

## EFFECT OF YOGA THERAPY ON VASOMOTOR SYMPTOMS AMONG MENOPAUSAL WOMEN RESIDING IN SELECTED VILLAGES AT NAMAKKAL DISTRICT

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### ABSTRACT

Menopause is one of the women's most important life stages. Objectives: To assess the effectiveness of Yoga therapy on Vasomotor symptoms among menopausal women. Materials and Methods: A True experimental research where pre and post test with control group design. Samples: Menopausal women with menopausal symptoms at Namakkal (Dt). Multistage sampling technique was used to select the sample. MRS (Menopause Rating Scale) was used to assess the level of menopausal symptoms. Results: The post test mean score for yoga was 57.5% in experimental group whereas in control group 31.25% showing the difference of 26%. Paired 't' test score for vasomotor symptoms was 8.435 in experimental group showing the significant effectiveness of yoga therapy. Unpaired 't' test score was 4.768 for yoga therapy. Conclusion: There was no significant association between post test vasomotor symptoms scores in both groups. It concluded that Yoga therapy was effective in reducing the vasomotor symptoms among menopausal women.

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### INTRODUCTION

It is a natural process that happens to every women as she grows older and not a medical problem, disease or illness, even though it may appear so. Some women may have a hard time because of changes in hormone levels during menopause. The average age of menopause is 52 but it can happen anytime between the ages of 42 and 56, (Bimal, 2008). Sudhaa Sharma, Vishal R. Tandon, (2007) an observational, cross sectional study carried out in urban women (n= 117) from Jammu to evaluate menopausal symptoms in women above 40 years belongs to middle socio economic strata. The mean age of menopause was 47.35. Most frequent menopausal symptoms were fatigue and lack of energy (72.93%), followed by headache (55.9%); hot flushes (53.86%), weight gain (43.13%).

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Vasomotor symptoms are being more prevalent with increasing age. A pilot study was conducted to assess the feasibility and efficacy of Hatha yoga treatment for menopausal symptoms. A prospective within group pilot study was conducted among 12 post menopausal women experiencing 4 menopausal hot flushes per day were assessed after 10 weeks of yoga programme and results revealed that the yoga therapy was very feasible for midlife women with a mean of 7.45 (Cathryn Booth, Rebacca, 2007). 120 Indian women were randomised to yoga and a control condition, there was a significant reduction occurred for vasomotor symptoms with greater reductions occurring in the yoga group (Chattha, Raghuram, Venkatram and Hongasandra, 2008). Subjects reported that there was a decrease in frequency and severity of hot flushes and showed a positive response to the program. Being it is a common problem, researcher showed much interest in treating the menopausal symptoms. Even in literature yoga was to be safe and effective to treat the menopausal symptoms. So, Researcher would like to undertake this project.

Table 1. Section A: Frequency and percentage distribution of samples according to their demographic variables

Demographic Variables	Experimental group (N <sub>1</sub> =20)		Control group (N <sub>2</sub> =20)	
	Frequency	Percentage	Frequency	Percentage
<b>Age in Years</b>				
a. 45 – 48	6	30	5	25
b. 49 – 52	5	25	7	35
c. 53 – 56	5	25	4	20
d. 57 – 60	4	20	4	20
<b>Socioeconomic status</b>				
a. Rs.1000 – Rs. 2000	2	10	5	25
b. Rs.2001 – Rs. 3000	2	10	4	20
c. Rs.3001 – Rs. 4000	7	35	4	20
d. Rs.4001 and >above	9	45	6	30
<b>Education</b>				
a. No formal education	5	25	5	25
b. Primary education	7	35	8	40
c. Secondary education	7	35	6	30
d. Higher secondary education	1	5	1	5
e. Graduate	-	-	-	-
<b>Occupation</b>				
a. Housewife	6	30	3	15
b. Sedentary workers	6	30	6	30
c. Moderate workers	5	25	7	35
d. Heavy workers	3	15	4	20
<b>Age at menarche</b>				
a. Less than 12 Years	1	5	3	15
b. 13 Years	8	40	10	50
c. 14 Years	8	40	5	25
d. Above 14 years	3	15	2	10
<b>Religion</b>				
a. Hindu	14	70	12	60
b. Muslim	4	20	5	25
c. Christians	2	10	3	15
d. Others	-	-	-	-
<b>Dietary pattern</b>				
a. Vegetarian	5	25	6	30
b. Mixed diets	15	75	14	70
<b>Types of habits</b>				
a. Tobacco chewing	4	20	5	25
b. Betal nut chewing	8	40	6	30
c. Smoking	-	-	-	-
d. None	8	40	9	45
<b>Period of cessation of menstruation</b>				
a. < 5 years	9	45	9	45
b. 6 – 10 years	7	35	8	40
c. 11 – 15 years	4	20	3	15
<b>Type of family</b>				
a. Joint family	10	50	11	55
b. Nuclear family	10	50	9	45
c. Extended family	-	-	-	-
<b>Source of information</b>				
a. Neighbours	8	40	9	45
b. Relations	9	45	7	35
c. Mass media	3	15	3	15
d. Health professionals	-	-	1	5
<b>Use of home remedies for symptoms</b>				
a. Yes	1	5	1	5
b. No	19	95	19	95

## Objectives

- To assess the level of vasomotor symptoms among experimental and control group of menopausal women before and after Yoga therapy.
- To assess the effectiveness of Yoga therapy on level of vasomotor symptoms among experimental and control group of menopausal women.
- To find out the association between post test score on level of vasomotor symptoms among menopausal women in experimental and control group with their demographic variables.

## MATERIALS AND METHODS

**Research Approach and Design:** It is an Evaluative research approach with True experimental research where pre and post

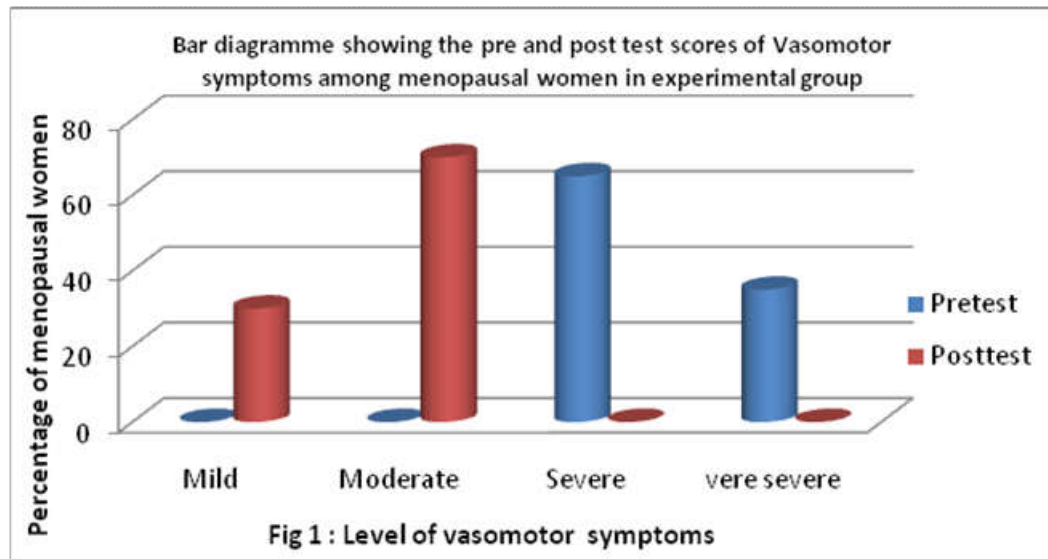
test with control group design. The setting for study was Anna Nagar and Goundanur, Namakkal (Dt). The samples for the present study were menopausal women residing in Anna Nagar and Goundanur, Namakkal (Dt), who fulfill the sampling criteria. The sample size was 40 menopausal women, out of which 20 were experimental group and 20 were control group. The “Multistage sampling technique” was used to select the sample.

### The inclusion criteria for the study were

- Age group between 45- 60 years
- Who were in normal physiological process
- With menopausal symptoms.
- Who scored more than 22 in MRS.
- Who gave consent to participate in this study
- Who were able to understand and speak Tamil

**Table 2. Section B: Frequency and percentage distribution of post test scores of vasomotor symptoms among menopausal women in experimental group and control group after yoga therapy**

Level of Vasomotor symptoms	Experimental group (N <sub>1</sub> = 20)				Control group (N <sub>2</sub> = 20)			
	Pre test score		Post test score		Pre test score		Post test score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
No symptoms	-	-	-	-	-	-	-	-
Mild	-	-	6	30	-	-	-	-
Moderate	-	-	14	70	-	-	-	-
Severe	13	65	-	-	7	35	8	40
Very sever	7	35	-	-	13	65	12	60



Along with Demographic variables, MRS (Menopause Rating Scale) was used to identify the level of vasomotor symptoms among menopausal women.

- Pre test was conducted by using MRS (Menopause Rating Scale) to assess the level of vasomotor symptoms
- The yoga therapy (Duration of 40 minutes once in a day for 1 week) was demonstrated to experimental group
- Posttest was conducted with same pretest tool after 1 week.

#### Validity and Reliability

- The content validity of the demographic variables and MRS (Menopause Rating Scale) was validated in consultation with guide and field of experts. The tool was modified according to the suggestions and recommendations of the experts
- Split Half method (Cronbach's Alpha) was used to find out the reliability of the MRS (Menopause Rating Scale). ( $r^1 = 0.78$ )
- The stastical analysis was done by Descriptive Statistics: Frequency & Percentage. Mean and Standard Deviation and Inferential Statistics by Mean and Standard Deviation, 't' test and Chi – square test

## RESULTS

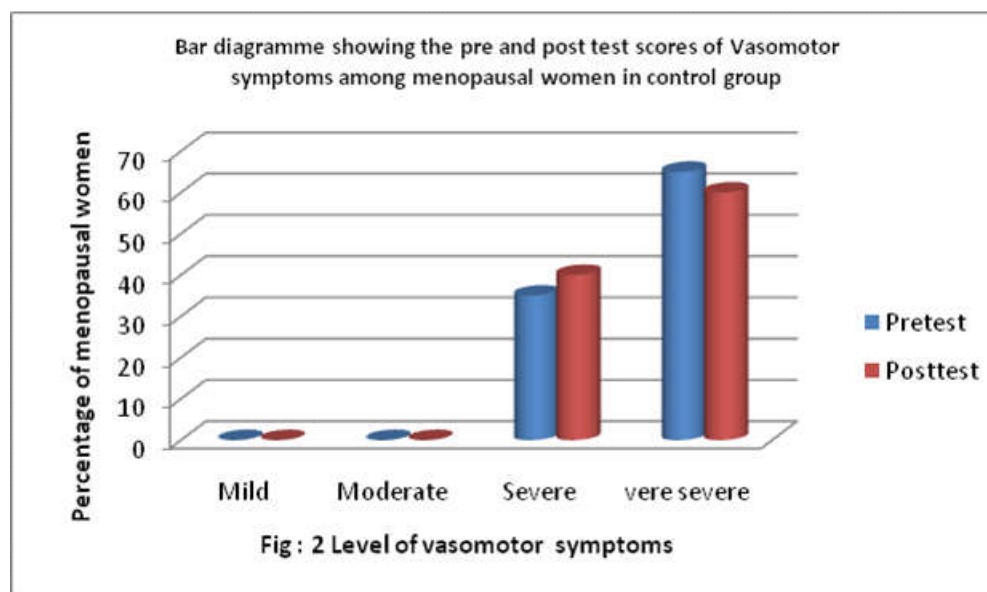
In pre & post test scores on level of vasomotor symptoms among menopausal women depicts that in experimental group, in pretest majority 13 (65%) of them had severe symptoms and

7 (35%) of menopausal women had very severe symptoms whereas in post test 14 (70%) of them had moderate symptoms and 6 (30%) of them had mild symptoms, whereas in control group, in pretest majority 13 (65%) of them had very severe symptoms and 7 (35%) of menopausal women had severe symptoms whereas in posttest 12 (60%) of them had very severe symptoms and 8 (40%) of them had severe symptoms. It seems that the yoga therapy was effective in reducing the vasomotor symptoms among menopausal women in experimental group than control group.

*The result was similar to a study conducted by Avanie Pal, Dr. Deepal i Hande, and Dr. Subhash Khatri (2013), Maharastra, which showed that the vasomotor / somatic symptoms were experienced most by late perimenopausal and early postmenopausal women, followed by psychological and urogenital symptoms.*

Paired 't' test vasomotor symptoms score was 8.435 in experimental group and 0.398 in control group. It was significantly high when compared to table value (2.093) and shows that yoga therapy was effective in reducing the vasomotor symptoms among menopausal women in experimental group than control group.

Unpaired 't' test to analyze the effectiveness between post test scores of experimental group and control group on level of vasomotor symptoms and it shows that moderately significant difference and the score was 4.768. It was high when compared to table value (2.021). It revealed that the yoga therapy was effective in reducing the vasomotor symptoms among menopausal women.



**Table 3. Section C: Mean and SD score on yoga therapy on vasomotor symptoms among menopausal women**

S. No	Vasomotor Symptoms	Max. Scores	Post Test Score						Difference in Mean (%)
			Experimental Group			Control Group			
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Yoga therapy	8	4.45	1.231	57.5	2.5	1.357	31.25	26.25

**Table 4. Paired 't' values of Pre and Post test scores of vasomotor symptoms of experimental group and control group after yoga therapy**

S.No	Menopausal Symptoms	Paired 't' Value			
		Experimental Group	Level of Significant	Control Group	Level of Significant
1	Vasomotor symptoms	8.435	Significant	0.398	Not Significant

df – 19 (n-1) Table Value = 2.093 ( $P < 0.05$  Significant)

**Table 5. Unpaired 't' test value of post test scores of level of vasomotor symptoms among experimental group and control group of menopausal women after Yoga therapy**

S. No	Level of Menopausal symptoms	Unpaired 't' value	Level of significant
1.	Vasomotor symptoms	4.768	$P < 0.05$ Significant

df=38 Table Value=2.021 Significant at  $P < 0.05$

## DISCUSSION

Highest percentage (30%) of women were in the age group of 45-48 years in experimental group whereas (35%) of women in control group were in the age group of 49- 53 years, 30% of them were sedentary workers in experimental group and 35% of them were moderate workers in control group. In both group, the menopausal women attained menarche at the age of 13 years (50%). In both group, the menopausal women were Hindus (70% and 60%) respectively. In both group, the period of cessation of menstruation of menopausal women were less than 5 years(40%).Most of the menopausal women in both the groups were not used any home remedies for menopause symptoms(95% and 95%) respectively. The study findings reveals that the post test scores on vasomotor symptoms after Yoga therapy in experimental group shows that 70% of the menopausal women had moderate symptoms and 30% of menopausal women had mild vasomotor symptoms and in control group, 60% of the menopausal women had very severe symptoms and 40% of menopausal women had severe vasomotor symptoms.

Paired 't' test scores on level of vasomotor symptoms among experimental group of menopausal women after yoga therapy shows moderately significant difference. Unpaired 't' test score on level of vasomotor symptoms shows that moderately significant difference and it revealed that the yoga therapy was effective in reducing the menopausal symptoms among menopausal women. There was no significant association between post test level of vasomotor symptoms scores when compared to demographic variables in both experimental and control group.

## Conclusion

Prior to implementation of yoga therapy, menopausal women had severe and very severe vasomotor symptoms. The effectiveness was evaluated by post test scores; The mean score on level of vasomotor symptoms was reduced from 74.38 to 31.25 after yoga therapy with the difference in mean % (43.13%). The study results shows that menopausal women showed highly significant reduction in vasomotor symptoms ( $P < 0.05$ ). No significant association was found between post

test vasomotor symptoms scores and their demographic variables.

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