

# Current scenario of menopause-related symptoms using menopause rating scale among middle-aged women of Western India: A cross-sectional study

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## ABSTRACT

**Background:** Even though menopause is a natural phenomenon, it causes symptoms ranging from vasomotor symptoms to sleep disturbance, mood disorders, loss of sexual desire, and vaginal dryness. During the menopausal transition, women may experience a variety of symptoms. Many a time women are unaware of these symptoms and they do not seek treatment for the same. **Objective:** (1) To assess menopausal-related symptoms among middle-aged women using menopause rating scale (MRS) and (2) to assess the severity of symptoms according to the menopausal status of women. **Materials and Methods:** The cross-sectional study was conducted among 425 middle-aged women residing in field practice areas of Urban Health Training Center of present teaching hospital. The menopausal status is classified according to STRAW + 10 classifications. The English version of the MRS questionnaire was used as a tool for assessing menopausal symptoms. **Results:** Of 425 women evaluated, the mean age of attaining menopause was 42.8 years. Menopause-related symptoms were present among 304 (71.5%) women. Majority of women suffered joint and muscular discomfort (62.6%), 47.5% had hot flushes, and physical as well as mental exhaustion. Logistic regression analysis reveals that postmenopausal women had highest prevalence of menopausal symptoms as compared to other groups. **Conclusion:** Age of attaining menopause was bit lower in present study. Availability of treatment modalities for various menopause-related symptoms requires women's attention to improve their quality of life.


**KEY WORDS:** Menopause; Middle-aged Women; Menopause Rating Scale

## INTRODUCTION

Termination of menstruation for more than 12 months implies menopause, which is normal physiological change experienced by almost all women of middle ages. During the menopausal transition, women may experience a variety of symptoms ranging from vasomotor symptoms to sleep and mood disturbance, lack of sexual desire, and dryness in vagina. The study findings showed that 20% of women

whose symptoms were severe and the resulting discomfort greatly diminish the quality of life.<sup>[1]</sup> Many a time women are unaware of menopausal symptoms experienced by them.<sup>[2]</sup> Worldwide natural menopause occurs between the age of 45 and 55 years.<sup>[3]</sup> Mean age at menopause for Indian women ranges from 40.32 to 48.84 years and in developed countries from 48 to 51 years.<sup>[4]</sup> In 1990, there were about 467 million postmenopausal women worldwide and it is expected to rise to 1200 million by 2030. Of these, 76% will be living in the developing countries.<sup>[3]</sup>

The Reproductive and Child Health program covers women of reproductive age group (15–45 years) and adolescents. No specific health program in the country has been planned so as to give enough attention to postmenopausal women. Even though menopause is a natural phenomenon, it causes quite physical, mental, and emotional imbalance in the women's

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life. Transitions that take place during menopause vary widely among women. Some women notice little difference in their bodies while others find it difficult to handle their symptoms. There is considerably lack of awareness about the effects and the treatment of the menopausal symptoms among women in India.

Due to various menopause-related symptoms, the quality of life diminishes among the women approaching menopause. Various studies conducted by foreign countries also reveal the negative association of menopause and quality of life.<sup>[5,6]</sup> The issues of menopause have not been given due to attention among developing countries. Very few studies have been conducted in India dealing with the issue of menopause-related symptoms.

Present research aimed at studying various factors associated with menopause among urban residential women of Ahmedabad. Objectives of the studies were to assess various menopause-related symptoms and to assess the severity of symptoms with different stages of menopause. Findings of the study would assist in early recognition of symptoms, reduction of discomfort, and facilitate women to seek appropriate medical care, if necessary.

## MATERIALS AND METHODS

The community-based cross-sectional study was conducted among middle-aged women residing in field practice areas of Urban Health Training Center (UHTC) of one of the teaching hospital at Ahmedabad, Gujarat, India. The female population served by center is around 2500. All women between the age 40 and 60 were interviewed for their status related to menopause. Severely ill women, who were undergoing treatment for cancer or in remission, women who had hysterectomy and woman who did not give consent, were excluded from the study. Total 425 females had participated in the study. Data collection was carried out using predesigned and pretested pro forma consisting of three sections. The first section consists of sociodemographic data. The second section dealt with the reproductive and menopausal status of woman. The menopausal status is classified according to STRAW + 10<sup>[3,7]</sup> classification. It divides menopausal staging into premenopausal (minor changes in cycle length particularly decreasing length of the cycle); early perimenopausal (irregular menses without skipping cycles and more than 7 days difference in length of consecutive cycle, experienced after the previously regular cycles); late perimenopausal (amenorrhea = 60 days but within past 12 months); and postmenopausal (no menstrual bleeding in the past 12 months). In the third section, the English version of the menopause rating scale (MRS) questionnaire was applied for assessing menopausal symptoms which have been widely used and validated and have been used in many clinical and epidemiological studies, and in research on the etiology of menopausal symptoms to assess the severity of menopausal

symptoms.<sup>[6]</sup> The MRS composed of 11 items on a scoring scale from “0” (none) to “4” (very severe symptoms) and divided into three subscales such as somatic, psychological, and urogenital. Informed consent was taken from participants before initiation of the study. MRS was used for grading of menopause-related symptoms. Personal interview of all the females was conducted by the investigator. Data were entered into Microsoft Excel and analyzed using SPSS software (trial version). The study was approved by the Institutional Ethical Committee.

## RESULT

The present study was conducted among 425 menopausal women residing at the field practice area of UHTC. Mean age of women who participated in the study was 47.9 years with standard deviation of 4.3 years. Majority of them (93.4%) were married, 28 (6.6%) were widowed. Around 40% were illiterate and equal proportion (40.7%) studied up to primary education. 26% of women were working and rest (73.9%) was housewives. Majority 75.5% belonged to middle and lower middle class as per modified Prasad’s classification. Women living in a joint family constitute 36.2% whereas those living in nuclear family were 43.2%. Only few (0.5%) were living alone. 6% of women had habit of tobacco chewing.[Table 1].

All women were grouped as per their stages of menopause. Of 425, 12.7% were in premenopausal state, 28.5% were perimenopausal while 58.8% were postmenopausal. Mean age of attaining menopause was 42.8 years with standard deviation of 4.64 years. Around 7.6% women mentioned the age of attaining menopause between the age 30 and 35 years. Menopause-related symptoms were present among 304 (71.5%) women out of total 425 study participants [Table 2].

List of menopause-related symptoms felt by all women is shown in Table 3. Majority of women suffered joint and muscular discomfort (62.6%), 47.5% had hot flushes, and physical as well as mental exhaustion. Bladder problems and irritability were found among 36.9% of women.

Menopausal symptoms were correlated with stages of menopause (premenopausal, perimenopausal, and postmenopausal). Almost all the symptoms were found to be higher among postmenopausal women as compared to women in previous stages. Hot flushes were felt by 74.3% postmenopausal women, which were quite higher as compared to perimenopausal women (25.7%). Sleep problems were found among 72.9% postmenopausal women whereas 26% perimenopausal women had difficulties related to sleep. Bone and joint problems noticed among 68.8% postmenopausal and 26.7% perimenopausal women. Similarly, psychological and urogenital symptoms were also found to be higher among postmenopausal women (60–70%) as compared to perimenopausal women (20–30%) [Table 4]. Statistically,

significant difference was noticed for each menopausal symptom among all three groups ( $P < 0.05$ ). Logistic regression analysis also reveals that postmenopausal women had highest prevalence of menopausal symptoms as compared to other groups [Table 5].

Various comorbid conditions such as hypertension (7%), diabetes (5.5%), and thyroid disorders (0.9%) were also reported by the study participants. 88 (20.7%) women seek treatment of one or the other menopausal symptoms from health centers. The most common symptoms for which they consulted doctors were joint problems (61.8%) followed by urogenital problems (16%). Very few participants went to physicians for other menopausal symptoms. Only 8 (2.5%) women underwent hormone replacement therapy (HRT) in their lifetime for treating menopause-related symptoms. Qualitative assessment of women who were not seeking

care shows that most of the women were unaware regarding menopause-related symptoms and availability of treatment like HRT.

## DISCUSSION

Menopausal symptoms of 425 females between 40 and 60 years were assessed using MRS. The mean age of menopause among study participants was  $42.6 \pm 4.6$  years. The present study used MRS questionnaire for assessing menopausal symptoms. Overall findings suggest that among all study subjects, joint and muscular discomfort (62.6%) was highest as compared to other symptoms followed by hot flushes (47.5%), physical and mental exhaustion (47.5%), and bladder problems (36.9%). In the present study, we compared the menopausal symptoms among three different groups, namely, premenopausal, perimenopausal, and postmenopausal. Bone and joint problems were noticed among 68.8% postmenopausal and 26.7% perimenopausal women. Similarly, vasomotor symptoms were reported by 74.3% postmenopausal as compared to 25.7% perimenopausal women. Around 70–80% postmenopausal women reported psychological as well as urogenital problems as compared to 20–30% perimenopausal women. On classifying various illnesses as per MRS, it was observed that most of the illnesses were fall in the category of mild-to-moderate severity among all groups in present study.

Mean age of menopause was slightly lower as compared to other studies conducted in different regions of India, namely, Chandigarh (44.1 years), Maharashtra (45.8 years), Calcutta (46.1), and Bangalore (49.3 years).<sup>[8-11]</sup> As per Indian Menopause Society, average age of menopause is around 48 years, but Indian women could attain menopause at the ages of 30–35 years.<sup>[3]</sup> Studies conducted at various other countries showed mean age of menopause slightly higher as compared to Indian studies, Malaysia (51.2 years), Thailand (48.7 years), and Singapore (49.1 years).<sup>[12-14]</sup> Menopause-related symptoms assessed by present study were quite similar to other studies. In the study conducted at Bihar<sup>[15]</sup> using same rating scale, 112 (40.1%) women found to have episodes of hot flashes, sweating, and/or night sweats in the preceding 4 weeks. In their study, all the women complained of rheumatic complaints such as muscle and joint pains and half of them reported that they had sleep problems. A study conducted at Nepal<sup>[16]</sup> showed that among the perimenopausal group, physical symptoms such

**Table 1:** Sociodemographic profile of study population

Socioeconomic data	Frequency (%)
Age group (years)	
40–45	165 (38.8)
45–50	170 (40.0)
50–55	54 (12.7)
55–60	36 (8.5)
Marital status	
Married	397 (93.4)
Widow	28 (6.6)
Unmarried/divorced/separated	0 (0)
Education	
Illiterate	174 (40.9)
Primary	173 (40.7)
Secondary	72 (16.9)
Higher secondary	6 (1.4)
Working status	
Housewife	314 (73.9)
Working	111 (26.1)
Socioeconomic status	
Upper class	8 (1.9)
Upper middle class	74 (17.4)
Middle class	161 (37.9)
Lower middle class	160 (37.6)
Lower class	22 (5.2)
Total	425 (100.0)

**Table 2:** Menopausal status versus prevalence of menopausal symptoms

Menopausal-related symptoms	Menopausal status			Total (%)
	Premenopausal (%)	Perimenopausal (%)	Postmenopausal (%)	
Present	16 (5.3)	92 (30.3)	196 (64.5)	304 (100)
Absent	38 (31.4)	29 (24)	54 (44.6)	121 (100)
Total	54 (12.7)	121 (28.5)	250 (58.8)	425 (100)

as bone and joint pain, irritability, and physical and mental exhaustion were the common problems accounting for more than 80% of respondents. 70% menopausal women in their study had sleep disturbances, joint pain, and decrease libido the major problems. Ahsan *et al.*<sup>[15]</sup> noticed that severity was mild to moderate for most of the symptoms among the

postmenopausal group, whereas perimenopausal women had more frequency of severe-to-very severe illnesses.

**Table 3:** Menopausal symptoms experienced by study participants

Symptoms	Frequency (%)
Hot flushes, sweating	202 (47.5)
Heart discomfort	71 (16.7)
Sleep problems	192 (45.2)
Depressive mood	139 (32.7)
Irritability	157 (36.9)
Anxiety	133 (31.3)
Physical and mental exhaustion	202 (47.5)
Sexual problems	80 (18.8)
Bladder problems	157 (36.9)
Dryness of vagina	151 (35.5)
Joint and muscular discomfort	266 (62.6)

**Limitation of Study**

The present study correlated menopause-related symptoms with different stages of menopause. At the age of menopause, women may suffer from various other conditions which are having similar symptoms to that of menopause. These conditions may interfere in assessing menopause-related symptoms accurately.

**CONCLUSION**

Age of attaining menopause was bit lower in present study. Simultaneous increase in life expectancy makes women to experience longer duration of menopause. 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.

**Table 4:** Menopausal symptoms in different stage of menopause\*

Menopausal symptoms	Premenopausal n=54 (%)	Perimenopausal n=121 (%)	Postmenopausal n=250 (%)	Total
<b>Somatic</b>				
Hot flushes, sweating	0 (0.0)	52 (25.7)	150 (74.3)	202
Heart discomfort	0 (0.0)	10 (14.1)	61 (85.9)	71
Sleep problems	2 (1.0)	50 (26)	140 (72.9)	192
Joint and muscular discomfort	12 (4.5)	71 (26.7)	183 (68.8)	266
<b>Psychological</b>				
Depressive mood	4 (2.9)	29 (20.9)	106 (76.3)	139
Irritability	10 (6.4)	50 (31.8)	97 (61.8)	157
Anxiety	2 (1.5)	37 (27.8)	94 (70.7)	133
Physical and mental exhaustion	10 (5.0)	57 (28.2)	135 (66.8)	202
<b>Urogenital</b>				
Sexual problems	4 (5.0)	18 (22.5)	58 (72.5)	80
Bladder problems	10 (6.4)	43 (27.4)	104 (66.2)	157
Dryness of vagina	6 (4.0)	34 (22.5)	111 (73.5)	151

\*: Figures in the parenthesis indicate row-wise percentages

**Table 5:** Logistic regression analysis of menopausal symptoms in different menopausal stage

Menopausal stage	B	SE	Wald	df	Significant	Exp (B)	95% Confidence interval limits	
							Lower	Upper
Premenopausal			42.84	2	0.000			
Perimenopausal	-2.154	0.335	41.27	1	0.000	0.116	0.060	0.224
Postmenopausal	-0.135	0.263	0.263	1	0.608	0.874	0.522	1.462
Constant	1.289	0.154	70.35	1	0.000	3.630		

SE: Standard error

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