

# Impact of yoga on psychological status of postmenopausal women

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## ABSTRACT

**Background:** Researchers have studied the effect of yoga on psychological and physiological parameters. However, the insight into its impact on psychological status of postmenopausal women is not much studied. **Objective:** This study is done to evaluate the impact of yoga in anxiety, stress, and depression of postmenopausal women. **Materials and Methods:** To collect the data, depression anxiety stress scale-21 questionnaire was used for this study. Sixty postmenopausal women in the age group of 45–55 years were trained with yoga for a period of 12 weeks (6 times/week; 30–40 min) by a yoga trainer. The data were collected before and after yoga intervention. **Results:** Mean anxiety score before yoga was 5.95. This decreased to 4.36 after yoga intervention. Mean stress score before yoga was 9.92 which decreased to 7.38 after yoga intervention. Mean depression score before yoga was 7.98 which decreased to 6.32 after yoga intervention. There is a significant decrease in level of anxiety, stress, and depression of postmenopausal women after the intervention of yoga where  $P < 0.001$ . **Conclusions:** The results suggest significant differences among the scores of the factors for anxiety, stress, and depression level with yoga practice.

**KEY WORDS:** Yoga; Anxiety; Stress; Depression; Postmenopausal


## INTRODUCTION

Yoga is a way of lifestyle which can improve the body, mind, and day-to-day life of an individual. Yoga is used as the therapeutic tool to gain positive health and to cure diseases. Yoga is an effective method of managing or reducing stress<sup>[1]</sup> and there are several studies, which have demonstrated the efficacy of yoga on anxiety and stress-related disorders.<sup>[2,3]</sup> The most commonly performed yoga practices are asanas and pranayama. The exact mechanism of how yoga helps in various states of health is still unknown. The researchers assume that yoga brings about normalization of the pathological state by control of counterregulatory hormones

or by increased receptor sites. There is also a suggestion that yogic practices create a hypothermic state and an alteration in the sympatho-parasympathetic axis.<sup>[4]</sup> Menopausal women find it difficult to overcome the symptom of mood changes, bloating, headaches, hot flushes, night sweats, tiredness, insomnia, weight gain, depression, irritability, forgetfulness, lack of concentration, and sexual problems to overcome all these symptoms of stress, anxiety, and depression.<sup>[5]</sup> Health workers are searching for different ways to manage menopausal symptoms and minimize the discomfort and inconvenience caused during this period. Yoga has become convincing and fairly effective in managing menopausal symptoms. There are many studies showing its effects on anxiety, stress, and depression.<sup>[6,7]</sup>

## MATERIALS AND METHODS

To perform this study, 60 postmenopausal women in the age group of 45–55 years who have freshly joined a yoga club in Fairland, Salem, were selected. This was an interventional

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study with ethical approval obtained from the institutional ethics committee of Vinayaka Mission's Kirupananda Variyar Medical College, Salem, with Ref. number VMKVMC&H/IEC/19/34. Educated, subjects with mild depression, non-athletic who have not practiced yoga for the past 1 year with postmenopausal symptoms were included in the study. Subjects with H/O of congenital heart diseases and surgical menopause and subjects with moderate and severe depression taking treatment for psychological disorders were excluded from the study.

To collect the data, the questionnaire of DASS-21 (Depression anxiety stress scale-21) was used. The subjects were trained with selected eight yoga posture (Sukhasana, Matsyasana, Ardha Chandrasana, Bitilasana, Halasana, Vajrasana, Janusirsasana, and Savasana) by a yoga trainer for 12 weeks (6 times/week; 30 min). Before the intervention, questionnaires were done by subjects. The intervention lasted 12 weeks. At the end of the 12<sup>th</sup> week, the questionnaire of DASS-21 was again done by subjects. The obtained data were analyzed using the SPSS version 20 (IBM, Armonk, NY, USA). Paired sample *t*-test was used for comparing the results before and after the intervention. The probability level for significance was set at  $P < 0.05$ .

## RESULTS

In this study, we examined effects of yoga on anxiety, stress, and depression in postmenopausal women. Symptoms of anxiety, stress, and depression were assessed and compared before and after yoga intervention. Mean anxiety score before yoga was 5.95. This decreased to 4.36 after yoga intervention. Mean stress score before yoga was 9.92 which decreased to 7.38 after yoga intervention. Mean depression score before yoga was 7.98 which decreased to 6.32 after yoga intervention. There is a significant decrease in the level of anxiety, stress, and depression of postmenopausal women after the intervention of yoga where  $P < 0.001$  [Table 1].

## DISCUSSION

The present study clearly gives the therapeutic utility of yoga in significantly reducing the postmenopausal symptom in all domains and thereby improving the overall quality of life. Menopausal anxiety can be a very difficult symptom to manage, but yoga therapy showed significant improvement.

**Table 1:** Mean and standard deviation of anxiety, stress, and depression before and after intervention

Variables	Mean±Standard deviation		
	Anxiety	Stress	Depression
Before intervention	5.95±6.57	9.92±8.18	7.98±8.53
After intervention	4.36±4.83	7.38±7.32	6.32±7.33
<i>P</i> -value	0.001	0.001	0.004

This simple eight asanas (Sukhasana, Matsyasana, Ardha Chandrasana, Bitilasana, Halasana, Vajrasana, Janusirsasana, and Savasana) practice has given a tremendous physical and psychological relief to the subjects. These changes may be due to several mechanisms such as altered neurotransmitters, changed brain blood flow and brain metabolism, and sympathetic activation.<sup>[8-10]</sup> The improvement in stress and depression is brought about by yoga intervention seems to be due to its effect in modulating autonomous nervous system with special attention to decreased sympathetic nervous system activation which, in turn, seems to affect the thermoregulation resulting in vasodilatation and sweating.<sup>[11-13]</sup>

The participants also reported the well-being felt from other symptoms such as mood changes, bloating, headache, hot flushes, night sweats, tiredness, insomnia, weight gain, depression, irritability, forgetfulness, lack of concentration, and sexual problem. This study has been an event to show that yoga could be an effective treatment of anxiety, stress, and depression in postmenopausal women and also it has proved that the potential importance of its therapeutic role was we can make use of it instead of medication.

## CONCLUSIONS

Yoga is a relatively simple, economical, and non-invasive technique with multiple lifestyle benefits. The results of the present study revealed that yoga therapy can be widely used as an effective and efficient method to improve the symptoms of anxiety, stress, and depression in postmenopausal women. It would be beneficial to all categories of people if yoga is practiced in all government and private health centers with a trainer.

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