

Study of menopausal symptoms and perception about menopause among postmenopausal women residing in Mechinagar municipality

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ABSTRACT

Introduction: Menopause is the end of a woman's menstrual cycles and an important biomarker of both fertility loss and menopausal symptoms. Menopausal health has received limited attention in developing countries until more recent times. As women's status in society continues to improve, an increasing number of them are now seeking assistance for their menopausal issues.

Objective: To determine prevalence of menopausal symptoms and assess the perspectives of postmenopausal women regarding the menopausal experience.

Methods: A cross-sectional descriptive study was conducted on 162 women in postmenopausal phase, specifically those aged between 45 and 60 years, residing in Mechinagar municipality. The study included women who had not had a menstrual cycle in the previous year. The study employed convenient sampling technique. The study applied the Menopause Rating Scale (MRS) to find presence of menopausal symptoms and its severity.

Results: The participants had an average age of 55.72 ($SD \pm 4.401$) years. The mean age for menopause was of 47.17 years, with a standard deviation of ± 4.473 . Among the women surveyed, the most frequently reported menopausal symptoms included somatic symptoms such as heart discomfort, urogenital symptoms like bladder problems, hot flushes, joint and muscular pain, and psychological symptoms such as irritability. Majority 143 (88.3%) of the respondents had MRS score of less than 16. There was a predominantly positive perception of menopause.

Conclusion: The findings of this study indicated a high prevalence of menopausal symptoms, but these symptoms were generally of low severity. There was at least one menopausal symptom reported by each postmenopausal woman who participated in this study.

Keywords: Mechinagar; menopause, menopausal symptoms, perception.

Introduction

Menopause is a natural occurrence in a woman's life which is marked by a decrease in ovarian hormones such as

estrogen and progesterone, which results in the cessation of menstrual periods, usually taking place in the age range of 45 to 55¹. Menopause affects millions of women globally, with an anticipated 1.2 billion women experiencing it by 2030, particularly in countries such as Nepal, where the 45-54 age group is rapidly rising^{2,3}.

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Menopause serves as a crucial marker of fertility loss and the onset of middle-aged, menopause-related symptoms. These symptoms, which can vary widely and include hot flashes, sweating, genital dryness and sleep disruptions, reduced sexual desire, joint pain, and emotional changes, may be influenced by factors such as aging, hormonal fluctuations, cultural differences, and societal expectations⁴⁻⁶.

Despite its universality, menopause often carries stigma and misconceptions, which impact how it is perceived⁷. In societies with traditional gender roles, discussing menopause may be discouraged, leaving women to navigate their symptoms in isolation⁸.

Nepal, like many places, faces a growing need to address women's non-reproductive health, including menopausal issues. Many women are unaware of menopause and its possible difficulties, emphasizing the need of recognizing the prevalence of menopausal symptoms and women's attitudes as they approach this life stage. As a result, the purpose of this research is to investigate these issues.

Methods

A cross-sectional descriptive study on 162 postmenopausal women living in Mechinagar Municipality was conducted with the agreement of Nobel College's Institutional Review Committee (IRC) under Ref no. 079/080/44.

Participants gave informed consent and took part voluntarily. The participants' anonymity and confidentiality were respected at all times.

The study included women between the ages of 45 and 60 who lived in Mechinagar municipality and had not had a menstrual cycle in the previous year. Those who were very unwell and unable to comprehend questions due to medical difficulties were barred from participating. Data was collected over the course of one month, in July 2022. The study used a semi-structured questionnaire that asked questions about socio-demographic factors, the presence of comorbidities, smoking and drinking habits, menstrual and reproductive characteristics, the prevalence of menopausal symptoms, 14 questions about menopause's perceptions, and Menopause-Rating-Scale (MRS) for rating menopausal symptoms' severity. As a standardized evaluation instrument, the study used MRS that has been legalized in Nepal. This scale was used with the author's permission. The MRS scale consists of a number of items, each with a rating scale from zero to four, where four denotes a very severe symptom and zero denotes the absence of a symptom. Somatic-vegetative, psychological, and urogenital domains make up the MRS. Hot flashes, heart pain, sleep issues, and joint and muscular discomfort are all included in the somatic-vegetative domain. The sum of the scores for these four items represents the domain's

overall score. Four components make up the psychological domain: a depressed mood, anger, anxiety, and bodily and mental tiredness. The combined scores for these four components make up the overall score for this domain. Three issues, including sexual issues, bladder issues, and vaginal dryness, are included in the urogenital domain. The scores for these three criteria are added to determine the overall score for this domain. The MRS total score can be from 0 and 44. Postmenopausal women were divided into two groups for the purposes of this study: those with moderate menopausal symptoms (decided by an MRS cut-off score of 16) and those with severe menopausal symptoms (defined by an MRS cut-off score of 16) ⁹. This classification was used in the current study as well and was based on earlier research among middle-aged Nepalese women. Extremely severe, severe, moderate, mild, and none are the five severity categories. Using the parameters from the cited publication Singh A, Pradhan SK ¹⁰, the sample size was computed using the formula $\frac{Z^2pq}{e^2}$, where the prevalence was 89.3%. Assuming the confidence level of 95%, a precision at 5% and adding 10% non-response rate, the total sample size was 162.

The sample was collected using convenient sampling. EPI Info 7 was utilized in collecting data that was subsequently moved to SPSS IBM Statistics version 25 for analysis. For descriptive

analysis, the frequencies and percentages were combined with additional descriptive metrics in terms of median, standard deviation, & mean. Chi-square assessment was executed for assessing the relationship among two category variables. P-value lower than or equal to 5 was regarded significant.

Results

The study's 162 participants all reported at least one menopausal symptom. Menopause was seen positively by the subjects. The contestants in this study had 55.72 years as an average age, with 4.401 years as standard deviation. In terms of religion, the vast majority of participants (90.7%) identified as Hindu. The individuals' average age for their first menstruation (menarche) was 14.36 years, with 1.904 years as standard deviation. The contestants' average age at marriage was 17.88 years, with 2.921 years as standard deviation. Their first child was born at 20.01 years mean age, with 2.957 years as standard deviation, & their last child was born at 26.77 years mean age, with 5.754 years standard deviation. The majority of participants (66%) had achieved a level of literacy. The bulk of them (80.9%) belonged to nuclear households, and 72.2% worked as housewives. Sedentary was described by more than half of the individuals (53.1%). The most common co-existing health condition among the participants was hypertension, which impacted

30.9% of them, followed by diabetes, which affected 17.3%.

The average age at which menopause occurred was 47.17 years, ranging from 37-56 years. Natural menopause was experienced by the vast majority of respondents (86.4%). Many women reported multiple symptoms during menopause, the most common of which were joint and muscular pain, hot flushes, heart discomfort, urogenital issues such as vaginal dryness & bladder problems, and psychological symptoms like irritability & physical as well as mental exhaustion (Figure 1). The severity of these signs and symptoms is shown in Table 1 using Menopause-Rating-Scale (MRS). The majority of the reported symptoms were mild to moderate in severity. The most common menopausal symptoms in the mild category were heart discomfort (29%), sad mood (19.1%), and irritability (15.4%). The most prevalent symptom in the moderate category was joint and muscular pain (56.8%), followed by hot flushes (42.6%), vaginal dryness (40.7%), bladder issues (37%), and physical/mental tiredness (35.2%). Hot flushes (18.5%) and muscular soreness (8.6%) were also common in the severe category.

With 0.001 p-value, there is a statistically noteworthy relationship among MRS score & respondent's age. Furthermore, the MRS score was found to be statistically significant with family type and kind of menopause. The p-value

of family type was 0.001 whereas p-value for type of menopause 0.002. There were no noticeable variations in relationship of MRS score to religion, ethnicity, educational status, occupation, marital status, lifestyle, menarche age, marriage age, first childbirth age, last childbirth age, menopause age, and (Table 3).

Menopause was widely perceived as a natural part of aging, a universal experience for all women, a stage marked by the loss of fertility and youth, a period of freedom from menstrual cycles, and concerns about pregnancy, childbirth, and an increased risk of heart disease. However, a small minority of women (6.8%) considered menopause to be a medical illness, and some (5.5%) felt that after menopause, women lose desire in sexual intercourse. A tiny minority of respondents (2.5%) believed that women who approach menopause are less real as women, and an even smaller amount (1.8%) believed that women had no true role in life after menopause (Table 2).

Discussion

Menopause is a very natural and unavoidable biological condition. Menopausal health has up to recently primarily been marginalized in developing nations. As women's roles in society continue to progress, an increasing number of them are now seeking assistance for issues related to menopause. The primary objective of this research is to look at socio demographic

characteristics, the prevalence of comorbidities, smoking and drinking habits, menstrual and reproductive history, the prevalence and severity of menopausal symptoms, and perceptions toward menopause.

The participants in our study were mostly between the ages of 50 and 55, and their average age was 55.72. A significant portion, 91.4%, were married, and 72.2% identified as housewives with basic literacy skills. Comparing these demographics with a similar study conducted in 2021, we found comparable results, with more than 50% of respondents being over 50 years old, 84.7% being married, and 70.4% being housewives³. The majority, 90.7%, of our study population identified as Hindus, consistent with the 2021 study, where 84.5% of participants shared this religious affiliation. The older age group representation (50-55) in our study aligns with the expectation that menopause typically occurs in the late 40s to early 50s. The similarities in age, marital status, and religious affiliation between the two studies may reflect the stability of these demographic factors in the region over time⁸. Our study revealed that 53.1% of females had a sedentary lifestyle, a statistic consistent with another study reporting 70.24% of women in a similar category. The sedentary lifestyle trend among aging women is likely due to reduced physical activity and mobility as individuals grow older¹¹. This phenomenon is common and can be

attributed to age-related factors such as decreased energy levels and physical limitations. Among the most prevalent comorbidities in our study were hypertension (30.9%) and diabetes (17.3%), aligning with findings from a 2019 study that reported hypertension (49.1%) and diabetes (13.5%) as the most common comorbidities among postmenopausal women. The higher prevalence of these conditions in postmenopausal women can be attributed to age-related changes in metabolism and hormonal fluctuations¹².

Our study indicated that the age at menarche for most respondents was between 10-15 years, and the most common age at marriage was between 16-20 years (62.3%). These results closely matched those of a separate study where average age for marriage was in between 15 and 20 years, average age for menarche was in between 14 and 15 years old. The similarity in age at menarche and age at marriage can be attributed to cultural norms and traditions in the region. According to research by Nagaraj et al., the mean age at the first childbirth was 20.33 years, with a deviation of 3.3 years, while for the last childbirth, it was 24.54 years, with a deviation of 4.3 years. In our study, the mean age at the first childbirth was 20.01 years, with a deviation of 2.957 years, and for the last childbirth, it was 26.77 years, with a deviation of 5.754 years⁸. The most common delivery mode in our study was natural vaginal delivery, consistent with other research¹³. The

similarity in the mean age at childbirth and the prevalence of natural vaginal delivery reflects the typical reproductive patterns and childbirth practices in the region. These findings are consistent with cultural and medical norms.

In our study, the average age at menopause was 47.17 ± 4.473 years, consistent with previous studies^{14,15}. Natural menopause was prevalent in 86.4% of cases, while surgical menopause was observed in 13.6%, similar to a 2020 study where natural menopause accounted for 77.7%, and surgical menopause for 22.3%¹⁶. It can be attributed to the biological processes of aging and the relatively stable healthcare practices in the region. Surgical menopause may result from medical interventions or procedures when natural menopause has not occurred. Assessing the frequency and severity of menopausal symptoms using the MRS scale, we found a high prevalence of symptoms, but generally mild to moderate severity. This aligns with a survey by Nisar et al., where most women reported mild symptoms. The mild to moderate severity may be influenced by the overall health and well-being of the study population¹⁷.

In our study, 11.7% of postmenopausal women had MRS scores greater than 16, similar to a study in Nepal where 23% of postmenopausal women reported such scores. The generally mild to moderate symptoms reported may be related to the specific sociocultural context of rural areas,

where positive attitudes towards aging may mitigate symptom severity. The sociocultural context in rural areas may indeed play a role in moderating symptom severity, as women may embrace aging with a positive outlook, which can influence their perception of symptoms⁸. The most common menopausal symptoms in our study included joint and muscular pain (77.2%), hot flushes (71%), heart discomfort (66.7%), bladder problems (51.2%), vaginal dryness (49.4%), irritability (50%), and physical and mental exhaustion (49.4%). These findings were consistent with studies conducted in Nepal, where similar symptoms prevailed. It can be attributed to the universal nature of certain menopausal symptoms, such as hot flushes and joint pain. These symptoms are primarily driven by hormonal changes and physiological responses to menopause⁹.

Notably, our study identified some myths and misconceptions about menopause among participants. A minority of 2.5% of individuals believed that women going through menopause were no longer considered as “real” women. While 6.8% considered menopause to be a disease. These perceptions, while unfavorable, were lower than those reported among Malaysian women (25%) and significantly less than a Korean survey (65%) where menopause was perceived as an illness¹⁸.

Our study also revealed a significant association between respondent age and menopausal symptoms' severity, consistent with the 2020 research finding that symptoms was worsened with age up to 60 years then it was improved beyond that age. However, our study's findings regarding the significance of family types contrasted with other studies, possibly due to the small sample size. Additionally, we found a strong association between the type of menopause (natural or surgical) and the severity of menopausal symptoms. Both surgically induced and naturally occurring menopausal women experienced similar symptoms, such as vaginal

dryness, sleep disturbances, hot flashes. Women with early menopause, whether natural or induced, spent more years without the effects of estrogen and were more likely to develop heart disease and osteoporosis later in life."

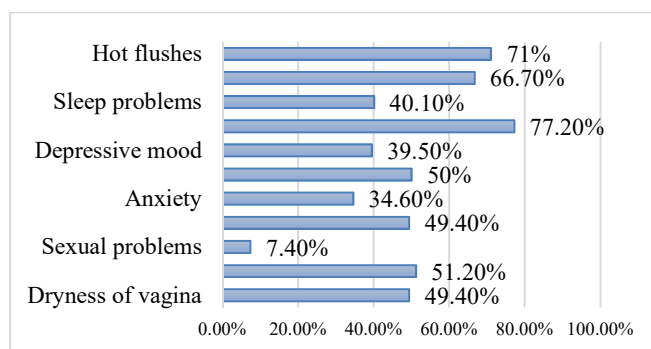


Figure 1: Prevalence of menopausal symptoms (n=162).

Table 1: Severity of menopausal symptoms, based on Menopausal Rating Scale among the study participants (n=162).

Symptoms of menopause	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Very severe n (%)
Somatic symptoms					
Hot flashes, sweating episodes	47 (29)	16 (9.9)	69 (42.6)	30(18.5)	0
Heart discomfort (unusual heart racing, awareness of heartbeat)	54 (33.3)	47 (29)	58 (35.8)	3 (1.9)	0
Sleep problems (difficulty falling asleep, disturbed sleep)	97 (59.9)	22 (13.6)	40 (24.69)	2 (1.2)	1 (0.6)
Joint and muscular pain	37 (22.8)	17 (10.5)	92 (56.8)	14 (8.6)	2 (1.2)
Psychological symptoms					
Depressive mood (feeling down, sad, lack of drive, and mood swings)	98 (60.5)	31 (19.1)	28 (17.3)	5 (3.1)	0
Irritability (feeling nervous, inner tension, feeling aggressive)	81 (50)	25 (15.4)	52 (32.1)	4 (2.5)	0
Anxiety (inner restlessness,	106(65.4)	25(15.4)	31(19.1)	0	0

feeling panicky)					
Physical/mental exhaustion (decreased performance/concentration, forgetfulness)	82(50.6)	15(9.3)	57(35.2)	8(4.9)	0
Urogenital symptoms					
Sexual problems (change in sexual desire, activity, and satisfaction)	150(92.6)	5(3.1)	7(4.3)	0	0
Bladder problems (difficulty in urinating, urgency, and incontinence)	79(48.8)	16(9.9)	60(37)	7(4.3)	0
Dryness of vagina (sensation of dryness or burning in the vagina, difficulty with sexual intercourse)	82(50.6)	10(6.2)	66(40.7)	3(1.9)	1(0.6)

Table 2: Perception regarding menopause among participants. (N=162)

Perceptions	Agree n(%)
Menopause is a sign of aging	140 (86.4)
Menopause means loss of fertility	137(84.6)
All women have to go through menopause	140 (86.4)
Menopause means freedom from menstrual cycles, pregnancy, and childbirth	129 (79.7)
After menopause women become more prone to heart disease	129 (79.7)
Women should discuss with their husband regarding menopause	117 (72.2)
Women should discuss with their family members regarding menopause	83 (51.2)
Menopause means loss of youth	105 (64.8)
Women who attain menopause are no longer real women	4 (2.5)
After menopause women have no real purpose in life	3 (1.8)
Menopause is a disease	11 (6.8)
After menopause have no energy to perform daily activity	8 (4.9)
After menopause women need not go to a gynecologist anymore	3 (1.8)
After menopause women do not want to have sexual intercourse	9 (5.5)

Table 3: Association between independent variables and severity of menopausal symptoms.

Independent variables	Dependent variables				P-value
	Menopause Rating Scale (MRS)				
	Mild symptoms		Severe symptoms		
	Frequency	(%)	Frequency	(%)	
Age					
45-49 years	17	81	4	19	
50-54 years	20	62.5	12	37.5	0.001*
Above 55 years	106	97.2	3	2.8	
Age at menarche					
10-15 years	112	89.9	14	11.1	0.648
16-20 years	31	86.1	5	13.9	
Age at marriage					
10-15 years	32	91.4	3	8.6	
16-20 years	88	87.1	13	12.9	0.782
21-26 years	23	88.5	3	11.5	
Age at first childbirth					
13-17 years	25	89.3	3	10.7	
18-22 years	95	89.6	11	10.4	0.531
23-37 years	22	81.5	5	18.5	
Age at last childbirth					
Below 20 years	19	95	1	5	
20-25 years	47	82.5	10	17.5	
26-30 years	43	87.8	6	12.2	0.068
31-35 years	23	100	0	0	
More than 35 years	10	83.3	2	16.7	
Age at menopause					
37-41 years	15	71.4	6	28.6	
42-26 years	54	91.5	5	8.5	0.124
47-51 years	46	92	4	8	
52-56 years	28	87.5	4	12.5	
Marital status					
Married	131	88.5	17	11.5	
Unmarried	1	100	0	0	
Divorced	1	100	0	0	0.859
Widowed	10	83.3	2	16.7	

Family type					
Nuclear	122	93.1	9	6.9	0.001*
Joint	20	66.7	10	33.3	
Lifestyle					
Active	71	93.4	5	6.6	0.056
Sedentary	72	83.7	14	16.3	
Type of menopause					
Natural menopause	128	91.4	12	8.6	0.002*
Surgical menopause	15	68.2	7	31.8	

Conclusion

In this study, every postmenopausal lady admitted to having at least one menopausal symptom. These symptoms were typically moderate, which was consistent with the results of earlier national investigations. The women most frequently indicated urogenital problems like bladder troubles, psychological symptoms like irritation, and physical discomforts like joint and muscular pain, hot flushes, and heart discomfort. The highest Menopause Rating Scale (MRS) score, which is significant, was below 16, indicating a higher prevalence of milder menopausal symptoms. This study also found a significant correlation between the respondent's menopausal

type, family type, and age. Despite certain myths and misconceptions about this time of life, women in the research had an overall positive opinion of menopause. Menopause-specific founded health education as well as awareness activities are required to overcome these myths.

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Conflict of interest None

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