

## **Prevalence of Menopausal Symptoms among Postmenopausal Women in Rural South India: A Cross Sectional Study**

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### **Abstract**

**Introduction:** Menopause is a natural event that occurs due to decline in production of hormones, estrogen and progesterone which may lead to physiological and psychological effects or symptoms. They can be categorized into Somatic, Psychological and Urogenital symptoms. Due to the gradual increase in life expectancy, health of post-menopausal women has become a public health concern which can have a direct impact on the quality of life. **Aims and Objectives:** To study the prevalence of menopausal symptoms using Menopausal Rating Scale (MRS).

**Material and Methods:** This cross-sectional study was conducted among 270 participants in villages of Kuppam mandal, Chittoor District, Andhra Pradesh during the period February 2017 to January 2018. Using cluster sampling method out of 63 villages in Kuppam mandal, 27 villages were selected and 10 samples were collected from each village. A semi structured questionnaire and Menopause Rating Scale was used to record the data and assess the symptoms. Collected data were entered in MS Excel 2010, and Epi-Info v7.1 was used to analyze the data.

**Results:** Range of age among the study group was observed as 31 years to 58 years. 80.7% of the study participants were above the age of 50yrs. The most common symptom observed in the study group was Joint and Muscular discomfort (76.6%) as somatic symptom, Irritability (37%) in Psychological symptom and Bladder problems (21.1%) in Uro-Genital symptom observed. 14.1% and 9.6% of the study participants experienced moderate and severe symptoms based on total MRS score.

**Conclusion:** A significant proportion of study participants were presented with moderate and severe symptoms based on Menopause Rating Scale, which will directly affect the quality of life in these individuals.

**Keywords:** Postmenopausal Women, MRS Scale, Menopausal Symptoms, Somatic Symptoms, Psychological Symptoms, Uro-Genital Symptoms.

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### **Introduction**

Menopause is a natural event that occurs due to decline in production of hormones, estrogen and progesterone which may lead to physiological and psychological effects or symptoms. These symptoms can significantly

disrupt a woman's daily activities and her sense of well-being, resulting in a decrease in the quality of life and these were the findings of research studies in different countries [1,2].

The report by WHO scientific group published in 1996 noted the following: 'Many women experience the symptoms around the time of menopause, which are self-limiting and not life-threatening. However the symptoms are unpleasant and sometimes disabling. The prevalence of menopause-related symptoms among women in developing countries is not well recorded. More important than the immediate symptoms of the menopause are the effects of hormonal changes on many organ systems of the body.

Predominantly the cardiovascular system and skeletal system are adversely affected by the post-menopausal hormonal changes as well as the inevitable ageing process [3]. Many research studies have been done on these aspects in the developed countries, but little research has been carried out in the developing countries. Particularly the socio-cultural impacts of menopause and health service needs of menopausal women in the developing countries are not studied'.

At the present time, the menopausal health condition of women has become a public health concern in the world. Many studies have been conducted among the menopausal women to assess the severity of symptoms and quality of life. There are three categories of symptoms, such as somatic (vasomotor) symptoms, psychological symptoms and urogenital symptoms. The variables associated with the occurrence of symptoms were socio-demographic factors, induced menopause, other chronic conditions, family and social stressors, negative attitudes to aging and menopause etc.

### **Aims and Objectives**

To study the prevalence of menopausal symptoms using Menopausal Rating Scale (MRS)

### **Material and Methods**

The present study was a cross sectional study, conducted in villages of Kuppam Mandal, Chittoor District, Andhrapradesh during the period February 2017 to January 2018. Using cluster sampling method study samples were selected from the study area. A total of 63 villages were there in Kuppam Mandal, each village were considered as a cluster, by simple random sampling method 27 villages were selected, 10 subjects were selected from each villages to attain the sample size. This study included women in post-menopausal state for more than 12 months and less than 10 yrs. Subjects who were not residing in that area for at least one year and people who were not willing to participate were excluded from this study.

A semi-structured questionnaire was used to record the socio-demographic factors of the study participants and Menopause Rating Scale (MRS) was used to assess the menopausal symptoms among the study participants.

Menopause Rating Scale (MRS) is a validated instrument for assessing the menopausal symptoms. The occurrence of eleven (11) symptoms among the subjects in the preceding four weeks period was recorded. The symptoms were classified into three dimensions (sub-scales) such as Somatic dimension (4 symptoms), Psychological dimension (4 symptoms) and Urogenital dimension (3 symptoms) [4].

### **Standardization of Menopause Rating Scale:**

The standardization of Menopause Rating Scale (MRS) was already established in other countries by population based study and the "reference values / scores" for various levels of severity were calculated and categorized as No or Little, Mild, Moderate and Severe symptoms [4,5].

The data were entered into MS Excel 2010 version and further analyzed using Epi-info

version 7.1. For descriptive statistics, the data were analyzed

## Results

The present study was conducted among 270 post-menopausal women residing in the rural area of Kuppam Mandal, Chittoor district, Andhra Pradesh

The lowest age among the subjects was 31 years and the highest age was 58 years. The mean age of the subjects was  $51.8 \pm 4.9$  years. Among the total of 270 subjects, most subjects (80.7%) were in the age group of 50 years & above 82.2% of the study participants were married. 87.1% of the individuals were belong to Hindu religion. 68.2% of the study participants were living in a nuclear family setup. Majority 71.5% of the study participants were found to be illiterate. 80.4% of the women were found to be home makers. 41.5% and 27% of the study participants belong to Class IV and Class III socio-economic status as per modified B. G. Prasad's classification. 12.2% of the study participants gave birth to 5 or more children during their reproductive period. 48.5% of the study participants were in between 7 – 9

years after their last menstrual period. 64.4% of the study participants have not adopted permanent sterilization method during their reproductive age group. 20% of the study participant in the group have attained menopause through surgery or chemotherapy / radiation as shown in the Table 1.

Among the 270 subjects, the most common somatic symptom was Joint and muscular discomfort (76.6%), psychological symptom was irritability (37.0%), and urogenital symptom was bladder problems (21.1%) as shown in Table 2.

In our study we observed that 13.4% and 12.2% of the study participants had Severe and Moderate Somatic symptoms respectively. In our study we observed that 23.3% of the study participants had Severe Psychological symptoms. In our study we observed that 11.1% and 19.3% of the study participants had Severe and Moderate Uro-Genital symptoms respectively as shown in Table 3. Based on the overall MRS score we observed that most of the study participants (53.3%) came under the category of 'no or little' and only 9.6% were in severe category as shown in Table 4

**Table 1: Distribution of Socio-demographic factors among study participants**

S. N.	Variables	Frequency	Percentage
<b>1.</b>	<b>Age group</b>		
	< 45	27	10.0
	45 - 49	25	9.3
	50 & above	218	80.7
<b>2.</b>	<b>Marital Status</b>		
	Married	222	82.2
	Divorced/ separated/ widowed (combined)	48	17.8
<b>3</b>	<b>Religion</b>		
	Hindus	235	87.1
	Muslims & Christians (combined)	35	12.9
<b>4</b>	<b>Type of Family</b>		
	Nuclear family	184	68.2
	Joint family & Three generation family (combined)	86	31.8
<b>5.</b>	<b>Literacy Status</b>		
	Illiterate	193	71.5
	Literate	77	28.5

<b>6.</b>	<b>Occupation</b>		
	Home maker	217	80.4
	Working woman	53	19.6
<b>7.</b>	<b>Socio-Economic Status (Modified B. G. Prasads class.</b>		
	Class I (6192 and above)	8	3.0
	Class II (3065-6191)	31	11.5
	Class III (1815-3064)	73	27.0
	Class IV (938 -1814)	112	41.5
	Class V (937 and below)	46	17.0
<b>8.</b>	<b>Parity</b>		
	0 – 2	149	55.2
	3 – 4	88	32.6
	5 & above	33	12.2
<b>9.</b>	<b>Duration of Last Menstrual Period (in Years)</b>		
	1 – 3	78	28.9
	4 – 6	61	22.6
	7 – 9	131	48.5
<b>10.</b>	<b>Permanent family planning - Adoption</b>		
	Yes	96	35.6
	No	174	64.4
<b>11.</b>	<b>Reason for Menopause</b>		
	Natural menopause	216	80.0
	Induced menopause	54	20.0
<b>12.</b>	<b>Chronic Medical Condition</b>		
	Yes	53	19.6
	No	217	80.4

**Table 2: Presence of menopause symptoms among study participants**

S.No.		Symptoms	Frequency (n=270)	Percentage (%)
1	<b>Somatic symptoms</b>	Hot flushes, sweating	75	27.8
2		Heart discomfort	77	28.5
3		Joint / muscular discomfort	207	76.6
4		Sleep problems	96	35.6
5	<b>Psychological symptoms</b>	Depressive mood	95	35.2
6		Irritability	100	37.0
7		Anxiety	93	34.4
8		Physical/ mental exhaustion	98	36.3
9	<b>Uro-genital symptoms</b>	Bladder problems	57	21.1
10		Sexual problems	33	12.2
11		Dryness of vagina	29	10.7

**Table 3: Severity of menopausal symptoms among study participants**

Severity of symptoms (with Reference value scores)	Frequency (n=270)	Percentage (%)
<b>Somatic Symptoms</b>		
No or little (0 – 2)	134	49.6
Mild (3 – 4)	67	24.8
Moderate (5 – 8)	33	12.2
<b>Severe (9 and above)</b>	36	13.4
<b>Psychological symptoms</b>		
No or little (0 – 1)	151	55.9
Mild (2 – 3)	56	20.8
Moderate (4 – 5)	0	0
<b>Severe (6 and above)</b>	63	23.3
<b>Uro-genital symptoms</b>		
No or little (0 )	193	71.5
Mild (1)	22	8.1
Moderate (2 – 3)	25	9.3
<b>Severe (4 and above)</b>	30	11.1

**Table 4: Severity of total MRS score among study participants**

Severity of symptoms (with Reference value scores)	Frequency (n=270)	Percentage (%)
No or little (0 – 2)	144	53.3
Mild (3 – 4)	62	23.0
Moderate (5 – 8)	38	14.1
Severe (9 and above)	26	9.6
<b>Total</b>	<b>270</b>	<b>100</b>

## Discussion

In the present study among the 270 post-menopausal women, it was enquired at the time of interview whether they had experienced the menopausal symptoms in the previous four (4) weeks. It was found that the somatic symptoms were the most prevalent and the uro-genital symptoms were the least prevalent symptoms among the subjects.

### Somatic symptoms

In the Tamil Nadu study also, every one of the total 128 subjects (i.e., all 100% of subjects) had at-least one somatic symptom [6] In this study, most subjects (49.6%) came under the ‘no or little’ category, followed by 24.8% subjects in ‘mild’ category, 12.2% in ‘moderate’ category and 13.4% in severe category. Similarly Guntur study observed

that 31.4% subjects came under the ‘no or little’ category, 57.1% subjects in ‘mild’ category, 5.7% in ‘moderate’ category [7] However China study noted that 42.8% of women had severe somatic symptoms [7]

### Psychological symptoms

In the present study among 270 subjects, 32 subjects (11.9%) had not reported any psychological symptom. About 20.8% subjects were in ‘mild’ category and 23.3% in severe category. However Tamil Nadu study found that every one of the total 128 subjects (i.e., all 100% of subjects) had at-least one psychological symptom [6]. Guntur study observed that, 31.4% subjects came under the ‘no or little’ category, 22.8% subjects in ‘mild’ category, 40.0% in

‘moderate’ category and 5.7% in severe category [6]. However China study noted that 17.9% of women had severe psychological symptoms [7].

#### **Uro-genital symptoms:**

The present study noted that 71.5% of the subjects came under the ‘no or little’ category, 9.3% in mild category, 12.6% in moderate category, and 6.6% in severe category. Guntur study observed that 37.1% subjects came under the ‘no or little’ category, 17.1% in ‘mild’ category, 34.2% in ‘moderate’ category and 11.4% in severe category [7]. However China study noted that 34.8% of women had severe uro-genital symptoms [8].

#### **Total MRS score (Severity of all menopausal symptoms considered together):**

As per Total MRS scale, the present study noted 53.3%, 23.0%, 14.1% and 9.6% of subjects were in ‘no or little’, ‘mild’, ‘moderate’ and ‘severe’ categories respectively. However Egypt study revealed that based on the total MRS scale, 15.6%, 30.4% and 54.0% of subjects were in mild, moderate and severe categories, respectively [9].

#### **Conclusion**

A significant proportion of study participants were presented with moderate and severe symptoms based on Menopause Rating Scale, which will directly affect the quality of life in these individuals. As most of the study participants were financially dependent we need to ensure the awareness and availability of health facilities to improve their life standards.

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