

Managing Anxiety among Postmenopausal Women through Yoga

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ABSTRACT

Anxiety is a state of mind which comes as a normal reaction to stress and is very common in postmenopausal women. The hormonal changes that occur during the menopause make them prone to psychological changes such as mood swings, anxiety, insomnia and other mental illnesses. The practice of asanas and pranayamas in combination with meditation appears to modulate stress response system of the body. This in turn decreases physiological arousal and thus reduces the level of anxiety on HAM-A rating scale. **Objective:** To study the role of yogic intervention on postmenopause induced anxiety among participants. **Settings and Design:** A purposive sample of 30 females of postmenopausal age between 45-55 years was selected and randomly divided into experimental and control group with each of 15 subjects. Research design selected for the present study is pre-test post-test control group design and the duration of the study is 15 days. Study group was asked to follow specific yoga intervention designed after compiling relevant scientific evidences. The intervention was practiced by the study group from 7A.M. to 7:45 A.M. daily for 15 days while the control group was not assigned any such treatment. All subjects were assessed using the Hamilton Anxiety Rating Scale (HAM-A) of Dr. M.Hamilton prior to commencement of the intervention and readministered the same test after completion of 15days training. **Statistical Analysis Used:** Paired sample t-test was used to compare the changes obtained by administering the test before and after the intervention with significance criterion on 0.01 level. **Result:** An analysis of result shows that the selected yogic intervention has proved its role to significantly reduce the level of anxiety among postmenopausal women.

Keywords: Anxiety, Postmenopause, Hormone, Insomnia, Asana, Pranayama

The prevalence of anxiety among postmenopausal women is very common and has been implicated as contributor to insomnia, diminished quality of life and other medical disorders. Post-menopause is one of the natural parts of aging and acquired by women after menopause where the menstrual cycle becomes stopped for 12 months. Although menopause is the permanent cessation of menstruation resulting in the loss of ovarian follicle development¹ and leads to postmenopausal syndrome including mood swings, insomnia, anxiety and mental confusions but many scientific researches proved the role of yoga in both prevention of postmenopausal complications like anxiety and promotion of health.

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The development of yoga can be traced back to over 3000 years ago and is the holistic system for physical, mental and spiritual well-being. Among the yogic tools used therapeutically the most common utilized today are Asanas (Physical postures), Pranayamas (Breathing exercises), Shatkarmas (Internal cleansing), Dhyan (Meditation) with Mudras (Hand postures) and Bandhas (Locks). Research suggests that yoga is a way of addressing mental health issues². Asanas release mental tensions by dealing with them on the physical level, acting somato-physically, through the body to the mind³. Various asanas such as Shavasana (Corpse pose) relaxes the whole psycho-physiological system and when the body is completely relaxed, awareness of the mind increases³. In order to regulate anxiety, practicing Shashankasana with ujjayi pranayama helps to eliminate anger and is very cooling for the brain³. Mahamrityunjaya mantra which is chanted as a therapeutic tool in most yogic disciplines is a verse from Rig-Veda and is considered to be the most powerful mantra which releases a string of vibrations and ensures the restoration of good health. Pranayama as an intervention in mental disorders is not a recent concept. The reason that various pranayamas combat anxiety is because breathing is a key ingredient for calming the mind by balancing the two hemispheres of the brain. Anxious breathing doesn't fully engage the diaphragm and occurs disproportionately in the upper chest while diaphragmatic breathing creates more space in the chest and lowering the pressure in the lungs⁴. Yogic breathing such as Bhramari pranayama may be practiced at any time to relieve mental tension as the vibration of the humming sound creates a soothing effect on the mind and nervous system, relieving cerebral tension, stress, anxiety and insomnia⁵. The practice of ujjayi soothes the nervous system, calms the mind and increases psychic sensitivity by relieving insomnia and high blood pressure⁵. Anulom-Vilom pranayama increases vitality and lowers levels of stress and anxiety by harmonizing the pranas³. According to Maharishi Patanjali, the repeated continuation or uninterrupted stream of that one point of focus is called absorption in meditation and the practice brings the mind's attention to the present, help individuals sleep better, relieve stress and anxiety by relaxing the body. While there are many forms of meditation but the practice of transcendental meditation (TM) is reported to reduce anxiety⁶ and level of mental distress in subjects⁷. Hence it can be concluded that breathing exercises in combination with asanas and meditation are at the heart of yoga's ability to improve overall symptoms of mental illnesses.

MATERIAL AND METHODS

The research design selected for the present study is pre- test post-test control group design. The study was conducted in sub urban area of Pithoragarh city. Purposive sampling method was used to select the samples for data collection. In this study 30 subjects were selected purposefully by using Hamilton Anxiety Rating Scale (HAM-A) and assigned to experimental and control group randomly with 15 subjects each. Subjects with age group of 45-55 years with signs and symptoms of postmenopausal anxiety, not taking any medications, and not doing any other type of exercise were included in the present study. The participants with history of major surgery in the recent past, chronic diseases, cardiac illness and below 45 years of age were excluded from the study. Yoga was taken as independent variable while anxiety (Postmenopause induced) was taken as dependent variable. The treatment was given for 15 days. The duration of intervention was 45 minutes. A written informed consent was taken from all the subjects participated in the present study.

Research Design: Pretest-posttest control group design

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Yoga Intervention- 45 minutes

Tool for data collection: Hamilton Anxiety Rating Scale (HAM-A)⁸

The Hamilton Anxiety scale rates level of anxiety based on psychological questionnaire. It was developed in 1959 by Dr. M. Hamilton. The HAM-A probes 14 parameters on a 5-point scale, ranging from 0= not present to 4= very severe. The score of ≤ 17 indicate mild anxiety, 18-24 mild to moderate anxiety, 25-30 moderate to severe anxiety and scores above 30 indicate severe anxiety.

Intervention Table: Yogic intervention for Anxiety

S.No.	Yogic Intervention	Name	Time
1.	Prayer	Maha Mrityunjaya mantra	05 minutes
2.	Loosening exercises	Neck rotation, Shoulder movement, Waist and knee movement, Ankle rotation, Forward, Backward and Side bending	10 minutes
3.	Asanas	Shashankasana	03 minutes
		Shavasana	06 minutes
4.	Pranayama	Nadisodhan	05 minutes
		Bhramari	03 minutes
		Ujjayi	03 minutes
5.	Meditation	Transcendental meditation	10 minutes
6.	Total	45 minutes	

RESULTS

Comparison of Hamilton Anxiety Rating Scale scores of study group and control group after intervention

	Study Group (N=15)	Control Group (N=15)
Sample Size	15	15
Mean	18.66	24.73
Standard Deviation	2.44	0.98
Standard error of Mean (SE _M)	0.63	0.25
T value	9.52	0.24
Degree of freedom (DF)	14	14

Mean of HAM-A score of pre test of experimental group and post test of experimental group was 24.66 and 18.66 respectively. Whereas mean of HAM-A score of pre test of control group and post test of control group was 24.8 and 24.73 respectively. The t value in case of experimental group was 9.52 and for control group it was 0.24. Since Cal. T value = (9.52) > tab. Value 0.01 (14) = 2.98. Null hypothesis (H₀) is rejected at 0.01 level of significance. As per the study the above remark can be given 99% confidence.

DISCUSSION

The present study was to investigate the clinical effects of yoga on anxiety. In the present study the HAM-A score was significantly reduced after the intervention. Results of the study clearly indicate that anxiety level among postmenopausal women was significantly reduced (24.66-18.66, observed t value = 9.52) in the post yoga experimental group. The findings are supported with the studies conducted by Streeter CC et al (2010)⁹, Gupta et al (2006)¹⁰, Jadhav et al (2009)¹¹ and Field T et al (2013)¹².

Pranayama is used with other yogic exercises in combination to provide psychological benefits. Reduced level of anxiety scores has been observed even after a single session of

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alternate nostril breathing¹³ as well as after 3 months¹⁴. One study showed sympathetic arousal in the right uninostril breathing group whereas indices representing parasympathetic activity were increased in left uninostril breathing group following 6 week nostril breathing¹⁵. The imbalance between sympathetic and parasympathetic functions creates autonomic imbalance which in turn reported to induce stress related mental disorders¹⁶. The vagus nerve which is called the nerve of emotion relays messages between the brain and the respiratory, digestive and nervous systems of the body. Low vagal tone indicates mental illness characterized by stress, anxiety and depression and the optimal vagal tone is achieved by uninostril breathing practice as evidenced by various researches to promote psychological wellbeing. In addition to alternate nostril breathing the bhamari pranayama induces parasympathetic predominance¹⁷ hence reduction in heart rate, irritability, depression and anxiety associated with tinnitus was recorded¹⁸. Subjects are believed to go meditative state¹⁹ after practicing bhamari pranayama which harmonizes the mind and directing the awareness inwards³. Ujjayi breathing with shashankasana is recorded very beneficial to calm down anxiety and other mental illnesses. Ujjayi breathing facilitates greater control over airflow and therefore regulates breath rate²⁰. Anxious person tends to breathe faster and hence ujjayi may administer for those to slow down respiration rate which in turn addresses anxiety. The word shashank means moon in Sanskrit. Hence shashankasana has a similar cooling and calming effect on the brain³. Furthermore, the practice of Shavasana brings the body, mind and spirit into balance²¹ and this pose is recommended for total relaxation of both body and mind helping psychosomatic relaxation²². Transcendental meditation which is a mantra-based technique for avoiding distracting thoughts resulting in calm and luminous mind with inner peace and creates manifold benefits in combination with asanas and pranayama. A study conducted by Stanford University found the T.M. technique to be twice as effective as other techniques for anxiety²³. The findings of the study suggest that yoga may help to improve mental health by reducing anxiety among test subjects. Hence the yogic system must be advocated as a complimentary treatment for a number of mental conditions such as stress, anxiety, insomnia and other mental disorders.

CONCLUSION

On the basis of obtained result, it can be concluded that yoga has an effect on Anxiety. Hence specific yoga sequence can be used as a possible treatment for the management of postmenopause related anxiety disorder.

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Conflict of Interest

The author(s) declared no conflict of interest.

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