Acta Scientific Women's Health (ISSN: 2582-3205)

Volume 7 Issue 4 April 2025

Research Article

Effect of Holistic Approach of Yogic Lifestyle Modification on Visceral Fat and Other Psycho-Physiological Parameters in Perimenopausal and Menopausal Women in Mumbai, India – A Pilot Study

Ami Hiren Lakhani*

Dr Roygaga's Health Care Clinic, India

***Corresponding Author:** Ami Hiren Lakhani, Dr Roygaga's Health Care Clinic, India.

Received: March 03, 2025

Published: March 20, 2025

© All rights are reserved by **Ami Hiren Lakhani.**

Abstract

Objective: This experimental research study aimed to investigate the effects of Yogic Lifestyle Modifications of Mitahara and IAYT on Visceral Fat and other psycho-physiological parameters in a sample of perimenopausal and menopausal women.

Methods: The study employed a pre and post-test design with a 2-group study. Convenience sampling was done for participation in either of the experimental groups, which engaged in 4- week interventions of Mitahara and IAYT. Assessments of Visceral Fat, Stress levels, Anxiety levels, Pulse rate, Respiratory rate and Blood Pressure were done before and after the intervention.

Conclusion: The findings revealed significant improvements in both the groups in all the parameters except Blood Pressure where IAYT showed better results than Mitahara. These results suggest that Mitahara and IAYT can be effective practices for promoting overall physical and mental health and wellbeing in perimenopausal and menopausal women.

Keywords: Visceral Fat; Mitahara; Menopause; Perimenopause; Obesity; Stress; Anxiety IAYT

Introduction

Perimenopause and menopause are significant life transitions for women. The menopausal transition brings with it a wide range of physiological and psychological changes, many of which may negatively impact a woman's quality of life. Common symptoms include irregular menstrual cycles, hot flashes, sleep disturbances, stress, anxiety, mood swings, depression and weight gain, particularly the central accumulation of visceral fat (Lovejoy, 2003) [3].

Mitahara, an ancient yogic diet concept as mentioned in the Hathayoga Pradipika (Svatmarama, n.d.) [5], emphasizes "Mita" (moderation) and "Ahara" (food), advocating mindful eating practices that promote both physical and mental well-being. Mitahara emphasizes on the quality and timing of meals, encouraging moderation in both quantity and frequency. This is in line with modern recommendations for weight management, which advocate for nutrient-dense foods and avoiding overconsumption. Yoga, an ancient discipline with roots in Indian philosophy, has gained global recognition for its physical, mental, and spiritual benefits. The Integrated Approach of Yoga Therapy (IAYT) is a holistic therapeutic model that combines multiple aspects of yoga—including asanas (postures), pranayama (breathing exercises), relaxation techniques, meditation, and ethical disciplines (yamas and niyamas)—to address various health conditions (Bhunia., *et al*. 2024) [1]. In contrast to conventional yoga, IAYT tailors these practices specifically to the individual's needs, targeting both the mind and body in an integrated manner.

While numerous studies have explored the effects of diet and exercise on different populations (Van Gemert., *et al*. 2019) [8], and weight loss and abdominal fat reduction (Tapadar and Tapadar, 2019) [6], this is a pilot study using the wisdom of ancient and traditional interventions of Mitahara and IAYT.

The present study aimed to examine the effects of 4-week interventions of Mitahara and IAYT on the visceral fat and other psycho-physiological parameters in women going through the menopausal transition. The research questions addressed in this study are as follows:

- Is Mitahara effective in reducing the Visceral Fat and improvising on the other psycho- physiological parameters during the peri-menopausal and menopausal phase in a woman's life?
- Is IAYT (Integrated Approach of Yoga Therapy) effective in re-

ducing the Visceral Fat and improvising on the other psycho-physiological parameters during the peri-menopausal and menopausal phase in a woman's life?

Method

Participants

101 women in the age group of 40 to 55 going through the menopausal transition registered for participation in the study. After screening, 12 participants were found to be not eligible as per the exclusion criteria. The sample thus comprised of 89 women for whom convenience sampling was done to participate in either of the groups, Mitahara and IAYT.

Procedure

All participants completed pre-test assessments. 50 participants joined for the Mitahara group. They were prescribed customised diet plans based on their detailed medical history and diet recall in lines with the yogic diet and modern science guidelines. 39 participants joined for the IAYT group. They attended 1-hour progressive online yoga sessions of moderate intensity 6 days per week totalling to 24 sessions. The yoga sessions included a combination of loosening practices, kriyas, surya namaskar, asanas, pranayama, and relaxation techniques with Om chanting, MSRT, Yoga Nidra. There were 17 drop-outs in the Mitahara group and 14 from the IAYT group. Remaining participants (n = 58) completed the post-test measures assessing all the variables as mentioned above.

Measures

Visceral Fat was assessed using the Bio-electrical Impedance Analysis (Omron Body Composition Analyzer) which is an easy to operate, portable, non-invasive machine by Omron Healthcare (Omron Healthcare, n.d.) [4]. The normal cut-off value being 9. So inclusion criteria for the study was women with visceral fat 10 and above.

Stress was assessed using the Perceived stress scale developed by Cohen., *et al*. (1983) [2] in order to measure the degree to which situations in one's life are appraised as stressful. It is one of the most widely used tools for measuring nonspecific perceived stress. Higher scores on The PSS indicate higher levels of perceived stress.

Anxiety was measured using the State/Trait Anxiety Inventory (Spielberger., *et al*. 1983) [7]. It is the definitive instrument for measuring anxiety in adults. The STAI clearly differentiates between the temporary condition of "state anxiety" and the more general and long-standing quality of "trait anxiety".

Pulse Rate was taken manually on the radial artery by using a timer on a digital clock for 1 minute.

Respiratory Rate was found out by counting the chest movements with every breath using a timer on a digital clock for 1 minute.

Blood Pressure was measured using a Sphygmomanometer for accuracy.

Data analysis

Paired Sample t-tests and Independent sample t-tests were conducted to analyse the pre-test and post-test scores within group and compare the significance of the interventions between groups. Paired samples t-tests were conducted to examine the changes in physical health, psychological well-being, and stress levels within each group.

Results

Both the Mitahara and Yoga groups demonstrated significant reductions in visceral fat, with the Mitahara group showing a 2.26% decrease ($p = 1.07E-05$) and the Yoga group a slightly larger 4.27% reduction ($p = 4.72E-05$). In terms of stress, as measured by the Perceived Stress Scale, both groups also exhibited notable reductions. The Mitahara group saw a 22.31% decrease in perceived stress levels ($p = 9.25E-05$), while the Yoga group achieved a slightly higher reduction of 24.45% ($p = 0.0022$). When examining anxiety levels, as measured by the State Trait Anxiety Inventory, both groups experienced significant reductions. The Mitahara group had a 15.36% decrease in anxiety ($p = 0.0073$), while the Yoga group showed a more pronounced reduction of 22.31% ($p = 2.56E-05$). The data on pulse rate also show significant decreases in both groups. The Mitahara group reduced their pulse rate by 4.99% ($p = 0.004$), and the Yoga group by 4.44% ($p = 0.033$). A similar pattern is observed in respiratory rate, with both groups showing significant reductions. The Mitahara group improved by 4.6% ($p = 0.0011$), while the Yoga group saw a 5.14% improvement ($p = 0.0225$). On the other hand, systolic blood pressure showed minimal change, with neither group displaying significant reductions. The Yoga group, however, was closer to statistical significance ($p = 0.0669$) than the Mitahara group. For diastolic blood pressure, no significant changes were observed in either group, indicating that these interventions had little effect on this particular measure.

Comparing the two groups on a between-group basis, the pre-intervention data show no significant differences between the groups across most variables. However, after the interventions, significant differences were found in anxiety levels and systolic blood pressure, with the Yoga group showing more substantial improvements. The post-intervention comparison of anxiety levels showed that the Yoga group achieved a greater reduction in anxiety ($p = 0.0011$), and similarly, systolic blood pressure improved more in the Yoga group ($p = 0.0364$).

Discussion

The results of a 28-day research study indicated that adopting Mitahara and practicing IAYT improved the overall health status of the participants.

Visceral Fat, which poses a serious health risk in perimenopausal and menopausal women (increasing the chances for developing Type 2 Diabetes Mellitus, Hypertension, Atherosclerosis, Cardiovascular diseases, Brain Stroke, Osteoporosis due to increased bone mineral absorption and many more) was significantly reduced. Psychological parameters showed a marked improvement. Stress and anxiety reduced since better mechanisms to cope with the circumstances opened up. Physical body got good nutrition through well balanced meals of Mitahara and better circulation, reduced lethargy through IAYT. Mind got enough rest through the disciplined lifestyle. Pulse rate and respiratory rate also showed good improvement thus indicating that the participants overall mental and physical health status improved. Although all the variables studied showed a significant improvement, blood pressure did not show a significant improvement, which may be due to the study being conducted for a short duration. The span of time studied wasn't enough to show a statistical difference. No adverse effect of both the interventions was recorded which shows that both the holistic approaches are safe, non-invasive, non-pharmacological and practically conducive to adopt.

Comparison with a study that comes close to the current study is by Van Gemert., *et al*. (2019) [8]. Weight loss and abdominal fat were the variables studied in this research along with the SHAPE (i.e. Sex Hormones and Physical Exercise) under three groups diet, diet and exercise and control. The diet was calorie restricted and exercise with diet group had an addon 4 hrs per week of intensive exercise. The study lasted for 16 weeks where the results were comparable for weight loss in both the groups, however, abdominal fat didn't show a significant result, (although MRI was used as an assessment tool for precision) probably because the diet was calorie restricted and not qualitatively nutrient rich. That may have led to suppression of cravings leading to stress and raised cortisol levels. As cortisol is known to stimulate the sympathetic nervous system, it may have resulted in this response. Advantage to our current study is that the Mitahara allowed for all food groups, but with mindful consumption of meals. Women were happy to follow and 100% adherence to the Mitahara meal plan was reported. Further, IAYT gave enough relaxation to stimulate the parasympathetic nervous response and that in turn helped stabilize and balance the entire system.

Another cross-sectional study considering the visceral fat was done by Jadhav., *et al*. (2022) in South India to predict the occurrence of pre-diabetes in 300 participants. This study used the same Bio-electrical Impedance Analysis (BIA) as our current study along with blood samples for fasting and post lunch sugar. They concluded that high levels of Visceral Fat are a strong predictor of Diabetes. However, dietary patterns of the participants were not considered.

Every girl and woman, in the society at large, at a point in time undergoes through the transition of perimenopause and menopause. Some may experience severe pysho-physiological symptoms and others may move through with some ease. However, through previous studies and also the current study, it is noted that visceral fat definitely increases as the reproductive hormones begin to decline.

This study holds high social relevance, although it was for a very short duration and with a small population. If conducted on a large population and for at least a year, easily tangible results may be procured. Mitahara improves relation with food through the mindfulness effect and IAYT works through all the aspects of the human body, the outermost Annamaya kosha and the innermost Anandmaya kosha. Balance and harmony, being achieved, both the approaches can be combined to achieve a better quality of life.

Bibliography

1. Bhunia S., *et al*. "Integrated Approach of Yoga Therapy (IAYT) has an ability to treat cancer patients through electrophysiological mechanisms: Advantages and disadvantages". *International Journal of Novel Research and Development* 9.2 (2024).

2. Cohen S., *et al*. "PERCEIVED STRESS SCALE". In S. Spacapan and S. Oskamp (Eds.), Journal of Health and Social Behavior (1983).

3. Lovejoy JC. "The menopause and obesity". *Primary Care Clinics in Office Practice* 30.2 (2003): 317-325.

4. Omron Healthcare. Medical devices and healthcare Solutions | OMRON Healthcare India.

5. Svatmarama Y. "HATHA YOGA PRADIPIKA (Pancham Sinh, Trans.)".

6. Tapadar S and Tapadar S. "A Study on the effect of Exercise on Menopausal women". *IOSR Journal of Dental and Medical Sciences* 18.6 (2019): 37-42.

7. The State-Trait Anxiety Inventory (STAI) (2011).

8. Van Gemert WA., *et al*. "Effect of diet with or without exercise on abdominal fat in postmenopausal women – a randomised trial". *BMC Public Health* 19.1 (2019).