

Menopausal Symptoms Among Post-Menopausal Women in Selected Wards of Lalitpur Metropolitan City

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Abstract

Introduction: Menopause is permanent cessation of menstruation for more than a year resulting from the loss of follicular activity of the ovaries. In Nepal, menopause is considered as a normal phenomenon and thus women themselves may not seek medical help and not understand the complications and issues associated with menopause. Therefore, this study aims to assess menopausal symptoms among post-menopausal women.

Methods: A descriptive cross-sectional research design was used to assess menopausal symptoms among postmenopausal women of age group 45-60 years residing in Lalitpur Metropolitan city, Nepal. One stage cluster sampling was used to select 273 respondents. Descriptive and inferential statistical methods were used to analyze data.

Results: Out of 273 postmenopausal women, mean age was 53.4 ± 3.8 years. The most common symptoms were physical and mental exhaustion 221 (81 %) followed by joint and muscular discomfort 213 (78 %), hot flushes and sweating 203 (74.4%). Among somato-vegetative symptoms, the severity of hot flushes and sweating was reported by 124 women (43.4%). Regarding psychological symptoms, the severity of physical and mental exhaustion was reported by 92 women (33.7%). For urogenital problems, the severity of sexual issues was reported by 78 women (28.6%).

Conclusions: It is concluded that more than half of the participants experienced mild to very severe menopausal symptoms especially hot flushes, sweating, joint and muscular discomfort, physical and mental exhaustion, sexual problems etc. These symptoms are significantly associated with physical activities and alcohol consumption.

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INTRODUCTION

Menopause is the permanent cessation of menstruation for more than a year resulting from the loss of follicular activity of the ovaries. Menopause is characterized by physical and mental symptoms such as hot flushes, urogenital symptoms, depression, irritability, sleep disturbances, troubles with concentrating, and sexual dysfunction may occur.¹ Several factors like, environmental, genetic, surgical influences, diet, exercise, and reproductive history is associated with the severity of symptoms of menopause. Despite the fact that menopause is a natural physiology,

some of the symptoms may lead to other psychological issues for lifelong.²

Menopause is a natural part of aging in women, where the number of primary ovarian follicles rapidly decreases, making them insufficient to respond to follicle stimulating hormone (FSH). As a result, there is no luteinizing hormone (LH) surge, preventing ovulation, which leads to a decline in estrogen production and the end of menstruation. During menopause, the lack of estrogen increases osteoclastic

activity, creating an imbalance between bone resorption and formation. This leads to greater bone loss, with bone mineral density likely starting to decline a few years before menopause begins.³ Menopause is frequently associated with a higher risk of cardiovascular diseases (CVD) and sleep disturbances. As the ovaries lose their follicular function during menopause, estrogen levels drop, which contributes to a range of cardio-metabolic risks. These risks include central obesity, decreased glucose tolerance, elevated blood pressure, abnormal plasma lipid levels, and inflammation in the blood vessels.⁴

A study conducted in Nepal in 2020 among postmenopausal women aged 40 to 60 years revealed, the common menopausal symptoms were decrease in physical strength (82.7%), accomplishing less than earlier (74%), experiencing poor memory (70%), change in sexual desire (40%).⁵ Life expectancy of women in Nepal is 73 years⁶ and average age of menopause is 48.7 years.⁷ So, it can be expected there will be an increasing number of menopausal women in Nepal. In Nepal, menopause is considered as a normal phenomenon, women themselves may not seek medical help and not understand the complications and issues associated with menopause. Therefore, this study aims to assess menopausal symptoms among post-menopausal women.

METHODS

A descriptive cross-sectional study design was adopted to assess the menopausal symptoms among postmenopausal women of age group 45 - 60 years residing in Lalitpur Metropolitan city, Nepal from June 2023 to July 2023. Approval letter for data collection from the selected wards was obtained and written consent was obtained from respondents prior to data collection. Women who were 45 to 60 years and had not have menstrual period at least for last 12 months, were included in the study. One stage cluster sampling technique was adopted to select the required number of samples. The Lalitpur Metropolitan city was selected purposively. Two wards (7 and 21) were selected randomly by lottery method assuming each ward as a cluster among 29 wards. Sample size was determined after calculation by using the following formula: Sample size for infinite population (n) = $Z^2 * p * q / e^2$ where $Z = 1.96$ for 95% confidence interval, $P = 0.80$, $q = 1 - P = 1 - 0.80 = 0.2$ and $e = 0.5$ margin of error expressed as decimal (i.e., 0.05), with allowable error of 5% (absolute precision).⁸

On the basis of research objectives structured interview questionnaire was developed. The standard tool Menopausal Rating Scale (MRS) was adopted to assess menopausal symptom among post-menopausal women. The menopausal rating scale consist 5-point Likert scale ranging from (0 = none, 1 = Mild, 2 = Moderate, 3 = Severe, 4 = Very severe). It consists of eleven items with three domains i.e., somato-vegetative symptoms (Four items; sweating / flush, cardiac complaints, sleeping disorders, joint and muscle complaints), psychological symptoms (Four items; depressed, irritable, anxious, exhausted) and urogenital symptoms (Three items; sexual problems, urinary complaints, vaginal dryness). The total score ranges between 0 (asymptomatic) and 44 (highest degree of complaints).⁹ The original version of this tool has sound validity and reliability result. Nepali version of MRS was developed and variable reliability test was done to see its internal consistency and it was at acceptable level of Cronbach alpha 0.77. Pearson correlation between variables was found to be statistically significant at 0.05 or 0.01.¹⁰ Data were collected after written consent via face-to-face interviews by using structured interview questionnaire in Nepali version, at respondents' home in their convenient time. Women between 45 and 60 years old, who had not menstruated at least for last 12 months, were identified by asking women of each household in ward 7 and 21. Data were analyzed in SPSS Statistics version 16.0 using descriptive statistics namely frequency, percentage, mean, standard deviation and inferential statistics method such as chi-square tests.

RESULTS

The study included a sample of 273 postmenopausal women with a mean age of 53.4 ± 3.8 years and out of them, 124 (45.42%) were of the age between 50 to 55 years. More than half, that is 145 (53.1%), experienced menopause between the ages of 46 and 50 years and 151 (55.31%) had less than five years of being menopause. Regarding education and employment, the highest number of women, 113 (41.4%), had completed primary education only indeed, nearly two third (59.0%) were employed. Additionally, a significant portion of the women, 164 (60.1%), engaged in physical activity whereas, nearly one-third, 82 (30.03%) were found with alcohol consumption habits, and around 4.0% with smoking habits as well (Table 1).

Table 1: Respondents' demographic information (N = 273)

Characteristics	Number	Percentage
Age (Years)		
Below 50	68	24.90
50 - 55	124	45.42
Above 55	81	29.68
Mean \pm SD = 53.4 \pm 3.8 Minimum = 40, Maximum = 60		
Education level		
No education	57	20.8
Primary	113	41.4
Secondary	50	18.3
SEE and above	53	19.4
Employment		
Employed	161	58.9
Unemployed	112	41.0
Physical activity (Yes)	164	60.1
Smoking (Yes)	10	3.61
Alcohol consumption (Yes)	82	30.03
Age at menopause (Years)		
45 and below	55	20.14
46 - 50	145	53.11
Above 50	73	26.73
Duration of post menopause (Years)		
< 5 years	151	55.31
> = 5 years	122	44.69
Median (Q ₁ , Q ₃) = 4 (2, 7) Minimum = 0.2, Maximum = 28		

Among the somato-vegetative symptoms, the severity (severe and very severe) of hot flushes and sweating was notably high, affecting 124 women (43.4%). This was followed by joint and muscular discomfort and heart discomfort. Regarding psychological symptoms, the severity of physical and mental exhaustion was prominent,

reported by 92 women (33.7%), followed by irritability and depressive mood. For urogenital problems, the severity of sexual issues was major affecting 78 women (28.6%), followed by vaginal dryness and bladder problems. (Table 2)

Table 2: The severity of menopausal symptoms in the menopause rating scale (N = 273)

Symptoms	None N (%)	Mild N (%)	Moderate N (%)	Severe N (%)	Very severe N (%)
Somato - vegetative symptoms					
Hot flushes and sweating	70 (25.6)	33 (12.1)	46 (16.8)	58 (21.2)	66 (24.2)
Heart discomfort	113 (41.4)	47 (17.2)	47 (17.2)	31 (11.4)	35 (12.8)
Sleep problems	117 (42.9)	50 (18.3)	38 (13.9)	42 (15.4)	26 (9.5)
Joint and muscular discomfort	60 (22.0)	60 (22.0)	48 (17.6)	48 (17.6)	57 (20.9)
Psychological symptoms					
Depressive mood	86 (31.5)	69 (25.3)	44 (16.1)	56 (20.5)	18 (6.6)
Irritability	80 (29.3)	60 (22.0)	51 (18.7)	61 (22.3)	21 (7.7)
Anxiety	95 (34.8)	70 (25.6)	45 (16.5)	47 (17.2)	16 (5.9)
Physical and mental exhaustion	52 (19.0)	67 (24.5)	62 (22.7)	53 (19.4)	39 (14.3)
Urogenital symptoms					
Sexual problem	125 (45.8)	35 (12.8)	35 (12.8)	38 (13.9)	40 (14.7)
Bladder problem	163 (59.7)	54 (19.8)	26 (9.5)	18 (6.6)	12 (4.4)
Dryness of vagina	151 (55.3)	47 (17.2)	32 (11.7)	29 (10.6)	14 (5.1)

The median score of menopausal symptoms (in different domains and total) is compared between categories of different socio-demographic and socio-economic variables. The median psychological symptom score is found significantly different among the categories of physical activities (P - value = 0.023), alcohol consumption (P - value = 0.002), and duration of post-menopause (P - value = 0.034). The median score of somatic symptoms is found significantly different among the categories

of physical activities (P - value = 0.010) and alcohol consumption (P - value = 0.000). However, the difference in the median score of urogenital symptoms is significant (P - value = 0.015) with the alcohol consumption habit only. Also, the median of the total symptom score was found significantly different among physical activity (P - value = 0.028) and alcohol consumption habits (P - value = 0.000). (Table 3)

Table 3: Factors associated with menopausal symptoms (N = 273)

Characteristics	Psychological symptom score (Median ± QD)	Somatic symptom score (Median± QD)	Urogenital symptom score (Median± QD)	Total symptom score (Median± QD)
Age (Years)				
Below 50	6.0 ± 3.3	6.5 ± 2.5	3.0 ± 2.0	14.5 ± 6.9
50 - 55	5.0 ± 3.5	6.0 ± 3.0	3.0 ± 1.5	14.0 ± 6.5
More than 55	6.0 ± 3.0	7.0 ± 3.0	3.0 ± 2.0	16.0 ± 6.5
P - value	.421	.207	.639	0.318
Education				
No education	5.0 ± 3.6	6.0 ± 3.5	2.0 ± 2.0	11.0 ± 7.6
Primary	7.0 ± 3.3	7.0 ± 3.0	4.0 ± 2.0	17.0 ± 6.5
Secondary and above	5.0 ± 3.0	6.0 ± 2.5	3.0 ± 1.5	14.0 ± 6.0
P - value	0.105	0.694	0.203	0.189
Employment				
Employed	5.0 ± 3.0	6.0 ± 3.5	3.0 ± 1.5	14.0 ± 7.0
Unemployed	6.0 ± 2.9	6.0 ± 2.9	3.0 ± 2.4	16.0 ± 6.5
P - value	0.193	0.550	0.098	0.113
Physical activities				
Yes	6.0 ± 3.5	7.0 ± 3.0	3.0 ± 1.5	16.0 ± 5.5
No	5.0 ± 3.0	6.0 ± 3.0	3.0 ± 2.3	13.0 ± 6.5
P - value	0.023*	0.010*	0.748	0.028*
Alcohol consumption				
Yes	7.5 ± 3.5	9.0 ± 3.5	4.0 ± 1.6	20 ± 6.1
No	5.0 ± 2.5	6.0 ± 3.0	3.0 ± 1.5	13 ± 6.5
P - value	0.002*	0.000*	0.015*	0.000*
Age at menopause (Years)				
45 and below	6.0 ± 3.0	6.0 ± 3.5	3.0 ± 2.5	13.0 ± 6.0
46 to 50	6.0 ± 3.0	6.0 ± 2.5	3.0 ± 2.0	15.0 ± 6.5
Above 50	5.0 ± 3.8	6.0 ± 3.5	3.0 ± 1.5	16.0 ± 8.0
P - value	0.766	0.757	0.780	0.961
Duration of post menopause (Years)				
< 5	5.0 ± 3.0	6.0 ± 3.0	3.0 ± 1.5	14.0 ± 7.0
>= 5	7.0 ± 3.5	6.5 ± 3.0	3.0 ± 2.0	16.0 ± 6.5
P-value	0.034*	0.415	0.194	0.061

DISCUSSION

The research aimed to evaluate menopausal symptoms among 273 post-menopausal women. The mean age of the participants was 53.4 ± 3.8 years, with less than half being between 50 and 55 years old. A study in Pakistan reported that the average age of participants was 52.17 ±

6.019 years, with 37.1% of the participants aged between 51 and 55 years.¹¹ Among them, the highest number of women, 113 (41.4%), had completed primary education only. This result is close to the study conducted in the South Canara District of India which had reported that 25.5% had completed primary education.¹² In terms of employment status, 59% were employed. In contrast, a study conducted

in India found that only 16.9% of the respondents were employed.¹³

The present study revealed that the most frequent symptoms on the menopause rating scale were physical and mental exhaustion (81.0%), joint and muscular discomfort (78.0%), and hot flushes and sweating (74.4%). In comparison, a study conducted in Tehran, Iran, identified hot flushes as the most common symptom (59.5%), followed by mood swings (42.6%), vaginal dryness (41.1%), and joint and muscular discomfort (5.1%).¹⁴ This study's findings align with those of a study conducted in Kathmandu, Nepal, which also documented joint and muscular discomfort as the second most common symptom (46.6%).¹⁵ A study conducted in India stated that joint and muscular discomfort was the most common symptom (70.6%), followed by physical and mental exhaustion (61.3%).¹⁶ A study by Rajbhandari et al in Nepal reported that 95.3% had the most prevalent symptom of loss of sexual interest, followed by joint and body pain in 39.3%.¹⁷

In the current study, among the somato-vegetative symptoms, the severity of hot flushes and sweating was notably high, affecting 24.1% women. This result was different from a previous study done in Nepal, where only 9.4% of women reported hot flushes and sweating as very severe.¹⁸ Whereas the finding in the study conducted in Pakistan among somato-vegetative symptoms, 66.3% of women reported hot flushes followed by night sweating 46.5% and sweating 34.7%. This difference may have been due to different study settings and population.¹¹

Regarding psychological symptoms, the severity of physical and mental exhaustion was prominent, reported by 92 women (33.7%), followed by irritability and depressive mood. A previous study done in Nepal revealed that the severity (severe and very severe) of physical and mental exhaustion was 26.6%, followed by irritability 10.6% and depressive mood 6.9%.¹⁸ In contrast, a study done in Kashan, Iran, presented that 28.6% of women reported anxiety as a severe symptom followed by depression 18.1%.¹⁹ Likewise, in Kerala, India, the most common symptoms experienced by 90.7% respondents were emotional issues, such as crying spells, depression, and irritability.¹³

In the present study, for urogenital problems, the severity (severe and very severe) of sexual issues was major, affecting 28.6% women, followed by vaginal dryness and bladder problems. A previous study done in Nepal revealed that the severity (severe and very severe) of sexual problems was 30.5% followed by vaginal dryness was 8.3% and bladder problems were 4.4%.¹⁸ Similarly, a study from Kashan, Iran, reported the severity of the sexual problem was 30% followed by vaginal dryness 19.9% and bladder problem 19.4%.¹⁹ Similarly, the study from Kerala, India, reported 58.9% of respondents with burning micturition.¹³

In the current study, the median psychological symptom score was found significantly different among the categories of physical activities (P - value = 0.023), alcohol consumption (P - value = 0.002), and duration of post-menopause (P - value = 0.034). A study done in India presented a significant association in menopausal symptoms with exercise. Those participants, who exercised at home, reported fewer psychological problems of menopause.¹⁶ Studies by some authors also suggested that exercise is beneficial to combat both physical and psychological problems of menopause.^{20,21}

In this study, the median score of somatic symptoms is found significantly different among the categories of physical activities (P - value = 0.010) and alcohol consumption (P - value = 0.000). However, the difference in the median score of urogenital symptoms is significant (P - value = 0.015) with the alcohol consumption habit only. Also, the median of the total symptom score was found significantly different among physical activity (P - value = 0.028) and alcohol consumption habits (P - value = 0.000). A study done in India revealed that the mean age of onset of menopause among participants without urogenital symptoms (N = 16) was 50.4 ± 3.6 years compared to 48 ± 4.6 years among participants with these symptoms (N = 78) (T = 2.006, P = 0.048). No other sociodemographic variables were found to be associated with the presence of somatic, psychological or urogenital symptoms among study participants.¹² A Malaysian study marked that there was no significant association found between all the menopausal symptoms with occupational status and age of onset of menopause.²² However, a study from Iran revealed a statistically significant difference between the severity of menopausal symptoms and working status (P = 0.017), different educational levels (P = 0.001), exercise activity (P = 0.001), exercise frequency (P = 0.04), and duration of menopause (P = 0.03).¹⁹ We have to acknowledge certain limitations of the present research. This study was conducted among postmenopausal women of only two wards of Lalitpur Metropolitan City; therefore, the sample size might not be representative to give a generalization for the entire population of the country.

CONCLUSIONS

It is concluded that more than half of the participants experienced mild to very severe menopausal symptoms during the post-menopausal period especially hot flushes, sweating, joint and muscular discomfort, physical and mental exhaustion, sexual problems etc. These symptoms are significantly associated with physical activities and alcohol consumption therefore it is important to evaluate the health issues thoroughly of menopausal women, and organize targeted awareness initiatives at the community level to improve the overall wellbeing of these women.

Raising awareness about menopause is vital for women's health. Educating women on the changes they may face can help them manage symptoms and seek support. Dedicated menopause clinics would offer resources, counseling, treatment, and screenings for breast cancer and heart disease, addressing risks linked to lower estrogen. Combining education with preventive care can enhance women's well-being during and after this transition.

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