

Prevalence and Severity of Menopause Symptoms among Perimenopausal and Postmenopausal Women -A Cross-Sectional Study.

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ABSTRACT:

Introduction:

Menopause (MP) is a common phenomenon occurring as women approach middle age. MP is marked with various premenopausal (PRMP), perimenopausal (PEMP) and postmenopausal (POMP) symptoms.

Aim: To conduct a study on the prevalence of menopause symptoms and to assess the healthy habits in perimenopausal and postmenopausal women.

Method: This cross-sectional study was carried out in Komarapalayam and various places of Tamil Nadu on 350 participating women (PEMP and POMP) for 6 months. Data collection was done through a pretested questionnaire through google forms. The questionnaire translated in the local language consisted of socio-demographic data, menopausal symptoms, awareness and perception about MP. The STRAW classification was used to classify the observed MP in the present study. In addition, MRS (Menopausal Rating System) was used to categorize MP symptoms.

Results: A total of 350 women were enrolled for the study; maximum were observed in the age group of 33 to 45 years (35.94%). The occurrence of MP was natural (54.28%) in most of participating women. In the present study, the maximum MP symptoms were reported in PRMP conditions (38.57%). Hypertension (19.42%) comorbidity was observed in maximum women. The symptoms of joint and muscular discomfort (24%), sleep problems (23%), anxiety (17%) were maximum in the very severe category. The present study recorded that (61%) of women were not aware of MP, and only 57% of women were found convenient with MP.

Conclusion: The present study recorded the prevalence of menopausal symptoms as well as self-rated severity through the MRS. Thus, our findings reflect menopausal symptoms in our specific study population and have been consistent with previous international research.

Keywords: Menopause, Perimenopause,

Premenopause, Postmenopause, prevalence, symptoms

I. INTRODUCTION

The word menopause (MP) means cessation of the menstrual cycle. It is also defined as a decrease in hormone production by the ovaries. The Greek word 'Menos' means month, and 'pauis' means a pause or cessation.¹

According to the WHO Scientific Group on Research on MP in the 1990s, various physiological changes occur in the body; some result from the cessation of ovarian function and related menopausal events. Others are a function of the ageing process.² Many women experience symptoms around the time of MP, most of which are self-limiting and not life-threatening. For example, ovaries stop functioning and production of steroid and peptide hormone falls, some of these result from the cessation of ovarian function and related menopause events.³ All the women who live beyond the age of 45-50 years experience a transition period from reproductive to non-reproductive stage of life. But some women can go through MP early. It can result from surgery, like if their ovaries are removed in a hysterectomy, or damage to their ovaries, such as from chemotherapy.⁴

MP is generally diagnosed in retrospect since confirmation occurs only after a 12-month cessation of menstrual periods. Perimenopause (PEMP) is defined as the transition before the last menstrual cycle, when a woman may experience variable or irregular menstrual cycles and hormonal fluctuations, and the 12 months after the final menstrual period⁵. Premenopause (PRMP) is the stage after menarche but before entering menopausal stages with normal fertility function during this phase.^{6,7} Postmenopause (POMP) is defined as the stage beginning 12 months after the last menstrual cycle.⁸

As a woman enters perimenopause, her individual experiences may coincide with role changes and symptom experiences. Symptoms attributed to menopause vary between individuals and cultures, which has been attributed to general aging, menopausal fluctuations, or socially constructed phenomena.⁹ The most commonly reported symptoms among women in high-income countries are vasomotor symptoms, including hot flashes, vaginal dryness, insomnia, fatigue, and joint pain.¹⁰

Hence, the present study was carried out in Tamil Nadu to study the prevalence and severity of MP symptoms among PEMP and POMP women. The study further aimed to assess the knowledge of participants about MP and their approach toward MP.

II. MATERIALS AND METHODS

This cross-sectional study was conducted in Komarapalayam and various places in Tamil Nadu for six months. A total of 350 perimenopausal and postmenopausal women were included.

Inclusion Criteria

- i) The study population comprised of all the women who had attained natural menopause.
- ii) Perimenopausal women and Postmenopausal women (12 or more months of amenorrhea) were included.
- iii) Those who undergone hysterectomy also included

Exclusion Criteria

- i) The women who refused to participate were excluded from the study.
- ii) Women who are deaf and dumb were excluded from the study.

The Ethical committee of the institution approved the protocol. A predesigned, pretested questionnaire is used to collect data containing the following items, Socio-demographic data, and Gynecological history and MP status of the participants. The written consent from all participants was also taken before the start of the study.

The menopausal status was classified according to STRAW classification that divided menopause staging into;

- a) **Pre-menopause:-** Minor changes in cycle length, particularly decreasing length/ flow of the cycle.

- b) **Perimenopause:-** It comprises Early and Late menopausal transition.

Early menopausal transition: It is marked by increased variability in menstrual cycle length, defined as a persistent difference of 7 days or more in the length of consecutive cycles.

Late menopausal transition: It is marked by the occurrence of amenorrhea of 60 days or longer up to 12 months.

- c) **Postmenopause:-** No menstrual bleeding in the last 12 months.

Menopausal symptoms: Assessed by using a modified MRS questionnaire (menopause rating scale). This is composed of 11 items and was divided into three subscales:

- i) **Somatic:** hot flashes, heart discomfort/palpitation, sleeping problems and joint and muscular discomfort.
- ii) **Psychological:** depressive mood, irritability, anxiety, physical and mental exhaustion
- iii) **Urogenital:** Sexual problems, bladder problems and dryness of the vagina. The women were asked whether or not they had experienced the 11 menopausal symptoms in the previous one month.

Menopause Rating Scale (MRS): The observed MP symptoms among all participating women were recorded and classified in 5 categories starting from zero with no symptoms to 4 with severe symptoms of MP.

Statistical analysis:

The data were evaluated for the number of incidences and Chi-square test to establish an association between the variables with the help of the Statistical Package for the Social Sciences 18.0 version. For determination of association, $P < 0.05$ was considered statistically significant.

III. RESULTS

The present study was carried out in Komarapalayam and various Tamilnadu places for 6 months on 350 participating women. Of 350 women, maximum was observed in the age group of 33 to 45 years 137 (35.94%) followed by 45 to 55 years 102 (34.64%) and minimum in the age group of more than 56 years 111 (29.52%).

Most of the women in the present study were housewives, 185 (53%) than working 165 (47%). Of all participating women, most of them never do physical activity 154 (54%) followed by

rarely doing 98 (28%) and least doing 3 times a day 40 (11.42%).

On evaluating the obesity, it was found that maximum women were observed normal 110 (31.42%) followed by obesity class I 88 (25.14%) and least found in obesity class II 15 (4.28%).

The majority of women in the present study were found to be consuming a drink with coffee two times a day 138 (39.42%), 2 pregnancies 118 (33.71%) and 0 to 3 days of period time 142 (40.57%). The occurrence of MP was natural 190 (54.28%) in most of participating women, followed by removal of ovaries 68 (19.42%) and chemotherapy 24 (6.85%). In addition, hysterectomy surgery was reported in 98

(28%) of the women enrolled in the study. In the present study status of MP, symptoms were evaluated in all 350 participating women. The maximum MP symptoms were observed in PRMP condition 135 (38.57%), followed by POMP condition 113 (32.28%) and minimum in POMP condition 113 (32.28%). (Table 1)

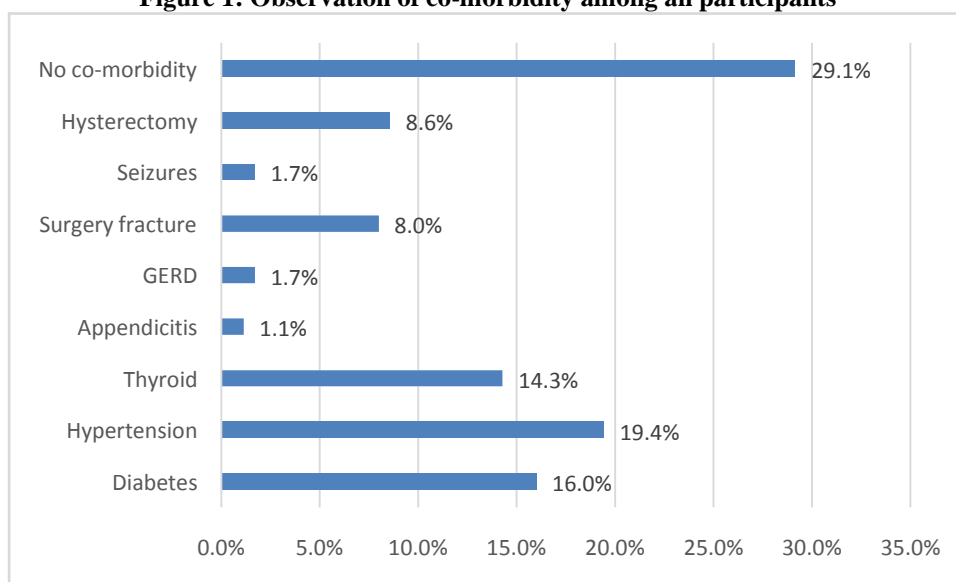
In the present study, co-morbidities among all 350 participating women were also examined and it was found that hypertension 68 (19.42%) was observed in maximum women, after that, diabetes 56 (16%) and thyroid 50 (14.28%) were reported. However, appendicitis was observed in the least number of participating women 4 (1.71%). (Figure 1)

Table 1: Distribution of participants based on demographic characteristics

Demographic Characteristics	Frequency (%)	
Age group (Years)	33-45	137 (35.94%)
	45-55	102 (34.64%)
	More than 56	111 (29.52%)
Occupation status	Housewife	185 (53%)
	Working women	165 (47%)
Physical activity	Never	154 (54%)
	Rarely	98 (28%)
	At least 3 times a day	40 (11.42%)
	Almost daily	58 (16.57%)
Body Mass index (BMI)	Underweight	33 (9.42%)
	Normal	110 (31.42%)
	Pre-obesity	85 (24.28%)
	Obesity class I	88 (25.14%)
	Obesity class II	19 (5.42%)
	Obesity class III	15 (4.28%)
Number of Pregnancies	0	26 (7.42%)
	1	42 (12%)
	2	118 (33.71%)
	3	82 (23.42%)
	More than 3	82 (23.42%)
Days period last	0-3	142 (40.57%)
	4-5	128 (36.57%)
	More than 5	80 (22.85%)
Occurrence of MP	Natural	190 (54.28%)

	Removal of both ovaries	68 (19.42%)
	Chemotherapy	24 (6.85%)
	Do not know	68 (19.42%)
Hysterectomy Surgery	Yes	98 (28%)
	No	208 (59.42%)
	Do not know	44 (12.57%)
MP status	PRMP	135 (38.57%)
	PEMP	102 (29.14%)
	POMP	113 (32.28%)

Figure 1: Observation of co-morbidity among all participants



The severities of MP symptoms were also studied in the present study among participating women. The symptoms of joint and muscular discomfort (24%), sleep problems (23%), anxiety (17%) were observed maximum in the very severe category. Symptoms of joint and muscular discomfort (29%), depressive mood (18%), bladder problem (16%) and irritability (16%) were

observed highest in the severe category. However, symptoms like heart problems (28%), hot flushes and sweating (25%) and anxiety (24%) were observed mostly in the moderate category. In the mild category, physical and mental exhaustion (27%), sleep problems (26%) and anxiety (25%) were more prevalent (Table 2).

Table 2: Distribution of MP symptoms and their severity among participants

Symptoms	None (%)	Mild (%)	Moderate (%)	Severe (%)	Very Severe (%)	p-value
Hot flushes and sweating	37%	15%	25%	11%	12%	0.6199
Heart problems	42%	12%	28%	12%	06%	0.0512*

Sleep problems	14%	26%	23%	14%	23%	0.725
Depressive mood	31%	20%	20%	18%	11%	0.4025
Anxiety	22%	25%	24%	12%	17%	0.1405
Physical & mental exhaustion	23%	27%	22%	15%	13%	0.1975
Sexual problems	75%	10%	08%	07%	0%	0.0110*
Bladder problems	44%	19%	15%	16%	06%	0.1760
Irritability	34%	15%	22%	16%	13%	0.3654
Dryness of vagina	46%	18%	17%	14%	05%	0.0274*
Joint and muscular discomfort	20%	10%	17%	29%	24%	0.0439*

*Statistically significant

The present study further evaluated the awareness regarding MP among participating women and their perception towards it. The study found that 215 (61%) of women were not aware of MP and only 135 (39 %) women had knowledge about MP.

Of all 350 participating women in the present study, 72% had the perception that MP will end their sexual life, 71 % though that MP will diminish their ability and competency, and 65% of women were apprehensive about losing femininity. However, 57% of women were reported to be convenient with MP in the present study.

IV. DISCUSSION:

As the demographic shift within India moves towards an aging population and longer life expectancies, the value of understanding health needs among older people becomes relevant. While research on women in India is being performed, the focus on all research has been on maternal and adolescence health and little attention has been given to MP health. MRS is a universally recognized instrument for measuring three symptomatic MP categories. In the present study, we applied the first recorded use of MRS in the southern population of India.

Of 350 participating women in the present study, most of them were observed in the age group of 33 to 45 years (35.94%). Abedzadeh-Kalahroudi et al. in their study reported maximum women in the age group of 40 to 44 years (33.33%), which is similar to the findings of our study.¹⁰

The majority of the women who participated in the study were found to be housewives (53%), and with normal BMI index (31.42%), which is in accordance with earlier reported studies.^{11, 12} In the present study, more women observed of never doing any physical activity (54%), whereas, in the study reported by Abedzadeh-Kalahroudi et al.,¹⁰ majorities of women reported (42.8%) of with doing regular physical activities.

In the present study, most MP women were observed with 2 pregnancies (33.71%) and observed consuming coffee two times a day 39.42%. In addition, a study carried out by Faubion et al. recorded a positive association of caffeine with MP.¹³ In our study, more than 30% of the population is in the age group of 33 to 45 years (35.94%) and at this age, most of the women in developing countries like India complete more than one pregnancy.¹⁴

Most of the women in our study observed naturally occurring MP (54.28%), period days of 0

to 3 days (40.57%)¹⁵ and with no hysterectomy surgery (59.42%). The hysterectomy is associated with early onset of MP as per the earlier reported study.¹⁶

In the present study, an almost equal distribution of participants was observed in all three categories of MP state (PRMP: 38.57%; PEMP: 29.14%; POMP: 32.28%). These kinds of distribution of MP state in participants are supposed to give better results of MP symptoms study.

On evaluating the co-morbidities observed among participating women in the study, hypertension (19.42%) and diabetes (16%) were the most observed co-morbidity. Whereas a study conducted by Nagai et al.,¹⁷ reported, Hypercholesterolaemia (4.74%) and hypertension (3.86) as the most frequently observed co-morbidity among subjects.

In the present study, the symptoms of joint and muscular discomfort (24%), sleep problems (23%), anxiety (17%) were observed maximum in the very severe category. Whereas symptoms of joint and muscular discomfort (29%), depressive mood (18%), bladder problem (16%) and irritability (16%) were observed highest in the severe category. These findings are in accordance with various earlier reported studies. In addition, the symptoms of heart problems, sexual problems, dryness of the vagina, joint & muscular discomfort were significantly associated with MP.¹⁸

Further, in the present study, awareness about MP was found very low (39%) among participating women, and only 57% were convenient with MP condition. Hence, there is an urgent need for awareness about MP among the population studied to provide better healthcare and correct the perception towards MP.

V. CONCLUSION:

The prevalence and severity of MP symptoms among perimenopausal and postmenopausal women aged more than 33 years in Tamilnadu were assessed using the Menopause Rating Scale (MRS). The most commonly reported individual symptoms were; hot flushes, heart problems, sleep problems, sexual problems, depressive moods, irritability. In addition, women reported joint and muscular discomfort, sleep problems, anxiety as the most severe symptoms experience. Furthermore, the symptoms of heart problems, sexual problems, dryness of the vagina, joint & muscular discomfort were significantly associated with MP. The present study further

revealed the poor knowledge and negative perception among women under study. Hence, different health awareness programs should be started by the government authorities to provide better health to women and correct their perception towards MP.

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