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Effect of Yoga therapy on joint and muscular discomforts among Menopausal women residing in selected Villages at Namakkal District.

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ABSTRACT:

Menopause currently affects the lives of millions of women globally and will be an issue of increasing concern as the population ages over the next few decades. **Objectives:** To assess the effectiveness of Yoga therapy on joint and muscular discomforts 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 37.4% in experimental group whereas in control group 21.62% showing the difference of 16%. Paired 't' test score for joint and muscular discomforts was 6.421 in experimental group showing the significant effectiveness of yoga therapy. Unpaired 't' test score was 5.378 for yoga therapy. **Conclusion:** There was no significant association between post test joint and muscular discomfort scores in both groups. **It concluded that Yoga therapy was effective in reducing the vasomotor symptoms among menopausal women.**

KEY WORDS: Yoga Therapy, joint and muscular discomforts & Menopausal Women

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INTRODUCTION:

Climacterium is the phase in a woman's life that corresponds to the gradual transition from a reproductive to a nonreproductive stage. It begins around the age of 40 years, when the first endocrine alterations are detected. These alterations signify not only the exhaustion of ovary follicles but also the desynchronization of the neural signals in the hypothalamus and central nervous system. Menopause takes place within the climacteric phase, at around the age of 50 years, and is characterized by at least 12 months of amenorrhea (**Gracia CR, Sammel MD, Freeman EW, et al. and Hall JE, 2005**)

Monika Satpathy (2016) conducted a study on Age at Menopause, Menopausal Symptoms and Problem among Urban Women from Western Odisha, India and the data on prevalence of physical problems of menopause among the respondents of the study shows that more than 60% of women were suffering with common problems of menopause i.e. hot flashes (77%), joint pain (60%), body pain (62%), and increased weight (69%).

Gayathri Nayak, Asha Kamath, Pratap Kumar (2016) conducted a study to assess the quality of life among perimenopausal women in selected coastal areas of Karnataka, India and the results showed that the Physical and psychosocial symptoms were more commonly reported among the women. Feeling tired or worn out 141 (67.5%), decrease in physical strength and stamina 134 (64.1%), muscles and joint pain 115 (55.0%), aches in the back of neck or head 114 (54.5%), and low back ache 108 (51.7%), were reported by over a half of the women in physical domain.

Motorwala ZS (2016), conducted a study to assess the Effects of integrated Yogasanas on osteoporosis in postmenopausal women. 30 females in the age group of 45-62 years suffering from postmenopausal osteoporosis were selected and underwent a 6 months fully supervised yoga session. The study results revealed that there was an Improvement in T-score (2.55 ± 0.25) at posttraining as compared to a pretraining score of (2.69 ± 0.17) and it concluded that Integrated yoga is a safe mode of physical activity which helps induce improvement in BMD in postmenopausal osteoporotic females.

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 joint and muscular discomfort among experimental and control group of menopausal women before and after Yoga therapy.

- ✓ To assess the effectiveness of Yoga therapy on level of joint and muscular discomfort among experimental and control group of menopausal women.
- ✓ To find out the association between post test score on level of joint and muscular discomfort 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 Sai Nagar and Periyar Nagar, Namakkal (Dt). The samples for the present study were menopausal women residing in Sai Nagar and Periyar Nagar, 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

Along with Demographic variables, MRS (Menopause Rating Scale) was used to identify the level of joint and muscular discomforts among menopausal women.

- ✓ Pre test was conducted by using MRS (Menopause Rating Scale) to assess the level of joint and muscular discomforts
- ✓ 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). ($r^1 = 0.73$)

- ✓ 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: 1Section A: Frequency and percentage distribution of samples according to their demographic variables

Demographic Variables	Experimental group (N ₁ =20)		Control group (N ₂ =20)	
	Frequency	Percentage	Frequency	Percentage
Age in Years				
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
Socioeconomic status				
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
Education				
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	-	-	-	-
Occupation				
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
Religion				
a. Hindu	14	70	12	60
b. Muslim	4	20	5	25
c. Christians	2	10	3	15
d. Others	-	-	-	-
Dietary pattern				
a. Vegetarian	5	25	6	30
b. Mixed diets	15	75	14	70
Source of information				
a. Neighbours	8	40	9	45
b. Relations	9	45	7	35
c. Mass media	3	15	3	15
d. Health professionals	-	-	1	5
Use of home remedies for symptoms				
a. Yes	1	5	1	5
b. No	19	95	19	95

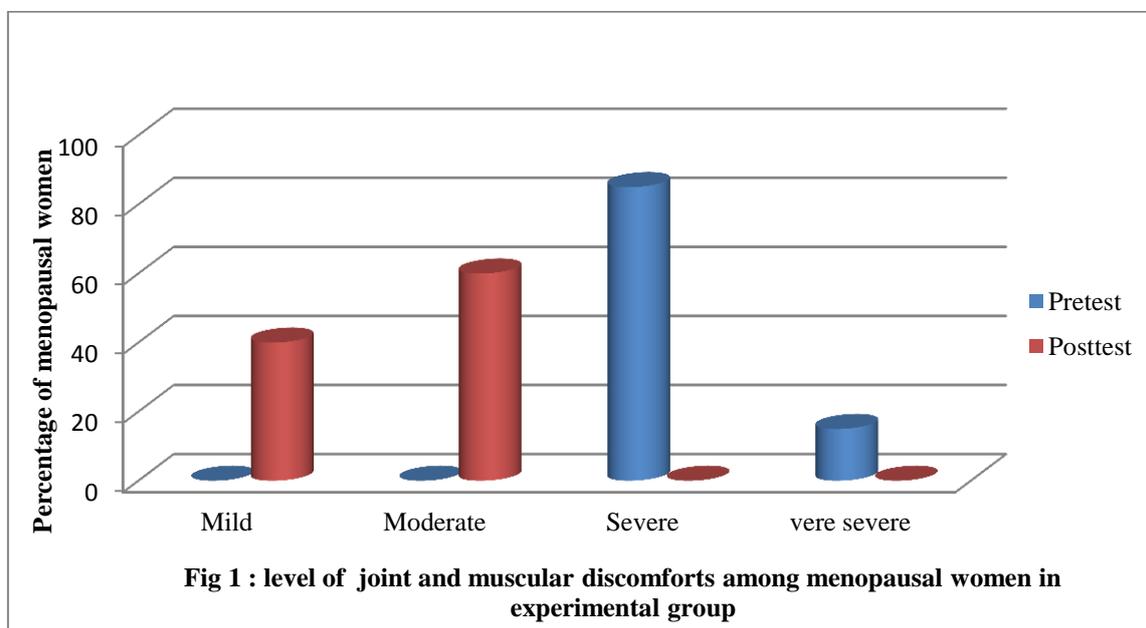
Section B:

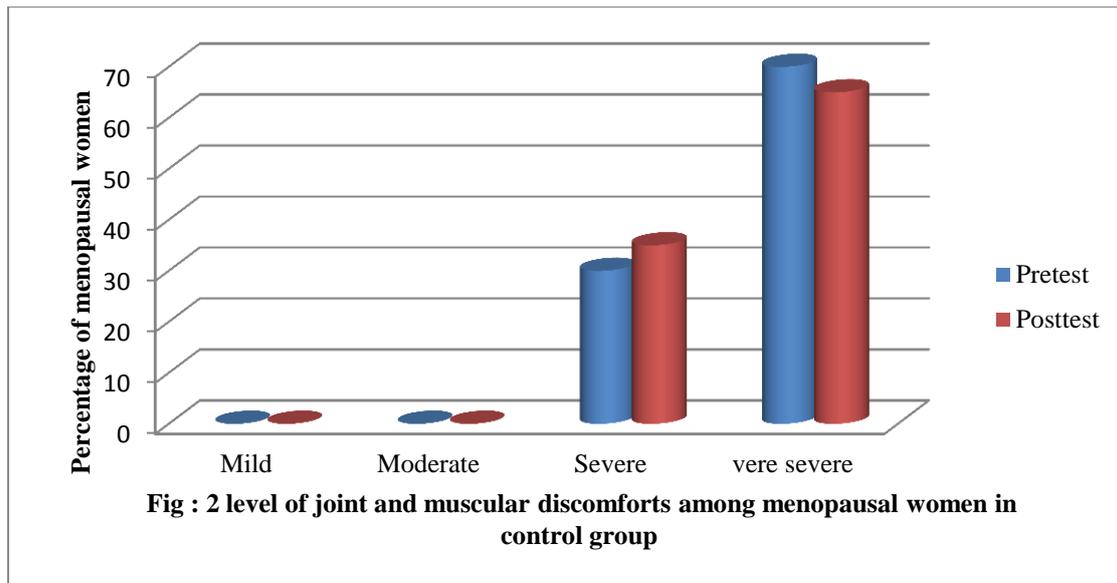
Table: 2: Frequency and percentage distribution of post test scores of Joint and muscular discomforts among menopausal women in experimental group and control group after yoga therapy.

Level of Joint and muscular	Experimental group (N ₁ = 20)		Control group (N ₂ = 20)	
	Pre test score	Post test score	Pre test score	Post test score

discomforts	Frequen cy (N)	Percentage (%)	Frequency (N)	Percentag e (%)	Frequency (N)	Percentage (%)	Frequen cy (N)	Percentage (%)
No symptoms	-	-	-	-	-	-	-	-
Mild	-	-	8	40	-	-	-	-
Moderate	-	-	12	60	-	-	-	-
Severe	17	85	-	-	6	30	7	35
Very sever	3	15	-	-	14	70	13	65

In pre & post test scores on level of **Joint and muscular discomforts** among menopausal women depicts that in experimental group, in pretest majority 17 (85%) of them had severe symptoms and 3 (15%) 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 14 (70%) of them had very severe symptoms and 6 (30%) of menopausal women had severe symptoms whereas in posttest 7 (35%) of them had very severe symptoms and 13 (65%) of them had severe symptoms. **It seems that the yoga therapy was effective in reducing the Joint and muscular discomforts among menopausal women in experimental group than control group. The result was similar to a study conducted by Shilpa K et al. (2015), Kerala, which showed that 79.2% postmenopausal women complained of muscle or joint pain.** Similar findings were observed in the studies conducted by Sagdeo and Arora (2007-2009 Nagpur), Nusrat (2008 Pakistan) and Sharma (2004-2005) Jammu in which the prevalence of muscle or joint pain were found to be 60.4%, 66.74% and 53.86% respectively.





Section C:

Table: 3: Mean and SD score on yoga therapy on Joint and muscular discomforts among menopausal women

S. No	Joint and muscular discomforts	Max. Scores	Post Test Score						Difference in Mean (%)
			Experimental Group			Control Group			
			Mean	SD	Mean (%)	Mean	SD	Mean (%)	
1.	Yoga therapy	8	4.30	1.224	37.4	2.34	1.136	21.62	15.78

Table: 4 Paired 't' values of Pre and Post test scores of Joint and muscular discomforts 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	Level of joint and muscular discomforts	6.421	Significant	0.537	Not Significant

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

Paired 't' test scores on level of joint and muscular discomforts was 6.421 in experimental group and 0.537 in control group. It was significantly high when compared to table value (2.093) and shows that yoga therapy was effective in reducing the joint and muscular discomforts among menopausal women in experimental group than control group.

Table: 5 Unpaired 't' test value of post test scores of level of Joint and muscular discomforts 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.	Level of joint and muscular discomforts	5.378	$P < 0.05$ Significant

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

Unpaired 't' test to analyze the effectiveness between post test scores of experimental group and control group on level of Joint and muscular discomforts and it shows that moderately significant difference and the score was 5.378. It was high when compared to table value (2.021). It revealed that the yoga therapy was effective in reducing the Joint and muscular discomforts among menopausal women.

CONCLUSION:

- ✓ Prior to implementation of yoga therapy, menopausal women had severe and very severe joint and muscular discomforts. The effectiveness was evaluated by post test scores; The mean score on level of joint and muscular discomforts was reduced from 37.4 to 21.62 after yoga therapy with the difference in mean % (15.78%). The study results shows that menopausal women showed highly significant reduction in joint and muscular discomforts ($P < 0.05$).
- ✓ No significant association was found between post test joint and muscular discomforts 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. 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 joint and muscular discomforts after Yoga therapy in experimental group shows that 60% of the menopausal women had moderate symptoms and 40% of menopausal women had mild joint and muscular discomforts and in control group, 65% of the menopausal women had very severe symptoms and 35% of menopausal women had severe joint and muscular discomforts. Paired 't' test scores on level of joint and muscular discomforts among experimental group of menopausal women after yoga therapy shows moderately significant difference. Unpaired 't' test score on level of joint and muscular discomforts shows that moderately significant difference and it revealed that the yoga therapy was effective in reducing the joint and muscular discomforts among menopausal women. There was no significant association between post test level of joint and muscular discomforts scores when compared to demographic variables in both experimental and control group.

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