)	24.40 ± 5.60	24.47 ± 6.91	between	1	7.70*
			within	38	
Mean gain	-9.00	-0.07	between	2	18.04**
			within	37	
Test	Yogic Practices Group	Control Group	Source of Variance	df	F Ratio
Pre test (Mean/SD)	26.87 ± 6.03	17.87 ± 5.55	between	1	0.68
			within	38	
Post test (Mean/SD)	24.40 ± 5.60	24.47 ± 6.91	between	1	7.70*
			within	38	
Mean gain	-9.00	-0.07	between	2	18.04**
			within	37	



*Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 38 (df) =4.2, 1 and 37(df) =4.21.

Fig. 2: Analysis of Variance of the means of yogic practices group and control group on stress (Units in Scores).

References

Bond DS, O'Leary KC, Thomas JG, Lipton RB, Papandonatos GD, Roth J, Rathier L, Daniello R and Wing RR. (2013) Can weight loss improve migraine headaches in obese women? Rationale and design of the women's health and migraine (WHAM)

randomized controlled trial. Contemp Clin Trials 35(1): 133-144.

Nayar D, Mahapatro M and Nayar P. (2022) Role of Yoga as an adjunct in the management of migraine headache-current status and future indications. Int J Yoga 15(1): 12-18.