



## **EFFECTIVENESS OF STP AND YOGA THERAPY ON MENOPAUSAL SYMPTOMS AMONG MENOPAUSAL WOMEN RESIDING IN SELECTED VILLAGES AT NAMAKKAL DISTRICT – PILOT STUDY**

**T. Jayadeepa\*, Dr. P. Muthulakshmi\*\* & P. Padmavathi\*\*\***

\* Vice Principal, Ph.D Scholar, Dhanvantri College of Nursing, Pallakkapalayam, Nammakkal, Tamilnadu

\*\* Principal, PPG College of Nursing, Saravanampatti, Coimbatore, Tamilnadu

\*\*\* Principal, Dhanvantri College of Nursing, Pallakkapalayam, Nammakkal, Tamilnadu

### **Abstract:**

*Menopause is one of the women's most important life stages. **Objectives:** to assess the effectiveness of STP and Yoga therapy on menopausal symptoms among menopausal women. **Design:** A Quasi experimental research where pre and post test with control group design. **Sample:** Menopausal women with menopausal symptoms in Namakkal (Dt). **Sampling Technique:** Snowball sampling technique was used to select the sample. **Data collection:** A Structured interview questionnaire used to assess the knowledge on menopausal symptoms and MRS (Menopause Rating Scale) used to assess the level of menopausal symptoms. **Results:** In post test, in experimental group, all (100%) of them had good knowledge regarding menopausal symptoms and most (18) (90%) of menopausal women in control group had poor knowledge. The overall post test mean knowledge score and yoga score was 53.4% & 75% in experimental group whereas in control group 14% & 35, showing the difference of 39% and 40% respectively. Paired 't' test overall score was 13.37 in STP and 8.399 in yoga therapy. Unpaired 't' test overall score was 23.014 in STP and 11.26 in yoga therapy. **Conclusion:** There was no significant association between post test knowledge scores and menopausal symptoms scores in both groups. It concluded that STP & yoga therapy was effective in improving the knowledge scores & reduces the menopausal symptoms among menopausal women.*

**Key Words:** Effectiveness, STP, Yoga Therapy, Menopausal Symptoms & Menopausal Women

### **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, (Dr. 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 at 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%). Vasomotor symptoms are being more prevalent with increasing age.

A woman is likely to experience health problems- physical and psychological symptoms- caused by hormonal changes. Physical symptoms: 62% experienced hot flushes, 46% had headache, 58% suffered insomnia, 48% obtained weight gain, 70% had joint and muscle pain, 54% developed back pain, 44% lacked interest in daily activities, and 46% developed dry skin. Psychological symptoms: 68% had mood 54%

developed anger, 54% experienced fatigue, 52% worried during the time of menopause, 40% developed nervousness, and 48% felt depression during the time of menopause, (Dr. Kanta, 2008).

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. C, 2007).

Dhikao.V. Karmarkar.G, Guptaa. R (2010) assessed the effect of yoga on female sexual function. About 40 females (age range 22- 55 years) who were enrolled in a yoga camp and were given a standardised questionnaire named Female Sexual Function Index (FSFI) before and after 12 weeks sessions of yoga and the result found that the sexual function score were significantly improved ( $p < 0.0001$ ) and it appears to be an effective method of improving all domains of sexual functions in women as studied by FSFI.

Every women, as she grows older she crosses the natural process- menopause. During this life stage, she may get many symptoms due to the changes in the hormonal level, which affects her normal day to day activity. 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.

#### **Objectives:**

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

#### **Hypothesis:**

- H<sub>1</sub>:** There is a significant level of Knowledge on menopausal symptoms among experimental and control group of menopausal women before and after STP
- H<sub>2</sub>:** There is a significant level of menopausal symptoms among experimental and control group of menopausal women before and after Yoga Therapy.
- H<sub>3</sub>:** There is a significant effectiveness of STP on knowledge regarding menopausal symptoms among experimental group than control group of menopausal women.
- H<sub>4</sub>:** There is a significant effectiveness of Yoga therapy on menopausal symptoms among experimental group than control group of menopausal women.

- H<sub>5</sub>:** There is a significant association between post test score of knowledge on menopausal symptoms among menopausal women in experimental and control group with their demographic variables.
- H<sub>6</sub>:** There is a significant association between post test score on level of menopausal symptoms among menopausal women in experimental and control group with their demographic variables.

**Delimitations:**

**The Study is Delimited to:**

- ✓ Assess the effectiveness of STP
- ✓ Assess the effectiveness of Yoga therapy
- ✓ Identify changes in the level of knowledge on menopausal symptoms
- ✓ Identify changes in the level of menopausal symptoms.
- ✓ Menopausal women
- ✓ Selected villages, Namakkal District.

**Research Methodology:**

**Research Approach and Design:**

The research approach and design selected for the present study was Evaluative research approach with quasi experimental research where pre and post test with control group design.

**Setting:**

The setting for study was Anna Nagar and Goundanur, Namakkal (Dt).

**Sample and Sample Size:**

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.

**Sampling Technique:**

“Snowball sampling technique” was used to select the sample.

**Inclusion Criteria:**

- Menopausal women with,
- ✓ Age group between 45- 60 years
  - ✓ Who are in normal physiological process
  - ✓ With menopausal symptoms.
  - ✓ Who are in perimenopause and postmenopause stage.
  - ✓ Who are in the score between 11 - 22
  - ✓ Who are present during the time of data collection.
  - ✓ Who give consent to participate in this study
  - ✓ Who are able to understand and speak Tamil

**Description of the Tool:**

**Section A:** Demographic variables

**Section B:** Structured interview Questionnaire to identify the knowledge on menopausal symptoms among menopausal women

**Section C:** MRS (Menopause Rating Scale) to identify the level of menopausal symptoms among menopausal women.

**Data Collection Procedure:**

- ✓ Pre test was conducted by using knowledge questionnaire and MRS (Menopause Rating Scale) to assess the level of knowledge and menopausal symptoms

- ✓ Implementing the STP ( Duration of 25- 30 minutes once in a day for 7 days) and yoga therapy (Duration of 40 minutes once in a day for 1 week) in experimental group
- ✓ Posttest was conducted with same pretest tool after 1 week.

**Validity and Reliability:**

- ✓ The content validity of the demographic variables, knowledge questionnaire 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 knowledge questionnaire and MRS (Menopause Rating Scale). ( $r^1 = 0.81$  and  $0.78$ )

**Plan for Data Analysis:**

- ✓ Descriptive Statistics : Percentage, Mean and Standard Deviation
- ✓ Inferential Statistics : 't' test and Chi -square test

**Results:**

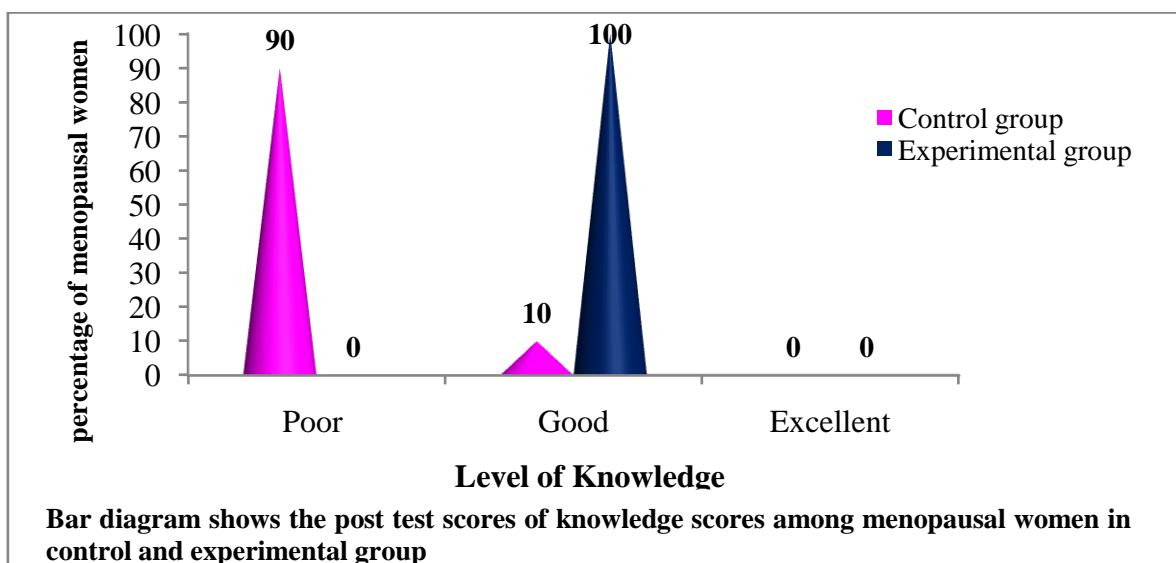
**Section A: Frequency and percentage distribution of samples according to their demographic variables**

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.4001and>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

**Section B: Frequency and percentage distribution of post test knowledge scores of menopausal symptoms among menopausal women in experimental group and control group after STP**

Level of Knowledge Score	Post test scores			
	Experimental group (N <sub>1</sub> = 20)		Control group (N <sub>2</sub> = 20)	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Poor	-	-	18	90
Good	20	100	2	10
Excellent	-	-	-	-



The knowledge post test scores on menopausal symptoms among menopausal women in experiment group depicts that, all 20 (100%) of them had good knowledge and whereas in control group most (18) (90%) of menopausal women had poor

knowledge. It shows that STP on menopausal symptoms among experimental group menopausal women was effective than control group.

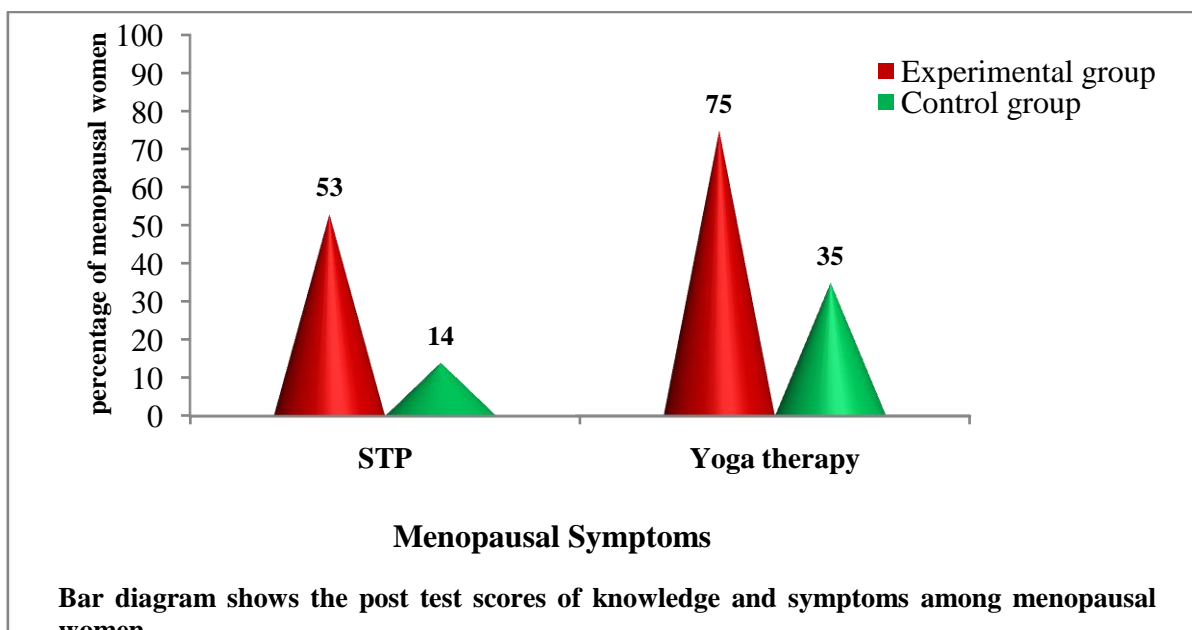
**Section C: Frequency and percentage distribution of post test scores of menopausal symptoms among menopausal women in experimental group and control group after yoga therapy.**

Level of Menopausal Symptoms	Post Test Score			
	Experimental Group (N <sub>1</sub> = 20)		Control Group (N <sub>2</sub> = 20)	
	Frequency (N)	Percentage %	Frequency (N)	Percentage %
No Symptoms	-	-	-	-
Mild	6	15	-	-
Moderate	14	85	-	-
Severe	-	-	8	40
Very sever	-	-	12	60

In post test scores on level of menopausal symptoms among menopausal women depicts that in experimental group, majority 14 (85%) of them had moderate symptoms and 6 (15%) of them had mild symptoms whereas in control group 8 (40%) of them had severe symptoms and 12 (60%) of them had very severe symptoms. It seems that the yoga therapy was effective in reducing the menopausal symptoms among menopausal women in experimental group than control group. Cramer H (2012) reported that there was moderate evidence for short-term effects on psychological symptoms (SMD = -0.37; 95% CI -0.67 to -0.07; P = 0.02). No evidence was found for total menopausal symptoms, somatic symptoms, vasomotor symptoms, or urogenital symptoms. Yoga was not associated with serious adverse events. Conclusion: This systematic review found moderate evidence for short term effectiveness of yoga for psychological symptoms in menopausal women.

**Section D: Mean and SD score on STP and yoga therapy on menopausal symptoms among menopausal women**

S. No	Menopausal Symptoms	Max. Scores	Post Test Score						Difference in Mean (%)
			Experimental Group			Control Group			
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	STP	25	13.35	1.137	53	3.5	1.539	14	39
2.	Yoga therapy	44	32.95	4.862	75	15.5	4.936	35	40





**Paired 't' value of Pre and Post test knowledge score of menopausal symptoms of experimental group and control group after STP**

S. No	Areas	Paired 't' test Value	
		Experimental Group	Control group
1	Introduction	8.679	0.336
2	Signs and symptoms	8.551	0.174
3	Investigation	6.557	0.104
4	Complications	3.533	0.241
	<b>Total</b>	<b>13.37</b>	<b>0.112</b>

Paired 't' test overall score was 13.37 in experimental group and 0.112 in control group. It shows that STP was effective in improving the knowledge of menopausal women. Vruti Patel (2014), found that the effectiveness of structured teaching programme in terms of increase in knowledge score among menopausal women was 46.13 %. There is a significant increase in the knowledge of women regarding menopausal symptoms and its management. The structured teaching programme was found to be an effective strategy to increase the knowledge of women regarding menopausal symptoms and its management.

**Paired 't' values of Pre and Post test scores of menopausal symptoms of experimental group and control group after yoga therapy**

S.No	Menopausal Symptoms	Paired 't' Value	
		Experimental Group	Control Group
1	Vasomotor symptoms	8.435	0.398
2	Physical symptoms	7.224	0.179
3	Psychological symptoms	6.726	0.117
4	Urogenital / sexual problems	5.008	0.621
	<b>Total</b>	<b>8.399</b>	<b>0.162</b>

Paired 't' test overall score was 8.399 in experimental group and 0.162 in control group. It shows that yoga therapy was effective in reducing the menopausal symptoms among menopausal women.

**Conclusion:**

- ✓ Prior to implementation of STP and yoga therapy, menopausal women had poor knowledge and severe menopausal symptoms. The effectiveness was evaluated by post test scores; the mean knowledge score had improved from 3.5 to 13.35 after implementation of STP. It shows that STP was effective. The mean level of menopausal symptoms score was reduced from 32.95 to 15.5 after yoga therapy. The study results shows that menopausal women showed highly significant knowledge and reduced menopausal symptoms ( $P < 0.01$ ).
- ✓ Highly significant association was found between pre and post test knowledge scores and menopausal symptoms.
- ✓ No significant association was found between post test knowledge scores, menopausal symptoms 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 post test knowledge scores after STP in experimental group shows that all the menopausal women (100%) had good knowledge on menopausal symptoms and in control group, most (18) (90%) of menopausal women had poor knowledge. .The post test scores on menopausal symptoms after Yoga therapy in experimental group shows that 70% of the menopausal women had moderate symptoms and 30% of menopausal women had mild menopausal symptoms and in control group, 60% of the menopausal women had very severe symptoms and 40% of menopausal women had severe menopausal symptoms. Paired 't' test scores on knowledge in experimental group regarding menopausal symptoms after STP among menopausal women shows moderately significant difference and the overall score was 13.37. Paired 't' test scores on level of menopausal symptoms among experimental group of menopausal women after yoga therapy shows moderately significant difference and the overall score was 8.399. Unpaired 't' test score on knowledge regarding menopausal symptoms shows that moderately significant difference and it revealed that the STP was effective in improving the knowledge on menopausal symptoms among menopausal women. Unpaired 't' test score on level of menopausal 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 knowledge scores and post test levels of menopausal symptoms scores when compared to demographic variables in both experimental and control group.

**Nursing Implication:**

**Nursing Education:**

By mass health education and through innovative measures, Nurse Educators can encourage nurses and midwives to educate regarding the practices of yoga and exercises among menopausal women.

**Nursing Services:**

The proper information regarding menopausal symptoms must be implicated in clinical areas to improve the knowledge level.

**Nursing Administration:**

Nurse administer can support the researcher to conduct the research on role of nurse in prevention and treatment of menopause symptoms among menopausal women.

**Nursing Research:**

- ✓ The study may be issued for further reference.
- ✓ Further large scale study can be done in different settings.

**Recommendations:**

- ✓ The replication of the present study can be conducted with large samples.
- ✓ A comparative study can be conducted among urban and rural population.
- ✓ A similar study can be conducted by adopting other alternative therapies for menopausal women.

**References:**

1. Adiga S and Bhat P , Prevalence of menopausal symptoms and quality of life after menopause in women from South India Aust N Z J Obstet Gynaecol. 2009 Feb; 49 (1):106-9. doi: 10.1111/j.1479-828S.



2. Vruti Patel and Sijo Koshy, Effectiveness Of Structured Teaching Programme On Knowledge Regarding Menopausal Symptoms And Its Management Among Women, Journal of Nursing and Health Science (IOSR-JNHS) Volume 3, Issue 3 Ver. III (May-Jun. 2014), PP 22-26
3. Priya Bansal and Anurag Chaudhary, Menopausal problems among rural middle aged women of Punjab, International Journal of Research in Health Sciences. Oct-Dec 2013 Volume-1, Issue-3 103
4. Bairy L, Study of menopausal symptoms among peri and postmenopausal women attending NMCTH, Nepal Med Coll J 2012; 14(3): 251-255
5. Comprehensive Text Book of Midwifery (2005) Jaypee Medical publishers (P) Ltd, New Delhi.
6. Sundar Rao an Introduction to Biostatics, 4th edition, Vegas publications (P) Ltd, New Delhi.
7. Begg C B, In Handbook of Research Synthesis, Publication Bias, Eds Cooper H, Hedges LV (Russell Sage Foundation, New York), 1994 Pp; 399-409.