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## RESEARCH ARTICLE

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

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#### ABSTRACT

Studying Menopause is a universal reproductive phenomenon. Increases in life expectancies mean that women are spending longer periods of their life in a hypo estrogenic state.

**Objectives:** To assess the effectiveness of Yoga therapy on Urogenital symptoms among menopausal women.

**Materials and Methods:** A True experimental research design where pre and post test with control group was used.

**Samples:** Menopausal women with menopausal symptoms at Namakkal (Dt). Multistage sampling technique was used to select the villages and Simple random sampling technique was used to select the samples. MRS (Menopause Rating Scale) was used to assess the level of menopausal symptoms.

**Results:** The post test mean score for yoga was 19.29 % in experimental group whereas in control group 51% showing the difference of 32%. Paired't' test score for urogenital symptoms was 24.95 in experimental group showing the significant effectiveness of yoga therapy. Unpaired't' test score was 16.7 for yoga therapy.

**Conclusion:** There was no significant association between post test urogenital symptoms scores in both groups. It concluded that Yoga therapy was effective in reducing the urogenital symptoms among menopausal women.

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#### INTRODUCTION

The increased life expectancy of women in India is the most remarkable demographic change observed in the new millennium. It is estimated that there will be 130 million elderly women in India, necessitating a substantial degree of care by the end of 2015 (Rossouw, 2002). Women are one of the most important parts of the family, society, and community health, which is dependent on provision of the needs of this group. Menopause is one of the most hypercritical stages of life among women (Rossouw, 2002). Life expectancy is increasing and women may live about 30 years in the post-menopausal state. It is therefore important that health, even in the deficiency of symptoms, and quality of life is optimized during this time. The average age for menopause is 51 years, but the peri-menopause commences at the age of 46 years (Rees *et al.*, 2009).

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The age at which the menopause occurs is determined by genetics, environmental factors such as smoking, and surgery (oophorectomy), chemotherapy or radiotherapy (Rees *et al.*, 2009). Khan *et al.*, (2016), conducted a community based cross-sectional study at Jawaharlal Nehru Medical College and Hospital, Aligarh, India to identify the major health problems of postmenopausal women. Among the uro-genital symptoms, sexual problems (0.06%), bladder problems (71.2%) and vaginal dryness (28.2%) were experienced by postmenopausal women. Hence, Bladder problems were most common followed by Joint and muscle discomfort followed by Exhaustion (physical and mental). Elsabagh and Allah (2012), conducted a descriptive cross-sectional study to investigate the impact of menopausal symptoms on the quality of life among 78 post menopausal women from rural area, Zagazig city, Egypt using Menopause Rating Scale (MRS) and quality of life Brief (WHOQOL Brief). The highest mean scores of menopausal symptoms were somatic symptoms and specifically urogenital domains (10.46±6.28, 9.96±5.26). Rahman *et al.* (2010), conducted a cross-sectional study to determine the commonly reported menopausal symptoms

among Sarawakian women using a modified Menopause Rating Scale (MRS). 356 Sarawakian women aged 40-65 years who visited the government health centres under the Ministry of health, Malaysia were interviewed. The most prevalent symptoms reported were joint and muscular discomfort (80.1%); physical and mental exhaustion (67.1%); and sleeping problems (52.2%). Followed by symptoms of hot flushes and sweating (41.6%); irritability (37.9%); dryness of vagina (37.9%); anxiety (36.5%); depressive mood (32.6%). Other complaints noted were sexual problem (30.9%); bladder problem (13.8%) and heart discomfort (18.3%). A descriptive cross-sectional, community-based study was conducted by Olaolorun and Lawoyin (2009) to determine the prevalence and distribution of menopausal symptoms among 1189 women aged 40 to 60 years in Ibadan, Nigeria using the Menopause Rating Scale (MRS). Prevalence of any menopausal symptom was 84.5%. Joint and muscular discomfort was the most common reported symptom among all women in this study (59.0%), followed by physical and mental exhaustion (43.0%), sexual problems (40.4%), and hot flashes (39.0%).

Joshi and Khandwe *et al.* (2011), conducted a prospective, randomized, controlled and interventional study to assess the Effect of yoga on menopausal symptoms by using Menopause Rating Scale (MRS). The results were observed on day 1 and day 90 and it concluded that the yoga group showed a reduction in score on all the subscales, which was statistically significant (somatovegetative, psychological and urogenital) and it was recommended that Yoga is effective in reducing menopausal symptoms and should be considered as alternative therapy for the management of menopausal symptoms. Being it is a common problem, researcher showed much interest in treating the menopausal symptoms. Even in literature yoga was found to be safe and effective to treat the menopausal symptoms. So, Researcher would like to undertake this project.

### Objectives

- To assess the level of urogenital symptoms among experimental and control group of menopausal women before and after Yoga therapy.
- To assess the effectiveness of Yoga therapy on level of urogenital symptoms among experimental and control group of menopausal women.
- To find out the association between post test score on level of urogenital 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 KPL Nagar and Aayakattur, Namakkal (Dt). The samples for the present study were menopausal women residing in KPL Nagar and Aayakattur, 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 villages and Simple random sampling technique was used to select the samples.

### 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

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

- Pre test was conducted by using MRS (Menopause Rating Scale) to assess the level of urogenital 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). ( $r^1 = 0.87$ )
- The statistical 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 urogenital symptoms among menopausal women depicts that in experimental group, in pretest majority 11(55%) of them had severe symptoms and 9 (45%) of menopausal women had very severe symptoms whereas in post test 12 (60%) of them had moderate symptoms and 8 (40%) 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 urogenital symptoms among menopausal women in experimental group than control group.

*The result was similar to a study conducted by Topatan S, (2016) among menopausal women to assess the menopausal symptoms which was assessed by using Golombok Rust Inventory of Sexual Satisfaction (GRISS) datas which showed that the sexual infrequency problems rated highest among menopausal women.*

Paired't' test urogenital symptoms score was 24.95 in experimental group and 0.512 in control group. It was significantly high when compared to table value (2.093) and shows that yoga therapy was effective in reducing the urogenital symptoms among menopausal women in experimental group than control group.

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

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

Level of Urogenital 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	-	-	8	40	-	-	-	-
Moderate	-	-	12	60	-	-	-	-
Severe	11	55	-	-	7	35	8	40
Very severe	9	45	-	-	13	65	12	60

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

S. No	Urogenital Symptoms	Max. Scores	Post Test Score						Difference in Mean (%)
			Experimental Group			Control Group			
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Yoga therapy	12	2.315	1.232	19.29	6.19	2.005	51	31.71

**Table 4. Paired 't' values of urogenital symptoms of experimental group and control group after yoga therapy**

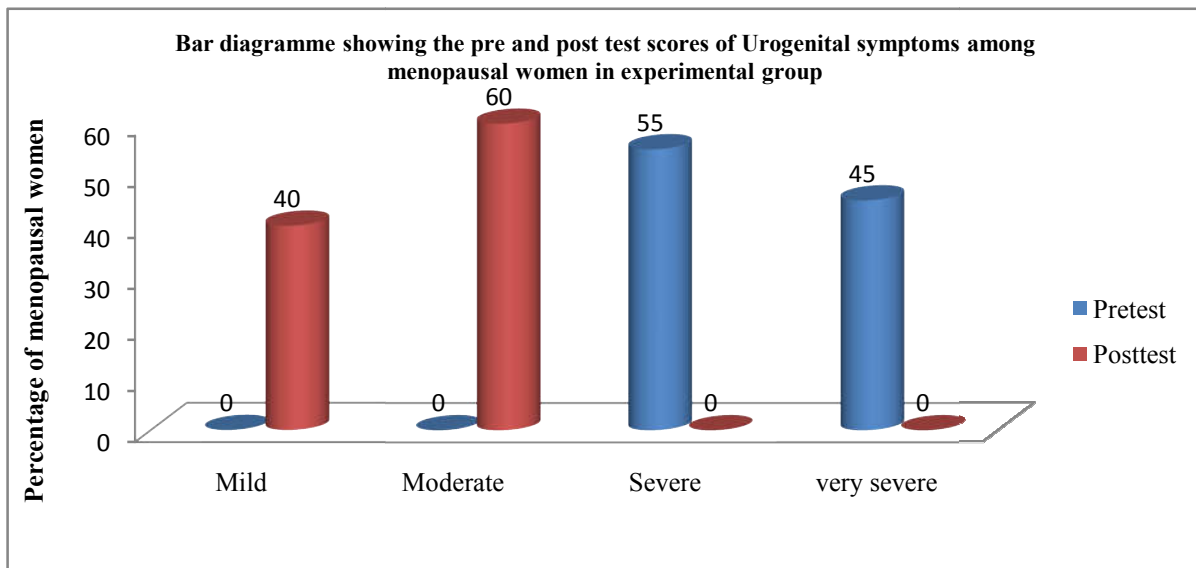
S.No	Menopausal Symptoms	Paired 't' Value			
		Experimental Group	Level of Significant	Control Group	Level of Significant
1	Urogenital symptoms	24.95	Significant	0.512	Not Significant

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

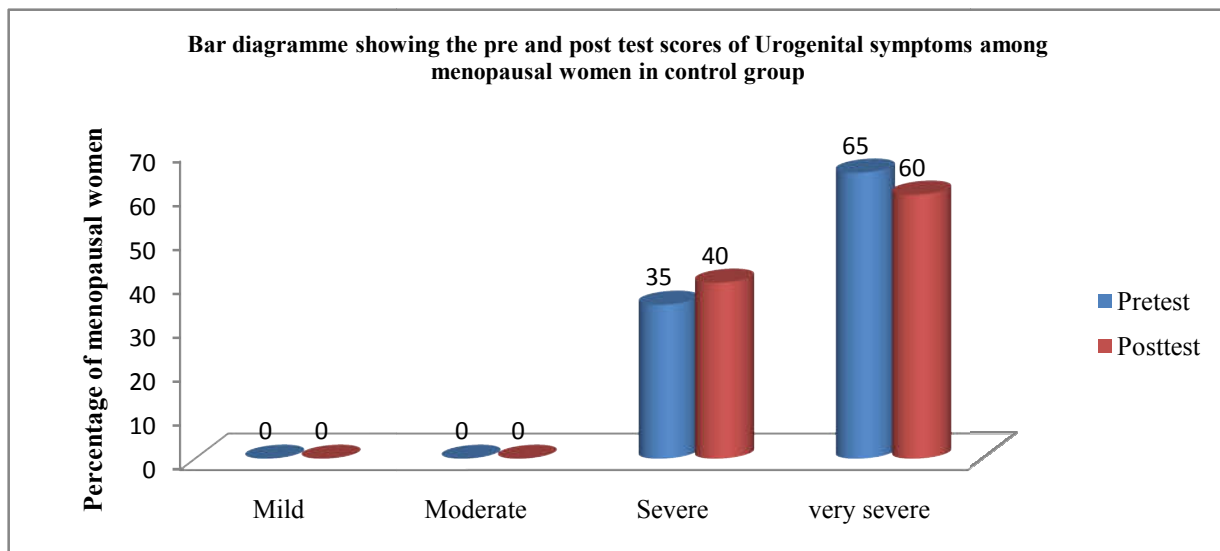
**Table 5. Unpaired 't' test value of post test scores of level of urogenital symptoms among experimental group and control group of menopausal women after Yoga therapy**

S. No	Level of Menopausal symptoms	Unpaired 't' value	Level of significant
1.	Urogenital / sexual problems	16.7	P < 0.05 Significant

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



**Fig. 1. Level of urogenital symptoms**



**Fig. 2. Level of urogenital symptoms**

Unpaired 't' test to analyze the effectiveness between post test scores of experimental group and control group on level of urogenital symptoms and it shows that moderately significant difference and the score was 16.7. It was high when compared to table value (2.021). It revealed that the yoga therapy was effective in reducing the urogenital symptoms among menopausal women.

### Conclusion

- Prior to implementation of yoga therapy, menopausal women had severe and very severe urogenital symptoms. The effectiveness was evaluated by post test scores; The mean score on level of urogenital symptoms was reduced from 51 to 19.29 after yoga therapy with the difference in mean % (31.7%). The study results shows that menopausal women showed highly significant reduction in urogenital symptoms ( $P < 0.05$ ).
- No significant association was found between post test urogenital symptoms scores and their demographic variables.

### 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 urogenital symptoms after Yoga therapy in experimental group shows that 60% of the menopausal women had moderate symptoms and 40% of menopausal women had mild symptoms and in control group, 60% of the menopausal women had very severe symptoms and 40% of menopausal women had severe symptoms. Paired 't' test scores on level of urogenital symptoms among experimental group of menopausal women after yoga therapy shows highly significant difference (24.95, TV = 2.093). Unpaired 't' test score on level of urogenital symptoms shows that moderately significant difference (16.7, TV= 2.021) and it revealed that the yoga therapy was effective in reducing the urogenital 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.

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