

# EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME AND YOGA THERAPY ON MENOPAUSAL SYMPTOMS AMONG MENOPAUSAL WOMEN RESIDING IN SELECTED VILLAGES AT NAMAKKAL DISTRICT.

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## ABSTRACT:

Menopause is a rapid decrease in the estrogen and progesterone level in the blood responsible for somatic and psychological symptoms in menopausal women. **Objectives:** To assess the effectiveness of STP and Yoga therapy on menopausal symptoms among menopausal women. **Materials and Methods:** A True experimental research with pre and posttest control group design. **Samples:** Menopausal women with Menopausal symptoms in selected villages at Namakkal (Dt). **Sampling Technique:** Multi stage sampling technique. **Tool:** Structured Interview Knowledge Questionnaires and MRS Rating Scale. **Results:** The study findings reveals that the pretest majority 184 (92%) of them had poor knowledge and 16 (8%) of menopausal women had good knowledge whereas in posttest, 195 (97.5%) of them had good knowledge and 5 (2.5%) of them had excellent knowledge. In pretest, majority 146 (73%) of them had severe symptoms and 54 (27%) of menopausal women had very severe symptoms whereas in posttest, 136 (68%) of them had moderate symptoms and 64 (32%) of them had mild symptoms. Paired 't' test scores on STP was 33.37 and for yoga therapy was 32.78. It was significant when compared to table value (2.093). **Conclusion:** It concluded that STP was effective in improving the knowledge on menopausal symptoms and Yoga therapy was effective reducing the menopausal symptoms among menopausal women.

**KEY WORDS:** Menopause, STP, Yoga therapy & Menopausal Women

## INTRODUCTION:

*“Women now live a third of their lives after menopause”*

- 8th International Congress on Menopause, Sydney

“The menopause occurs when her reproductive capacity stops. Ovaries stop functions and there is a fall in steroid and peptide hormone. The two most important physiological changes in the women’s life are –menstruation and cessation of menstruation. The menopausal symptoms are due to changes in the ovarian function, (Mojgan Asadi, 2011) & (Ford Melanie, 2015)

WHO stated that Natural menopause takes place at the ages of 45 & 55 years for the women. The general age of menopause is about 51 years in developed countries and in developing countries; it falls from 43 – 49 years, (Avin Alva, 2016).

A cross sectional study was conducted among 400 menopausal women at Haryana to assess the severity of menopausal problems and the results showed that joint and muscular discomforts (77.5%), sleep problem (76.5%), hot flushes (62%), irritability (58.5%) and bladder problems (54.5%) were assessed. (Anita Punia, 2016)

A descriptive study was carried out among 100 premenopausal women of Andhra Pradesh, Rajahmundry. Knowledge questions were used to assess premenopausal symptoms and their management. About 2% of women had adequate knowledge. 80% of them had moderate knowledge and remaining 18% of them had inadequate knowledge, (Shabana Begum, 2017)

Yogasanas used to combat the somatic and mental health symptoms like anxiety, depression, anger and fatigue. The cortisol (biomarker) regulates the stress and it reduces anxiety, depression and negative effect. The yoga may reduce the psychological symptoms by increasing GABA level, (Afonso et al., 2012)

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:

1. To assess the level of knowledge on menopausal symptoms among experimental and control group of menopausal women before and after STP.
2. To assess the level of menopausal symptoms among experimental and control group of menopausal women before and after Yoga therapy.
3. To assess the effectiveness of STP on knowledge regarding menopausal symptoms among experimental and control group of menopausal women.
4. To assess the effectiveness of Yoga therapy on level of menopausal symptoms among experimental and control group of menopausal women.
5. 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.
6. 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.

### MATERIALS AND METHODS:

#### 3.1 Research Approach and Design:

It is an Evaluative research approach with True experimental research design where pretest and posttest with control group design was selected to evaluate the Effectiveness of STP and Yoga therapy on menopausal symptoms among menopausal women. The settings for study were selected villages of Allinayakanpalayam and Pachampalayam at Namakkal District. The samples for the present study were menopausal women residing in villages of Allinayakanpalayam and Pachampalayam at Namakkal District, who fulfill the sampling criteria. The total sample size was 400 menopausal women, out of which 200 were experimental group and 200 were control group. Multistage sampling technique was adopted for the study. The investigator selected 200 menopausal women from each village by using Simple Random Sampling technique (Lottery Method)

#### Scoring Procedure for assessing the Level of knowledge

Level of knowledge on menopausal symptoms	Actual Score	Percentage of scores
Poor	1 – 8	Below 36
Good	9 - 16	36 – 68
Excellent	17 - 25	69 – 100

## Scoring procedure for menopausal symptoms

Level of menopausal symptoms	Actual score	Percentage of scores
Mild	1 – 11	Below 25
Moderate	12 – 22	26 – 50
Severe	23 – 33	51 – 75
very severe	34 - 44	76 -100

### 3.2 The inclusion criteria for the study were Menopausal women,

- ✓ Age group between 45- 60 years
  - ✓ Who are in normal physiological process
  - ✓ With menopausal symptoms.
  - ✓ Who were in the score more than 22 in MRS ( Menopausal Rating Scale)
  - ✓ Who were present during the time of data collection.
  - ✓ Who gave consent to participate in this study
  - ✓ Who were able to understand and speak Tamil
- ❖ Along with Demographic variables, Structured Interview Schedule Questionnaires was used to assess the knowledge on menopausal symptoms and Menopause Rating Scale was used to assess the level of menopausal symptoms among menopause women.
  - ❖ Pre test screening was conducted by using Structured Interview Schedule Questionnaires and Menopause Rating Scale to assess the level of knowledge and level of menopausal symptoms.
  - ❖ The STP on Menopausal symptoms was implemented by using video assisted teaching once a day for 30 minutes.
  - ❖ **Yoga therapy consists of 3 steps.**
  - ❖ **Step I: Asana:** Makrasana, Marjariasana, Ardha Halasana, Setubandhasana, Mulabandhasana and Savasana are given to the menopausal women for the duration of 30 minutes (each asana 5 minutes duration) once a day for 10 weeks.
  - ❖ **Step II: Pranayama (Breathing Techniques)** is given to the menopausal women for the duration of 5 minutes once a day for 10 weeks.
  - ❖ **Step III: Meditation (Relaxation)** is given to the menopausal women for the duration of 5 minutes once a day for 10 weeks.
  - ❖ Totally for 40 minutes once a day for 10 weeks.
  - ❖ For STP, Posttest was conducted after 7 days and for yoga therapy, Posttest was conducted at 11th weeks of yoga intervention.

### 3.3 Validity and Reliability:

- ✓ The content validity of the demographic variables and Structured Interview Schedule Questionnaires and 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). ( $r^1 = 0.78$  and  $0.81$ )
- ✓ 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:

#### Table: 1

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

S.No	Demographic variables	Experimental group (N <sub>1</sub> =200)		Control group (N <sub>2</sub> =200)	
		Frequency (N = 200)	Percentage (%)	Frequency (N = 200)	Percentage (%)
1.	<b>Age in Years</b>				
	a. 45 - 48	39	19.5	38	9
	b. 49 - 52	65	32.5	65	32.5
	c. 53 – 56	62	31	61	30.5
	d. 57 – 60	34	17	36	18

2.	<b>Socio economic status</b>				
	a. Rs. 1000 – Rs. 2000	35	17.5	32	16
	b. Rs. 2001 – Rs. 3000	73	36.5	76	38
	c. Rs. 3001 – Rs. 4000	60	30	59	29.5
	d. Rs. 4001 and > above	32	16	33	16.5
3.	<b>Education</b>				
	a. No formal education	9	4.5	63	31.5
	b. Primary education	83	41.5	59	29.5
	c. Secondary education	53	26.5	57	28.5
	d. Higher secondary education	46	23	11	5.5
	e. Graduate	9	4.5	10	5
4.	<b>Occupation</b>				
	a. Housewife	114	57	99	49.5
	b. Sedentary workers	42	21	52	26
	c. Moderate workers	34	17	38	19
	d. Heavy workers	10	5	11	5.5
5.	<b>Age at menarche</b>				
	a. Less than 12 Years	35	17.5	29	14.5
	b. 13 Years	105	52.5	107	53.5
	c. 14 Years	54	27	59	29.5
	d. Above 14 years	6	3	5	2.5
6.	<b>Religion</b>				
	a. Hindu	106	53	86	43
	b. Christians	59	29.5	71	35.5
	c. Muslim	27	13.5	35	17.5
	d. Others	8	4	8	4
7.	<b>Dietary pattern</b>				
	a. Vegetarian	22	11	22	11
	b. Mixed diets	178	89	178	89
8.	<b>Types of habits</b>				
	a. Tobacco chewing	29	14.5	22	12
	b. Betal nut chewing	26	13	12	6
	c. Smoking	-	-	-	-
	d. None	145	72.5	164	82
9.	<b>Period of cessation of menstruation</b>				
	a. <1 years	61	30.5	58	29
	b. 1 – 2 years	95	47.5	93	46.5
	c. 3 – 4 years	40	20	44	22
	d. 5 – 6 years	4	2	5	2.5
10.	<b>Type of family</b>				
	a. Joint family	86	43	77	38.5
	b. Nuclear family	94	47	99	49.5
	c. Extended family	20	10	24	12
11.	<b>Source of information</b>				
	a. Neighbours	81	40.5	63	31.5
	b. Relations	65	32.4	77	38.5
	c. Mass media	28	14	33	16.5
	d. Health professionals	26	13	27	13.5
12.	<b>Use of home remedies for symptoms</b>				
	a. Yes	31	15.5	35	17.5
	b. No	169	84.5	165	82.5

**Section B:****Table: 2: Frequency and Percentage Distribution of Pre and Post Test Knowledge Scores of Menopausal Symptoms among Menopausal Women in Experimental Group and Control Before And After STP (N<sub>1</sub>= 200) (N<sub>2</sub>= 200)**

Level of knowledge score	Experimental group (N <sub>1</sub> = 200)				Control group (N <sub>2</sub> = 200)			
	Pretest score		Post test score		Pretest score		Posttest score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Poor	184	92	-	-	193	96.5	189	94.5
Good	16	8	195	97.5	7	3.5	11	5.5
Excellent	-	-	5	2.5	-	-	-	-

With respect to level of knowledge in experimental and control group depicts that, in experimental group, in pretest majority 184 (92%) of them had poor knowledge and 16 (8%) of menopausal women had good knowledge whereas in posttest, 195 (97.5%) of them had good knowledge and 5 (2.5%) of them had excellent knowledge. **It shows that STP on menopausal symptoms among menopausal women was effective.** In control group, in pretest majority 193 (96.5%) of them had poor knowledge whereas in posttest also 189 (94.5%) of them had poor knowledge. It shows that without STP there was no improvement in knowledge on menopausal symptoms among menopausal women.

**Table: 3: Frequency and Percentage Distribution of Pre and Post Test Scores Of Menopausal Symptoms in Experimental Group And Control Group Before And After Yoga Therapy (N<sub>1</sub>= 200) (N<sub>2</sub>= 200)**

Level of menopausal symptoms	Experimental group (N <sub>1</sub> = 200)				Control group (N <sub>2</sub> = 200)			
	Pretest score		Posttest score		Pretest score		Post test score	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
No symptoms	-	-	-	-	-	-	-	-
Mild	-	-	64	32	-	-	-	-
Moderate	-	-	136	68	-	-	-	-
Severe	146	73	-	-	168	84	173	86.5
Very severe	54	27	-	-	32	16	27	13.5

With regards to menopausal symptoms in experimental and control group showed that, in experimental group, in pretest majority 146 (73%) of them had severe symptoms and 54 (27%) of menopausal women had very severe symptoms whereas in posttest 136 (68%) of them had moderate symptoms and 64 (32%) of them had mild symptoms. **It seems that yoga therapy was effective in reducing the menopausal symptoms among menopausal women.** In control group, 168 (84%) of them had severe symptoms and 32 (16%) had very severe symptoms, whereas in posttest 173 (86.5%) of menopausal women had severe symptoms and 27 (13.5%) of them had very severe symptoms. It shows that without Yoga therapy there was no reduction in menopausal symptoms among menopausal women.

**Section C:****Table: 4: Area Wise Comparison of Mean, SD and Mean Percentage of Experimental Group Pre and Post Test Knowledge Scores Before and After STP (N<sub>1</sub> = 200)**

S. No	Areas	Max. scores	Pretest score			Post test score			Difference in Mean (%)
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Introduction	9	2.03	0.642	19.5	6.24	1.651	69.33	49.83
2.	Signs and symptoms	11	2.145	1.227	22.56	9.48	4.215	86.18	63.62
3.	Investigation	2	0.215	0.412	10.75	1.42	0.73	71	60.25
4.	Complications	3	0.62	0.644	20.67	2.12	0.819	70.67	50
	<b>Total</b>	<b>25</b>	<b>5.01</b>	<b>2.187</b>	<b>20.04</b>	<b>19.26</b>	<b>5.628</b>	<b>77.05</b>	<b>57.01</b>

The mean score of pretest and posttest scores of level of knowledge in experimental group revealed that in pretest the highest mean score was  $2.145 \pm 1.277$ , which is 23% whereas in posttest the highest mean score was  $9.48 \pm 4.215$  which is 86% showing the difference of 63%. The overall pretest mean score was  $5.01 \pm 2.187$  which is 20% whereas in posttest  $19.26 \pm 5.628$  which is 77% showing the difference of 57%. **It revealed that STP will improve the knowledge on menopausal symptoms.**

**Table: 5: Area Wise Comparison of Mean, SD and Mean Percentage of Experimental Group Pre and Post Test Menopausal Symptom Scores Before and After Yoga Therapy (N<sub>1</sub>= 200)**

S. No	Areas	Max scores	Pretest score			Post test score			Difference in Mean (%)
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Vasomotor symptoms	8	7.13	2.224	89.13	3.12	1.221	39	50.13
2.	Physical symptoms	8	6.42	1.446	80.25	3.155	1.225	39.44	40.81
3.	Psychological symptoms	16	14.58	4.238	91.13	5.485	1.832	34.28	56.85
4.	Urogenital / sexual problems	12	7.03	2.346	58.58	2.315	1.232	19.29	39.29
	<b>Total</b>	<b>44</b>	<b>35.16</b>	<b>8.209</b>	<b>79.91</b>	<b>14.08</b>	<b>3.911</b>	<b>32</b>	<b>47.91</b>

The pretest and posttest scores of level of menopausal symptoms in experimental group revealed that in pretest the highest mean score was  $14.58 \pm 4.238$ , which is 91.13% for Psychological symptoms, whereas in posttest the highest mean score was  $5.485 \pm 1.823$  which is 34.28% for Psychological symptoms showing the difference of 57%. The overall pretest mean score was  $35.16 \pm 8.209$  which is 79.91% whereas in posttest  $14.08 \pm 3.911$  which is 32% showing the difference of 47.91%. **It revealed that yogasana was effective in decreasing the menopausal symptoms among menopausal women.**

**Table: 6: Unpaired 'T' Test Value of Post Test Knowledge Scores and Level of Menopausal Symptoms Scores Among Experimental Group and Control Group of Menopausal Women After STP And Yoga Therapy (N<sub>1</sub> = 200) (N<sub>2</sub>= 200)**

S. No	Level of knowledge	Unpaired 't' value	Level of Menopausal symptom	Unpaired 't' value	Level of significant
1.	Introduction	34.68	Vasomotor symptoms	16.27	$P < 0.05$ Significant
2.	Signs and symptoms	24.88	Physical symptoms	21.11	$P < 0.05$ Significant
3.	Investigation	22.84	Psychological symptoms	30	$P < 0.05$ Significant
4.	Complications	20.99	Urogenital / sexual problems	16.7	$P < 0.05$ Significant
	<b>Total</b>	<b>35.95</b>	<b>Total</b>	<b>35.69</b>	<b><math>P &lt; 0.05</math> Significant</b>

df = 198 Table Value = 1.98 Significant at  $P < 0.05$

Unpaired 't' test was calculated to analyze the effectiveness between post test scores of experimental group and control group on different aspects of STP and Yoga therapy shows that the overall score was 35.95 to STP and 35.69 for yoga therapy when compared to table value (1.98). It was high. **It revealed that the STP was effective in improving the knowledge regarding menopausal symptoms and the 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 and good knowledge and had severe and moderate level of menopausal symptoms.
- ✓ The overall pre-test mean score was  $5.01 \pm 2.187$  which was 20% whereas in post-test  $19.26 \pm 5.628$  which was 77% showing the difference of 57%. **It revealed that STP showed significant effective in improving the knowledge on menopausal symptoms**
- ✓ The overall pre-test mean score was  $35.16 \pm 8.209$  which was 79.91% whereas in post-test  $14.08 \pm 3.911$  which was 32% showing the difference of 47.91%. **It revealed that yoga was most effective in decreasing the menopausal symptoms among menopausal women.**
- ✓ There was nil significant association found between post-test knowledge scores except for socioeconomic status ( $\chi^2 = 8.714$ ) religion ( $\chi^2 = 9.179$ ) and personal habits ( $\chi^2 = 6.574$ ) when compared to demographic variables. There was nil

significant association between post-test levels of menopausal symptoms scores among experimental group except for age at menarche ( $\chi^2 = 4.862$ ) and diet ( $\chi^2 = 4.681$ ) when compared to demographic variables.

## DISCUSSION:

- ❖ In the present study, 32.5% of menopausal women were in the age of 49 – 52 years in both the groups. In the present study, 32.5% of menopausal women were in the age of 49 – 52 years in both the groups.
- ❖ In the present study, 36.5 % & 32.5% of them were having the monthly income of Rs. 2001 – Rs.3001. In the present study, about 4.5% and 31.5% were had no formal education in both the groups. (41.5% & 29.5%) of them had primary education in both the group. In the present study, Most (84.5%) of them had not taken any home remedies in experimental group. Most (82.5%) of them had not taken any home remedies in control group. Paired ‘t’ test value for STP and Yoga therapy were 33.37 and 32.78 ( $P < 0.05$ , Significant).

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