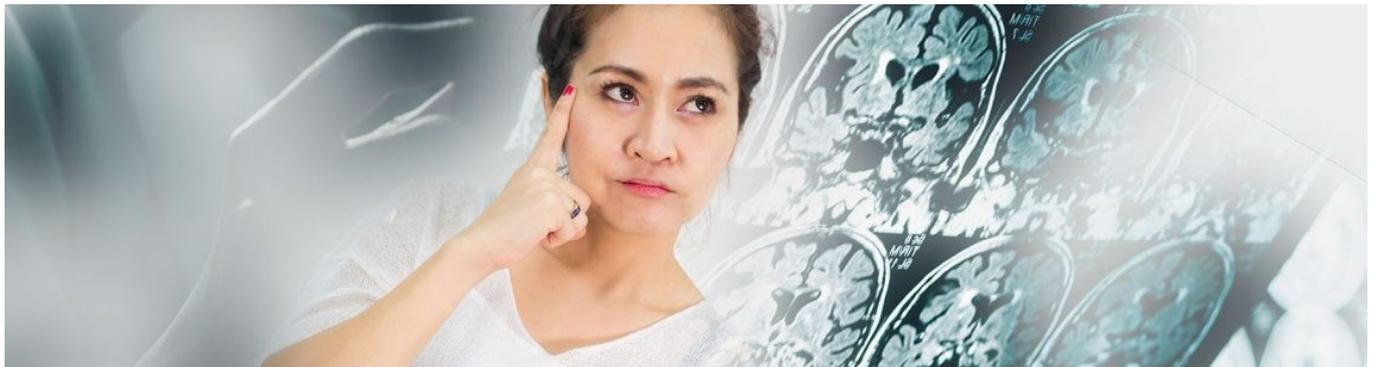


# Correlation between menopausal symptoms and quality of life among postmenopausal women



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## ABSTRACT

**Background:** Menopause is a critical period in a woman's life that is associated with multiple physical, vasomotor, psychological and sexual complaints.

**Objective:** To assess the severity of menopausal symptoms and their impact on quality of life among postmenopausal women in selected villages of Coimbatore.

**Methods:** A cross-sectional study was conducted among 250 postmenopausal women aged 46-60 years were randomly interviewed using a structured questionnaire. It has three parts- Socio demographic characteristics, Menopausal Rating Scale to assess the menopausal symptoms and QOL using the 29-item Menopause-Specific Quality of life Questionnaire.

**Results :** out of 250 study subjects 133(53.2%) experiencing a sensation of heat over face, face and body weekly once, 134(53.6%) had excessive sweating in the night on alternate days, 135(54%) experiencing palpitation weekly once and 127(50.8%) experiencing chest tightness weekly once. Majority of them have sleeping problems like difficulty in falling asleep 125(50%) in weekly once and waking up early 168 (67.2%) on alternate days. The overall median score of quality of life with respect to vasomotor and psychosocial domain were higher than the physical and sexual domain. The mean score of overall quality of life among postmenopausal women was found  $4.1 \pm 0.3$  and the median was 4.1.

**Conclusion:** The result shows that menopausal symptoms significantly affects the QOL.

## KEY WORDS :

Post menopause, Menopause Rating Scale, Quality of life.

## I. INTRODUCTION

Women are among the most important part of any society and family and community health provision is dependent on the fulfillment of different health needs. On the other hand menopause is one of the most critical stages of women's health. According to the World Health Organization classification, premenopausal women are those who have experienced regular menstrual bleeding within the last 12 months, perimenopausal women are defined as those women who have experienced irregular menses within the last 12 months or the absence of menstrual bleeding more than three months but less than 12 months, and postmenopausal women are those who have not experienced regular menstrual bleeding for 12 months or more.<sup>(1)</sup>

World Health Organization defines Quality of life as an individual perception of their position in life in the context of culture and values system in which they live and in relation to their goal expectations, standards and concerns. In menopausal women, quality of life usually refers to aspects pertaining to health based on a combination of symptoms without considering physical, emotional or social functions. India has a large population, which has already crossed the one billion mark with 71 million people over 60 years of age and the number of menopausal women about 43 million. Projected figures in 2006 have estimated the population in India will be 1-4 million, people over 60 years 173 million and the menopausal population 103 million. Average age of menopause is 47.5 years in Indian women with an average life expectancy of 71 years.<sup>(2)</sup>

Today, most women spend more than one third of their life after menopause. It is predicted that the total number of postmenopausal women worldwide will increase from 476 million in year 1990 to 1200 million in 2030. The portion of postmenopausal women living in developing countries is also expected to increase from 40% to 60%. The presence of menopausal symptoms significantly reduces the quality of life and with more severity, worsens the quality of life.<sup>(3)</sup>

### Need for the study

Most studies on QOL in the postmenopausal women were conducted in developed countries. In India there is no current health programme that focus on health needs of postmenopausal women and few researches have been conducted especially in rural areas of Tamilnadu

### Aim

This study aimed to determine the severity of menopausal symptoms among postmenopausal women and how these symptoms affect their quality of life.

### Objectives

- To assess the post menopausal symptoms in women.
- To determine the QOL of postmenopausal women.
- To assess the relationship between menopausal symptoms and quality of life.

## II. MATERIALS AND METHODS

A cross-sectional study was conducted among 250 women in selected areas of Karadivavi Block, Coimbatore district, Tamilnadu, India. Women who are mentally challenged, women with medically or surgically induced menopause, women who used hormone replacement therapy were excluded. Post menopausal women aged between 46 to 60 years of age one year after menopause were selected for the study. Women were randomly selected using simple random method from the name list taken from Karadivavi health centre. Those who agreed to participate in the study, information was collected by face-to-face interview, each interview lasted 10-15 minutes.

Data's were collected by using a predesigned questionnaire which includes Demographic information including the menstrual history, questionnaire related to menopausal symptoms (MRS) and questionnaire related to quality of life of postmenopausal women (Hildich MENQO Questionnaire). It was initially written in English, then translated in to Tamil and then back to English for validation. It was checked and pretested for clarity and suitability in a small pilot study for 10 women. Menopausal rating scale consists of eleven items assessing menopausal symptoms. Each item is graded by the subjects from 0-3 The severity ranging from 0-3 (0-never, 1-monthly once, 2-weekly once, 3-alternate days). The total severity score was ranged as follows , very minimal symptoms (1-6), mild(7-13), moderate (14-20), severe(>20). Standardized the Menopause-specific quality of life questionnaire (MENQOL-I) intervention version by John.R.Hilditch was used to assess the quality of life of postmenopausal women. MENQOL-I contains 29 items under four domains such as vasomotor, psychosocial, physical and sexual domain.

### Ethical consideration

Formal approval was obtained from the institutional ethical committee of SRM university, Kattankulathur, Chennai. Official permission was obtained from the medical officer of Rural health centre and panchayat presidents of selected villages of Karadivavi. Written informed consent was obtained from the postmenopausal women. The objectives, practices, goodness, problems and the time period and the confidentiality were explained in the consent form.

## III. STATISTICAL ANALYSIS AND GRAPHIC REPRESENTATION

Statistical package for social science version 10 was used for data analysis for a level of statistical significance 5% with the help of qualified statistician. Data was analysed by using descriptive and inferential statistical methods.

Frequency, percentage distribution, mean and standard deviation were used for the assessment of demographic variables, menopausal symptoms and quality of life. Correlation between menopausal symptoms and quality of life were analyzed using Karl Pearson correlation. Results were declared as statistically significant at 0.01 level.

## IV. RESULTS

### Background characteristics of postmenopausal women

**Table.1 Illustrates the background characteristics of postmenopausal women.**

S.No	Background Characteristics	Participants	
		f	%
1.	<b>Age</b>		
	46 – 50	81	32.4
	51 – 55	92	36.8
	56 – 60	77	30.8
2.	<b>Education level</b>		
	Illiterate	29	11.6
	Primary	84	33.6
	Secondary	88	35.2
	Graduate	49	19.6
3.	<b>Employment status</b>		
	Government	34	13.6
	Private	17	6.8
	Coolie	38	15.2
	Housewife	161	64.4
4.	<b>No.of children</b>		
	Nulliparous	4	1.6
	Primiparous	48	19.2
	Multiparous	169	67.6
	Grand multiparous	29	11.6
5.	<b>Chronic disease</b>		
	Yes	86	34.4
	No	164	65.6
6.	<b>Marital status</b>		
	Married	242	96.8
	Unmarried	1	0.4
	Widow	7	2.8
7.	<b>Religion</b>		
	Hindu	214	85.6
	Christian	17	6.8
	Muslim	19	7.6
8.	<b>Age at menarchae</b>		
	<10	35	14.0
	10 – 13	165	66.0
	14 – 16	50	20.0
9.	<b>Post menopausal duration</b>		
	<5 yrs	90	36.0
	5 - 10 yrs	92	36.8
	>10 yrs	68	27.2
10.	<b>Type of diet</b>		
	Veg.	64	25.6
	Non veg.	186	74.4
11.	<b>BMI</b>		
	Under weight	32	12.8
	Normal weight	147	58.8
	Over weight	71	28.4
12.	<b>Blood pressure</b>		
	Low	8	3.2
	Ideal	188	75.2
	Pre high BP	54	21.6

It showed that majority 92(36.8%) in the age group of 51-55yrs and maximum of them 88(35.2%) obtained secondary school certificates and only 29(11.6%) were illiterate.

With respect to the employment status majority of them 161(64.4%) were housewives and 34(13.6%) were working in government sectors. About the number of children most of the participants 169(67.6%) were multiparous women and only 4(1.6%) were nullipara. Regarding the presence of chronic disease majority of them 164(65.6%) had no chronic diseases Regarding the marital status 242(96.8%) were married and none of them were unmarried. Among the postmenopausal women majority 214(85.6%) of them belonged to Hindu

religion, 19(7.6%) belonged to Muslim religion and only 17(6.8%) belonged to Christian religion. Age at menarchae showed that, most of them 165(66%) attained menarchae at the age of 10-13 years and only 35 (14%) attained menarchae at less than 10 years of age.

In accordance with the postmenopausal duration 92(36.8%) had 5-10yrs of postmenopausal duration and With respect to the type of diet 186 (74,4%) were non-vegetarian and only 64 (25.6%) were vegetarian. About BMI 147(58.8%) had normal weight and 32(12.8%) were underweight. Regarding Blood pressure, majority of the postmenopausal women 188(75.2%) had ideal blood pressure and 8(3.2%) of them had low blood pressure.

**Assessment of postmenopausal symptoms in women**

**Table 2 Percentage distribution of the sample according to post menopausal symptom in women**

Menopausal symptoms		Never	Monthly once	Weekly once	Alternate days
Hot flushes, sweating	A sensation of heat over face, chest and body	0(0)	24(9.6)	133(53.2)	93(37.2)
	Excessive sweating in the night	0(0)	18(7.2)	98(39.2)	134(53.6)
Heart discomfort	Palpitation (Quick and strong heart beat)	48(19.2)	57(22.8)	135(54)	10(4)
	Chest tightness	38(15.2)	60(24)	127(50.8)	25(10)
Sleep problems	Difficulty in falling asleep	1(0.4)	3(1.2)	125(50)	121(48.4)
	Waking up early	0(0)	2(0.8)	80(32)	168(67.2)
Depressive mood	Feeling of loneliness	93(37.2)	80(32)	77(30.8)	0(0)
	Sad	3(1.2)	5(2)	124(49.6)	118(47.2)
	On the verge of tears	32(12.8)	75(30)	124(49.6)	19(7.6)
	Lack of motivation	16(6.4)	22(8.8)	124(49.6)	88(35.2)
Irritability	Feeling nervous	11(4.4)	42(16.8)	132(52.8)	65(26)
	Inner tension	5(2)	58(23.2)	144(57.6)	43(17.2)
	Feeling aggressive	0(0)	7(2.8)	61(24.4)	182(72.8)
Anxiety	Feeling restlessness	25(10)	78(31.2)	142(56.8)	5(2)
	Feeling panicky	42(16.8)	101(40.4)	53(21.2)	54(21.6)
Physical and mental exhaustion	General decrease in performance	62(24.8)	69(27.6)	109(43.6)	10(4)
	Impaired performance	16(6.4)	71(28.4)	110(44)	53(21.2)
	Decrease in concentration	40(16)	48(19.2)	110(44)	52(20.8)
Sexual problems	Decrease in sexual desire	0(0)	26(10.4)	128(51.2)	96(38.4)
Blader problems	Difficulty in urinating	94(37.6)	73(29.2)	69(27.6)	14(5.6)
	Urinary frequency	5(2)	53(21.2)	130(52)	62(24.8)
	Incontinence	0(0)	6(2.4)	124(49.6)	120(48)
Feeling of excessive dryness of vagina		0(0)	1(0.4)	84(33.6)	165(66)

The above table showed that out of 250 study subjects 133(53.2%) experiencing a sensation of heat over face, face and body weekly once, 134(53.6%) had excessive sweating in the night on alternate days, 135(54%) experiencing palpitation weekly once and 127(50.8%) experiencing chest tightness weekly once. Majority of them have sleeping problems like difficulty in falling asleep 125(50%) in weekly once and waking up early 168 (67.2%) on alternate days.

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They experienced sadness 124(49.6%) weekly once, 124(49.6%) are on the verge of tears in weekly once, and had lack of motivation 124(49.6%) weekly once. They were also feeling nervous 132(52.8%) and inner tension 144(57.6%) weekly once. Apart from this the women were experiencing restlessness 142(56.2%) and general decrease in performance 109 (43.6%) weekly once. Sexual problems were high among the study subjects. 128(51.2%) experiencing decrease in sexual desire weekly once and 165(66%) have feeling of excessive dryness of vagina on alternate days.

Regarding the bladder problems 130(52%) have urinary frequency weekly once and 165(66%) have incontinence of urine on alternate days. Majority of them 137(54%) experiencing joint pain weekly once.

**Table 3 Percentage distribution of pre test score of overall menopause rating scale**

Overall menopause	F	%
Moderate	0	0.0
Severe	250	100.0

It is inferred from the above table that all the 250 menopausal women were experiencing most of the menopausal symptoms in severe level.

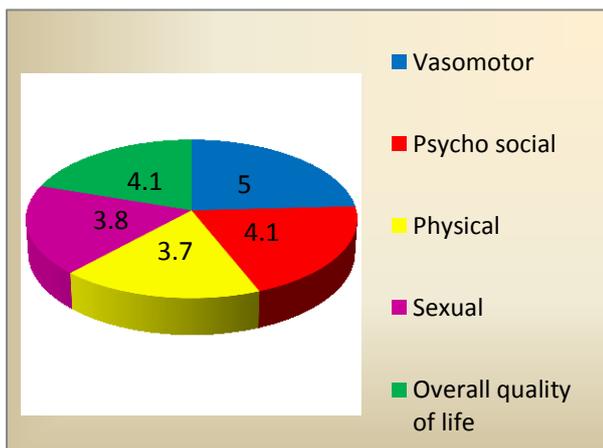
**Quality of life of postmenopausal women**

**Table 4 Descriptive statistics for quality of life of post menopausal women.**

	Mean	SD	Median	Percentage score	Minimum	Maximum
Vasomotor	5.0	1.0	5.0	62.5	2.7	6.7
Psycho social	4.1	0.5	4.0	51.3	2.6	5.6
Physical	3.7	0.3	3.7	46.3	3.0	4.6
Sexual	3.8	0.7	3.7	47.5	2.0	5.3
Overall quality of life	4.1	0.3	4.1	51.3	3.5	5.1

The median of the each domain of MENQOL was used as the overall subscale score. The above table showed that the score of the four domains. The overall median score of quality of life with respect to vasomotor and psychosocial domain were higher than the physical and sexual domain. The mean score of overall quality of life among postmenopausal women was found 4.1± 0.3 and the median was 4.1.

**Figure-1: Pie diagram showing the quality of life in different domains**



Relationship between menopausal symptoms and quality of

**Table 5 : Relationship between pre intervention menopausal symptoms and quality of life**

	r	Sig.
Vasomotor	0.213**	0.001
Psycho social	0.225**	0.000
Physical	0.142*	0.025
Sexual	0.187**	0.003
Overall quality of life	0.373**	0.000

Table 5 shows that there was fair positive correlation between menopausal symptoms and quality of life before intervention. It means that when the menopausal symptoms were more the vasomotor, psychosocial, physical, sexual and overall quality of life was decreased.

**V. DISCUSSION**

In the present study majority 92(36.8%) in the age group of 51-55yrs and maximum of them 88(35.2%) obtained secondary school certificates and only 29(11.6%) were illiterate. In another study the mean age was found 45.93±8.37 and median age was 43 years.<sup>(4)</sup>

Out of 250 study subjects 133(53.2%) experiencing a sensation of heat over face, face and body weekly once, 134(53.6%) had excessive sweating in the night on alternate days, 135(54%) experiencing palpitation weekly once and 127(50.8%) experiencing chest tightness weekly once. Majority of them have sleeping problems like difficulty in falling asleep 125(50%) in weekly once and waking up early 168 (67.2%) on alternate days. Another study conducted in Riyadh found that the most reported symptoms were joint and muscular discomfort, physical and mental exhaustion, and hot flushes.. in that 80.1% of women reported joint and muscular discomfort as the most prevalent symptoms , followed by fatigue and stress(67.1%).<sup>(5)</sup>

The overall median score of quality of life with respect to vasomotor and psychosocial domain were higher than the physical and sexual domain. The mean score of overall quality of life among postmenopausal women was found 4.1± 0.3 and the median was 4.1. it is similar with yet another study which showed that QOL of women was lower than average in three domains : General health, vitality and role limits-emotional.<sup>(6)</sup>

There was fair positive correlation between menopausal symptoms and quality of life before intervention. It means that when the menopausal symptoms were more the vasomotor, psychosocial, physical, was decreased. The findings shows the similarities in study conducted in Bangladesh which concluded that there is relation between fatigue and depression <sup>(7)</sup>

Various studies also proved that the practice of yoga as an approach to holistic health is a powerful tool for helping women experience the passage in to menopause as a positive event, both physically and spiritually.<sup>(8)</sup>

This study has some limitations like few women ignored their problems and were not willing to discuss their menopausal symptoms freely.

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## VI. CONCLUSION

Menopause is the signal indicating the approach of the third phase of life. Some women may experience few or no symptoms of menopause, while others experience multiple physical and psychological symptoms. A large number of women all over the world suffer from menopausal symptoms, and the problem cannot be ignored. Education, creating awareness and providing suitable intervention to improve the QOL are important social and medical issues which need to be addressed.

## VII. ACKNOWLEDGEMENTS

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