

## A CROSS SECTIONAL STUDY TO ASSESS THE INTENSITY OF COMMON PERIMENOPAUSAL SYMPTOMS AMONG MIDLIFE WOMEN IN SELECTED VILLAGES AT CUDDALORE DISTRICT, TAMIL NADU

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### Abstract

*Even though menopause is a natural phenomenon, it causes symptoms varies from vasomotor symptoms to sleep disturbance, mood disorders, stress, anxiety and Depression. In the time of the menopausal transition, many women may experience a variety of symptoms. Many a time woman is unaware of these symptoms and they do not seek treatment for the same. Objective: (1) To assess menopausal-related symptoms among middle-aged women, and (2) to assess the severity of common menopausal symptoms. Materials and Methods: The cross-sectional study was conducted among 426 middle-aged women residing in Thondamanatham panchayath, Cuddalore District, Tamilnadu. Greene Climatic symptoms scales used to assess the menopausal symptoms. Results: Menopausal symptoms of 426 females between 40 and 55 years were assessed using Modified Greene Climatic Symptoms scale. Overall findings suggest that among all study subjects, joint and muscular discomfort was highest as compared to other symptoms followed by hot flushes difficulty in sleeping, feeling tired or lacking in energy, sweating at night, Irritability and headache. Regarding overall climatic symptoms, 186 (43.6 %) of them had experienced mild climatic symptoms, 157 (36.8 %) of them had moderate climatic symptoms, 83 (19.4 %) of them had experienced severe climatic symptoms and none of them perceived no climatic symptoms. **Conclusion:** Availability of treatment modalities for various menopause-related symptoms requires women's attention to improve their quality of life.*

**Keywords:** Menopause; Middle-aged Women; Greene Climatic symptoms scales

### INTRODUCTION

Menopause is a unique stage of the female reproductive life cycle, a transition from reproductive to non-reproductive stage. All women who live up to 50 years or more go through a period of transitions

from the reproductive to non-reproductive stage of life. Menopause is defined as the state of an absence of menstrual periods for 12 months. The average age of menopause is 51 years old. But there is no way to predict when an individual woman will enter menopause. There is no single blood test that reliably predicts when a woman is going through the menopausal transition. The only way to diagnose menopause is to observe the lack of menstrual periods for 12 months in a woman in the expected age range.

25 million women pass through menopause each year, and we estimate that in 1990 there were an estimated 476 million women aged 50 years and over in the world, by 2030, the world population of menopausal and postmenopausal women is projected to increase to 1.2 billion, with 47 million new entrants each year. India has a large population, which has already crossed the 1 billion with 71 million people over 60 years of age and the number of menopausal women about 43 million. Projected figures in 2026 have estimated the population in India will be 1.4 billion, people over 60 years 173 million, and the menopausal population 103 million. Individual variations in India exist just as they do worldwide. Menopausal symptoms have been found to be different in the rural and urban areas. Urogenital symptoms, fatigue and weakness, body aches, and pains are the predominant symptoms in both rural and urban menopausal women. Hot flushes, psychological symptoms, mood swings, and sexual dysfunctions are seen more in urban women. Some women notice little difference in their bodies while others find it difficult to handle their symptoms. There is considerable lack of awareness about the effects and the treatment of the menopausal symptoms among women in India.

Present research aimed at assessing the prevalence of menopausal symptoms among rural residential women of Cuddalore. Findings of the study would assist in early reorganization of symptoms, reduction of discomfort, and facilitate women to seek appropriate medical care, if necessary

## **STATEMENT OF THE PROBLEM**

A study to identify the intensity of common perimenopausal symptoms among midlife women in selected villages at Cuddalore district, Tamil Nadu.

### **Objectives**

- To identify the common perimenopausal symptoms among midlife women
- To assess the intensity of perimenopausal symptoms among midlife women

### **Assumptions**

Awareness of perimenopausal problems, motivates the individuals to practice lifestyle modifications.

### **Delimitations**

The study was delimited to

- selected villages at Cuddalore district
- with an age group of 40 – 55 years.
- within data collection period

## **METHODOLOGY**

### **Research Approach**

In this study, a quantitative research approach was adopted in order to accomplish the study objectives.

## Research Design

A descriptive research design was adopted and a descriptive cross-sectional survey was used to identify the existing menopausal women with menopausal symptoms. In this phase the researcher identified the common menopausal symptoms, and intensity of the menopausal symptoms.

## Variables

**Research variables:** Menopausal symptoms like anxiety, depression, somatic symptoms, and vasomotor symptoms.

## Setting of the Study

The study was conducted at Thondamanatham Panchayath, Cuddalore district. Tamilnadu. The Thondamanatham Panchayath is in Kurinchipadi Panchayath union. It is 15 km away from the center town of Cuddalore district. It consists of 6 villages namely Subramaniapuram, Subramaniapuram colony, S. N Nagar, S.Pudur, S.Pudur colony and Thondamanatham, The setting chosen for this study only 3 villages of Thondamanatham Panchayath by lottery method. It has nearly all necessities such as health care, education, and transport. The total population of the selected villages is about 3711. The total women population of the villages is about 1347. The average population of the women in the age group of 40 to 60 years is about 694.

## Population

### Target population

The target population of the study was menopausal women who were in the age group of 40 to 60 years.

### Accessible population

The accessible population was the menopausal women with menopausal symptoms, who were between the age group of 40-60 years living in all villages of Thondamanatham Panchayath, Cuddalore district.

## Sample

In this study the sample was menopausal women affected with menopausal symptoms and who are fulfilling the inclusion criteria living in selected villages of Thondamanatham Panchayath, Cuddalore district.

## Sample Size

426 menopausal women with menopausal problems residing in selected villages of Thondamanatham Panchayath

## Sampling Technique

Purposive sampling technique was used to select the samples.

## Criteria for Sample Selection

**Inclusion criteria, Women,**

- who are in menopausal period
- who have menopausal symptoms

#### Exclusion criteria, Women,

- Who underwent hysterectomy and bilateral oophrectomy.
- Who have any chronic illness.
- Who are receiving hormonal replacement therapy.

#### Ethical Consideration

Prior to the data collection the written permission was obtained from the Institution Research Advisory Committee. The selection of samples was based on inclusion criteria. Each individual subject was informed about the purpose of the study. Informed consent was obtained from the sample in written form. The subject was provided freedom to withdraw from the study at any time. No physical or psychological harm involved in this study.

#### Development and Description of Data Collection Instrument

The data collection instrument was developed after review of literature and experts' opinion.

The tool consists of two sections

Section – A: Demographic and Clinical variables

Section– B: Modified Greene Climatic Scale to assess the Menopausal symptoms

(Depression, anxiety, Somatic symptoms, and vasomotor symptoms,

#### SECTION – A: Demographic and clinical variables

The background variables consisted of demographic variables and clinical variables. The demographic variables consists of the following items: age, education, occupation, family income per month, family status, dietary pattern, marital status and the clinical variables comprised of the following items: past history of menstruation, recent changes in menstruation, type of menstruation, how often do menstruate, how long periods last, did you undergone any medical treatment for menopausal problems, sexual activity, methods of contraception, habit of performing exercise, number of conception, number of conception and weight gain.

#### SECTION – B: Modified Greene Climatic Scale

This scale consists of 20 items, and it is also subdivided into 4 areas like Anxiety (1 – 6 items), Depression (7 – 11 items), Somatic symptoms (12 – 18 items), and Vasomotor symptoms (19 – 20 items). Each item scores 0 – 3, 0 indicates not at all, 1 indicates A little, 2 quite a bit, 3 indicates extremely. The total score is about 60.

#### SCORING PROCEDURE / SCORING INTERPRETATIONS

S. No	Scores	Levels Of Symptoms
1	0	No symptoms
2	<21	Mild symptoms
3	22 – 44	Moderate symptoms
4	>44	Severe symptoms

#### Reliability

The r value obtained for Modified Greene climatic scale was 0.9 using spearman brown formulas. The results proved that the instruments were valid and reliable. Hence the investigator proceeded for the main study.

### Data Collection Procedure

Before preceding the study, the researcher has obtained the written permission from the block medical officer Vadalur, Cuddalore District. The purpose of study was explained to the study participants in their regional language. Confidentiality was assured and informed written consent was obtained to all the subjects.

The data collection was done for phase I from January 2017 to June 2017. 664 midlife women were identified in the votes list of Thondamanatham Panchayath, of which 426 samples were selected by purposive sampling technique. A descriptive cross-sectional survey approach was adopted for collecting the preliminary data. After obtaining formal consent from the samples the demographic data and clinical data were collected from the samples. Every day 5 – 7 samples were chosen for collecting the information. The menopausal symptoms were assessed with the Modified Greene climatic scale.

### Plan for Data Analysis

The investigator must organize and compute the data. Appropriate statistical techniques such as descriptive statistics were used to analyze demographic variables.

## RESULT

The result of this study were organised for following headings;

Section A: Distribution of demographic variables among midlife women

Section B: Distribution of clinical variables among midlife women

Section C: Distribution of common menopausal symptoms among midlife women

Section D: Distribution of intensity of climatic symptoms among midlife women

### SECTION - A

**Table 1: Frequency and percentage distribution of demographic variables (N = 426)**

S. No	Demographic Variables		n	%
1	Age	a. ≤ 45 years	154	36.1
		b. 46 – 50 years	106	24.8
		c. 51 – 55 years	101	23.7
		d. > 55 years	62	14.5
2	Education	a. No formal education	84	19.7
		b. Primary school education	117	27.4
		c. Secondary school education	125	29.3
		d. Higher Secondary education / Diploma	86	20.1
		e. Graduate	14	3.2
3	Occupation	a. Government employee	17	3.9
		b. Private employee	35	8.2
		c. Self-employee	83	19.4
		d. Daily wages	144	33.8
		e. Homemaker	147	34.5
4	Income per month (Family)	a. <Rs.6000 / Month	33	7.7
		b. Rs.6000 – Rs.10000 / Month	80	18.7
		c. Rs.10001 – Rs.15000 / Month	196	46

		d. Rs.15001 – Rs.20000 / Month	73	17.1
		e. Rs.20001 – Rs.40000 / Month	29	6.8
		f. >Rs.40000 / Month	15	3.5
5	Family Status	a. Nuclear family	337	79.1
		b. Joint family	78	18.3
		c. Extended Family	11	2.5
6	Dietary Pattern	a. Vegetarian	48	11.3
		b. Mixed diet	378	88.7
7	Marital Status	a. Unmarried	9	2.1
		b. Married	364	85.4
		c. Divorced / Separated	11	2.5
		d. Widow	42	9.8

The above table shows the frequency and percentage distribution of demographic variables of the midlife women. Regarding age, 154 (36.1%) of them were in the age group of <45 years, as for education concern, the maximum number 125 (29.3%) of the perimenopausal women had completed secondary school education. Regarding occupation, mostly 147 (34.5%) of the samples were homemakers. Pertaining to family income per month, 196 (46%) of the sample's family income were Rs.10001 – Rs.15000 / month. Regarding the family status, the majority 337 (79.1%) of the samples were from nuclear families. While considering the dietary pattern, the highest 378 (88.7%) of them were mixed dietary patterns. Regarding marital status, the majority 364 (85.4%) of them were married.

## SECTION - B

**Table 2: Frequency and percentage distribution of clinical variables (N = 426)**

S. No	Clinical Variables		n	%
1	History of menstruation	a. Regular	247	57.9
		b. Irregular	179	42.1
2	Recent changes in menstruation	a. Yes	324	76.1
		b. No	102	23.9
3	Type of <i>recent changes</i> in menstruation	a. Irregular bleeding	120	28.2
		b. Excessive bleeding	109	25.6
		c. Scanty bleeding	80	18.8
		d. Painful bleeding	64	15
		e. Regular bleeding	53	12.4
4	How often do menstruate	a. Every month	189	44.3
		b. Every two months	96	22.5
		c. Every three months	45	10.7
		d. Occasional	96	22.5
5	How long periods last	a. < 3 days	104	24.4
		b. 3 - 4 days	116	27.2
		c. 5 - 6 days	125	29.4
		d. > 6	81	19
6	Underwent medical treatment for menopausal problems	a. Yes	43	10.1
		b. No	383	89.9
7	Sexual activity	a. Yes	160	37.6
		b. No	266	62.4
8	Methods of contraception	a. Temporary contraception	20	4.7

		b. Tubectomy	<b>303</b>	<b>71.1</b>
		c. Vasectomy	8	1.9
		d. Natural methods	95	22.3
<b>9</b>	Habit of performing exercises	a. Yes	86	20.2
		b. No	<b>340</b>	<b>79.8</b>
<b>10</b>	Number of conceptions	a. 1 - 3	86	20.2
		b. 3 - 4	<b>263</b>	<b>61.7</b>
		c. > 4	67	15.7
		d. No conception	10	2.4
<b>11</b>	Weight gain	a. Yes	<b>254</b>	<b>59.6</b>
		b. No	172	40.4

The above table shows the frequency and percentage distribution of clinical variables of the midlife women. In relation to the history of menstruation, the majority 247 (57.9%) of them had regular menstruation. Considering the recent changes in menstruation, 324 (76.1%) of the samples said yes. Regarding the type of recent changes in menstruation shows that, 120 (28.2%) of them had irregular bleeding. Majority 189 (44.3%) of them had menstruated every month. Regarding, how long the period last shows that, 125 (29.4%) of the samples had menstruation 5 – 6 days. Pertaining to Underwent medical treatment for menopausal problems 383 (89.9%) of the samples does not undergo any treatment for menopausal symptoms. Regarding sexual activity, 266 (62.4%) of them were sexually inactive. Concerning methods of contraception shows that, the highest percentage 303 (71.1%), of them underwent tubectomy method of family planning. Majority 340 (79.8%) did not perform regular exercise during their lifetime. Majority 263 (61.7%) of the women had conceived 3 - 4 times. Regarding the recent changes in weight, the majority 254 (59.6%), had weight gain during the perimenopausal transition period.

## SECTION C

**Table 3: Frequency and percentage distribution of common menopausal symptoms N = 426**

S. No.	Symptoms	Not At All (0)		A Little (1)		Quite A Bit (2)		Extremely (3)	
		No.	%	No.	%	No.	%	No.	%
1.	Heart beating quickly or strongly	92	21.6	<b>140</b>	<b>32.9</b>	114	26.8	80	18.8
2.	Feeling tense or nervous	91	21.4	<b>131</b>	<b>30.8</b>	106	24.9	98	23.0
3.	Difficulty in sleeping	30	7.04	102	23.9	133	31.2	<b>161</b>	<b>37.8</b>
4.	Excitable	<b>258</b>	<b>60.6</b>	70	16.4	46	10.8	52	12.2
5.	Attacks of anxiety, panic	<b>178</b>	<b>41.8</b>	100	23.5	111	26.1	37	8.7
6.	Difficulty in concentrating	64	15.0	<b>154</b>	<b>36.1</b>	146	34.3	62	14.5
7.	Feeling tired or lacking in energy	43	10.1	153	35.9	<b>192</b>	<b>45.1</b>	38	8.92
8.	Loss of interest	84	19.7	<b>168</b>	<b>39.4</b>	122	28.6	52	12.2
9.	Feeling of unhappy or depressed	118	27.7	116	27.2	<b>135</b>	<b>31.7</b>	57	13.4
10.	Crying spells	<b>223</b>	<b>52.3</b>	84	19.7	73	17.1	46	10.8
11.	Irritability	90	21.1	120	29.6	<b>155</b>	<b>36.4</b>	55	12.9
12.	Feeling of dizzy or faint	<b>196</b>	<b>46.0</b>	106	24.9	73	17.1	51	11.9
13.	Pressure or tightness in head	<b>199</b>	<b>46.7</b>	128	30.1	97	22.8	2	0.5
14.	Parts of the body feeling numb	<b>202</b>	<b>47.4</b>	131	30.8	81	19.0	12	2.82
15.	Headaches	69	16.2	223	52.3	<b>129</b>	<b>30.3</b>	5	1.2
16.	Muscle and joint pains	21	4.93	93	21.8	142	33.3	<b>170</b>	<b>39.9</b>
17.	Loss of feeling in hands or feet	<b>222</b>	<b>52.1</b>	155	36.4	43	10.1	6	1.41



18.	Breathing difficulty	300	70.4	103	24.2	22	5.2	1	0.23
19.	Hot flush	43	10.1	91	21.5	127	29.8	165	38.7
20.	Sweating at night	41	9.62	95	22.3	159	37.3	131	30.8

## SECTION D

**Table 4: Frequency and percentage distribution of intensity of climatic symptoms N = 426**

Perimenopausal Symptoms	No Symptoms		Mild		Moderate		Severe	
	No.	%	No.	%	No.	%	No.	%
Anxiety	0	0	180	42.2	159	37.3	87	20.4
Depressive	3	0.7	196	46.0	145	34.0	82	19.2
Somatic	5	1.1	279	65.4	134	31.4	8	1.8
Vasomotor	28	6.5	90	21.1	136	31.9	172	40.3

The above table shows that the climatic symptoms among women, regarding anxiety, 180 (42.2%) of them perceived mild anxiety, 159 (37.3%) of them experienced moderate anxiety, 87(20.4%) of them had severe anxiety and none of them have experienced anxiety symptoms.

Regarding depression, 196 (46 %) of them experienced mild depression, 145 (34 %) of them had moderate depression, 82(19.2 %) of them had experienced severe depressive symptoms however only 3 (0.7%) of them perceived no depressive symptoms.

Regarding somatic symptoms, 279 (65.4 %) of them had mild somatic symptoms, 134 (31.4 %) of them had moderate somatic symptoms, 8 (1.8 %) of them had experienced severe depressive somatic symptoms and few 5 (1.1 %) of them perceived no somatic symptoms

Regarding vasomotor symptoms, 172 (40.3 %) of them had experienced severe vasomotor symptoms, 136 (31.9 %) of them had moderate vasomotor symptoms, 90 (21.1 %) of them had experienced mild vasomotor symptoms and 28 (6.5 %) of them perceived no vasomotor symptoms

## DISCUSSION

Menopausal symptoms of 426 females between 40 and 55 years were assessed using Modified Greene Climatic Symptoms scale. Overall findings suggest that among all study subjects, joint and muscular discomfort, was highest as compared to other symptoms followed by hot flushes difficulty in sleeping, feeling tired or lacking in energy, sweating at night, Irritability and headache. Regarding overall climatic symptoms, 186 (43.6 %) of them had experienced mild climatic symptoms, 157 (36.8 %) of them had moderate climatic symptoms, 83 (19.4 %) of them had experienced severe climatic symptoms and none of them perceived no climatic symptoms.

## CONCLUSION

Burden of menopausal symptoms is quite high resulting in disturbance in day-to-day routine. Availability of treatment modalities for various menopause-related symptoms requires women's attention as well, which may lead to improvement in the quality of life of postmenopausal women.



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