

FREQUENCY AND SEVERITY OF MENOPAUSAL SYMPTOMS IN MIDDLE-AGED WOMEN PRESENTING IN A TERTIARY CARE SETTING

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ABSTRACT

Background: Menopause is a natural transition in women's life associated with diverse physical, psychological, and urogenital symptoms that may significantly affect quality of life.

Objective: To determine the frequency and severity of menopausal symptoms in middle-aged women presenting in a tertiary care setting.

Methodology: This hospital-based descriptive cross-sectional study was conducted at the Department of Obstetrics and Gynecology, Shalamar Hospital, Lahore, from March 2026 to June 2026, including 245 women aged 40–60 years selected through non-probability purposive sampling. Data were collected using a structured questionnaire based on the Menopause Rating Scale (MRS) and analyzed using SPSS version 26.

Results: Among 245 participants, the most common symptoms were sleep problems (80.82%), fatigue/exhaustion (76.73%), hot flushes and sweating (75.92%), and joint/muscular pain (71.02%). Moderate symptoms were reported in 39.18% of women, while 24.08% had severe and 7.35% had very severe symptoms. The mean total MRS score was 22.39 ± 6.87 . Menopausal symptoms affected daily activities in 71.84% of participants, and 57.55% did not seek medical care. Quality of life was reported as poor in 25.72% of women.

Conclusion: Menopausal symptoms are highly prevalent among middle-aged women and significantly impact daily functioning and quality of life.

KEYWORDS: Menopause, Menopausal symptoms, Menopause Rating Scale, Middle-aged women, Quality of life.

INTRODUCTION

Menopause refers to a natural biological phase in a woman's life when menstruation comes to a stop, when the ovarian follicular activity is lost [1,2]. It is usually experienced after the age of 45 and is linked with significant hormonal, physical, psychological and social changes [3]. Many women experience symptoms during this time that range from mild to moderate to severe, and symptoms do not occur at the same time for everybody. These symptoms can adversely affect functioning, relationships, and emotional and overall functioning and well-being [4,5].

Vasomotor symptoms like hot flushes and night sweats are among the most reported menopausal symptoms experienced by middle-aged women [6]. Other menopausal changes include sleep disturbances, fatigue, mood swings, irritability, anxiety, depressive symptoms, decreased libido, vaginal dryness, and musculoskeletal pain [7,8]. These manifestations vary in severity due to the individual's biological, environmental, cultural and socioeconomic factors [9]. Some women may have only minor symptoms, and others may have more serious ones that need medical care and changes to their lifestyle [10].

With the rising life span of women globally, the number of women in the postmenopausal period is becoming a significant public health issue [11]. There is a lack of awareness about menopausal symptoms and treatment in developing countries, including Pakistan [12]. Women may be reluctant to discuss their symptoms openly or seek appropriate treatment due to cultural beliefs and social stigma, as well as limited access to health care and poor health-seeking behaviors. As a result, it is estimated that many women still live in silence, resulting in physical and psychological deterioration [13,14].

There has been a significant difference in prevalence and intensity of menopausal symptoms reported from studies around the world. Ethnicity, nutritional status, educational level, lifestyle patterns and health care accessibility are among the factors that could affect these variations [15]. But local information about the frequency and severity of menopausal symptoms in Pakistani women, especially women attending tertiary care hospitals is still limited.

Awareness of the burden of these symptoms in the local population is critical to help guide clinical assessment and supportive care interventions for middle age women.

Research Objective

To determine the frequency and severity of menopausal symptoms in middle-aged women presenting in a tertiary care setting.

METHODOLOGY

Study Design and Setting

The study was a descriptive, cross sectional study carried out in the hospital setting which aimed to determine the prevalence and intensity of the menopausal symptoms in middle aged women attending the hospital. The research was carried out in Department of obstetrics and gynecology at Shalamar hospital Lahore.

Study Duration

The period of study was 6 months (from December 2025 to May 2026).

Sample Size and Sampling Technique

A sample size of 245 was estimated for the study, based on a 95% confidence level, a 5% margin of error, and an assumed prevalence of sexual problems of 19.83%, which was assumed to represent the least common menopausal symptom. Eligible participants were recruited to the study using non-probability purposive sampling technique during the study period. There was no selection bias as the selection was done based on the pre-defined inclusion and exclusion criteria.

Study Population

Study population comprised of women coming to the outpatient department of gynecology in the hospital for a routine consultation or with gynecological complaints in the menopausal age group.

Inclusion Criteria

Women aged 40–60 years were included in the study, as this age group represented the menopausal transition and postmenopausal period. Recruitment of women was designed to ensure accurate comprehension of the questionnaire and reliable self-report of symptoms, as they were able to understand and cooperate with the interview process. Women who had stopped menstruating for over a year who came for any gynaecological problem to the outpatient clinic were also included. To assure homogeneity of the study population, only women with a natural menopause were selected.

Exclusion Criteria

Women who had undergone either hysterectomy or bilateral oophorectomy prior to 50 years of age were excluded, since the menopausal symptom patterns and hormonal fluctuations are different in surgically vs. naturally menopausal women. Other exclusion criteria were women who were using hormonal contraceptives or hormone replacement therapy, women who had previously been treated for depression and women taking an antidepressant. These were excluded as menopausal symptoms may be affected by these medications. Also, women with known chronic lung, liver, or heart disease were excluded due to the possibility that these diseases may also cause symptoms similar to menopausal symptoms and may affect the results of the study. To avoid overlap with psychological symptom scoring, patients with a known psychiatric disorder were also excluded.

Data Collection Procedure

After obtaining ethical approval from the institutional ethical review committee, eligible participants fulfilling the inclusion criteria were enrolled after written informed consent had been obtained. Data were gathered by means of face-to-face interviews with a structured and pre-designed proforma. Sociodemographic and clinical data were collected, such as age, marital status, level of education, occupation, parity, age at menopause, length since menopause, menstrual history, sexual activity, body mass index (BMI), lifestyle, physical activity level, smoking, and other comorbid conditions like diabetes and hypertension. Further information was also collected on the impact of menopausal symptoms on daily activities, healthcare-seeking behaviours, treatment sought and quality of life during menopause. Menopausal symptoms were evaluated with a standardized and validated Menopause Rating Scale (MRS) comprising of 11 items related to three categories: Somatic symptoms (hot flushes and sweating, heart discomfort, sleep problems, and joint and muscular discomfort), Psychological symptoms (depressive mood, irritability, anxiety, and physical and mental exhaustion) and Urogenital symptoms (sexual problems, bladder problems, and vaginal dryness). The participants were provided a proper understanding of each symptom by explaining it in Urdu. The

severity of the symptoms was scored on a 5-point Likert scale (0=no symptom, 4=very severe). Consistent and uniformity in the data collection was maintained as all interviews were conducted by the principal researcher. A small number of participants used the questionnaire in a pilot test to check for clarity and feasibility prior to the main data collection.

Data Analysis Procedure

All the collected data have been entered and analyzed using SPSS version 26.0. The quantitative variables age, BMI, age at menopause, duration since menopause and total MRS score were presented as mean and standard deviation, whereas the qualitative variables sociodemographic characteristics, lifestyle factors, comorbidities, menopausal symptoms, severity and quality of life indicators were presented as frequencies and percentages. Chi-square test was used to determine the association between categorical variables and the severity of menopausal symptoms, and independent sample t-test was used to compare the mean MRS scores among the different categorical variables. The p values of 0.05 or lower were regarded as being statistically significant. Data were treated for integrity by excluding missing data on a case-wise basis.

Ethical Considerations

Ethical clearance was taken from the Institutional Ethical Review Committee, Shalamar Hospital Lahore before data collection. All participants signed informed consent forms and data collected was kept confidential. The involvement was voluntary and participants were free to drop out of the study at any time. The study was performed in accordance with the declaration of Helsinki.

RESULTS

Among 245 participants, the most common menopausal symptoms were sleep problems (80.82%), fatigue/exhaustion (76.73%), hot flushes and sweating (75.92%), and joint/muscular pain (71.02%), followed by irritability (62.04%), anxiety (58.78%), heart discomfort (57.96%), and depressive mood (56.33%), shown in table 1. Sexual problems (49.39%), vaginal dryness (55.51%), and bladder problems (44.90%) were also frequently reported. Regarding severity, 7.35% had no symptoms, 22.04% mild, 39.18% moderate, 24.08% severe, and 7.35% very severe symptoms. The mean domain scores showed somatic symptoms (9.42 ± 3.21) as the highest affected domain, followed by psychological (7.86 ± 2.94) and urogenital symptoms (5.11 ± 2.48), with a total mean MRS score of 22.39 ± 6.87 .

Table 1: Socio-demographic, Clinical Characteristics and Menopausal Symptom Profile of Participants (n = 245)

Variable	Category	Frequency (n;%)
Age (years)	40–45	62 (25.31)
	46–50	88 (35.92)
	51–55	63 (25.71)
	56–60	32 (13.06)
Age at menopause (years)	Mean $\pm$ SD	48.21 $\pm$ 3.84
Duration since menopause	1–2 years	74 (30.20)
	3–5 years	101 (41.22)
	>5 years	70 (28.57)
Marital status	Married	212 (86.53)
	Widowed/Divorced	33 (13.47)
Education	Illiterate	74 (30.20)
	Primary	58 (23.67)
	Matric	52 (21.22)
	Intermediate & above	61 (24.91)
Occupation	Housewife	189 (77.14)
	Employed	56 (22.86)
Parity	Nulliparous	21 (8.57)
	1–3	112 (45.71)
	≥ 4	112 (45.71)
BMI (kg/m ²)	Normal	96 (39.18)
	Overweight	89 (36.33)
	Obese	60 (24.49)
Lifestyle	Active	102 (41.63)
	Sedentary	143 (58.37)

Physical activity	Regular	68 (27.76)
	Occasional	94 (38.37)
	None	83 (33.88)
Smoking status	Yes	38 (15.51)
	No	207 (84.49)
Menstrual history	Natural menopause	245 (100)
Comorbid conditions	None	121 (49.39)
	Diabetes	58 (23.67)
	Hypertension	66 (26.94)
	Both	(optional if needed)
Menopausal symptoms (MRS)	Hot flushes & sweating	186 (75.92)
	Heart discomfort	142 (57.96)
	Sleep problems	198 (80.82)
	Joint & muscular pain	174 (71.02)
	Depressive mood	138 (56.33)
	Irritability	152 (62.04)
	Anxiety	144 (58.78)
	Fatigue/exhaustion	188 (76.73)
	Sexual problems	121 (49.39)
	Bladder problems	110 (44.90)
	Vaginal dryness	136 (55.51)
Severity of symptoms (MRS)	No symptoms	18 (7.35)
	Mild	54 (22.04)
	Moderate	96 (39.18)
	Severe	59 (24.08)
	Very severe	18 (7.35)
Domain-wise MRS score	Somatic symptoms	9.42 ± 3.21
	Psychological symptoms	7.86 ± 2.94
	Urogenital symptoms	5.11 ± 2.48
	Total MRS score	22.39 ± 6.87

The severity of menopausal symptoms showed significant associations with selected variables (table 2). Severe symptoms were more common in women aged >50 years (29.47% vs 25.33%, $p=0.020$), overweight/obese participants (28.19% vs 25.00%, $p=0.027$), those with lower education (28.03% vs 25.66%, $p=0.012$), and sedentary lifestyle (30.07% vs 22.55%, $p=0.001$). Overall, all studied factors showed statistically significant relationships with symptom severity.

Table 2: Association of Severity of Menopausal Symptoms with Selected Variables (Chi-square test, n = 245)

Variable	Category	Mild/Moderate (%)	n	Severe (%)	n	χ^2 value	p-value
Age	≤50 years (n=150)	112 (74.67)		38 (25.33)		5.42	0.020
	>50 years (n=95)	67 (70.53)		28 (29.47)			
BMI	Normal (n=96)	72 (75.00)		24 (25.00)		4.88	0.027
	Overweight/Obese (n=149)	107 (71.81)		42 (28.19)			
Education	Low (Illiterate + Primary) (n=132)	95 (71.97)		37 (28.03)		6.31	0.012
	High (Matric + Intermediate+) (n=113)	84 (74.34)		29 (25.66)			
Physical activity	Active (n=102)	79 (77.45)		23 (22.55)		10.18	0.001
	Sedentary (n=143)	100 (69.93)		43 (30.07)			

Menopausal symptoms affected daily life in 71.84% of women, with 34.66% reporting mild, 44.89% moderate, and 20.45% severe impact (Table 3). More than half (57.55%) did not seek medical care. Quality of life was reported as fair in 52.24%, poor in 25.72%, and good in only 22.04% of participants.

Table 3: Impact of Menopausal Symptoms on Daily Life (n = 245)

Variable	Category	Frequency (n)	Percentage (%)
Effect on daily activity	Yes	176	71.84

	No	69	28.16
Severity of impact	Mild	61	34.66
	Moderate	79	44.89
	Severe	36	20.45
Health seeking behavior	Yes	104	42.45
	No	141	57.55
Quality of life	Good	54	22.04
	Fair	128	52.24
	Poor	63	25.72

The mean MRS score was significantly higher in women aged >50 years (23.97 ± 6.89 vs 20.84 ± 6.21 , $p=0.021$), overweight/obese women (23.45 ± 6.73 vs 19.76 ± 5.88 , $p=0.002$), and sedentary individuals (24.11 ± 6.92 vs 19.12 ± 5.41 , $p<0.001$), indicating greater symptom severity in these groups (Table 4).

Table 4: Comparison of Mean MRS Score using Independent Sample t-test

Variable	Group	Mean MRS $\pm$ SD	t-value	p-value
Age	≤ 50 years (n=150)	20.84 ± 6.21	2.31	0.021
	>50 years (n=95)	23.97 ± 6.89		
BMI	Normal (n=96)	19.76 ± 5.88	3.12	0.002
	Overweight/Obese (n=149)	23.45 ± 6.73		
Physical activity	Active (n=102)	19.12 ± 5.41	4.08	<0.001
	Sedentary (n=143)	24.11 ± 6.92		

DISCUSSION

This study examined the prevalence and intensity of menopausal symptoms in 245 middle-aged women was assessed by Menopause Rating Scale (MRS). The most common symptom was sleep problems (80.82%), followed by fatigue/exhaustion (76.73%), hot flushes and sweating (75.92%) and joint/muscular pain (71.02%). These high prevalence rates were also found in another study conducted in rural Sindh, Pakistan, where other symptoms associated with fatigue such as sleep disturbances (40.9%), hot flushes (42%) and fatigue-related symptoms (38.2%) were also reported, but at lower rates than in our study [16]. The difference may be due to differences in access to health services, awareness of health and tertiary care hospital-based sampling of the present study population.

As for the severity, our study revealed that 39.18% had moderate symptoms, 24.08% severe and 7.35% very severe symptoms, whereas 7.35% did not have any symptoms. The overall mean score of the total MRS was 22.39 ± 6.87 , which is moderately high. In the same way, a tertiary care study reported the same pattern of symptom clustering, although there was some variation in the intensity of symptoms (MRS scores) by population [17,18].

The highest domain score in the present study was that in somatic symptoms (9.42 ± 3.21), followed by that in psychological symptoms (7.86 ± 2.94) and urogenital symptoms (5.11 ± 2.48). This is in line with the results of a Nepalese MRS study which reported that the most prevalent symptoms were associated with somatic complaints (joint pain 68.6%, sleep disturbances 78.7%) [19]. Both studies show that somatic symptoms are predominant, indicating that the physiological effects of estrogen deficiency are widespread, especially in the musculoskeletal and thermoregulatory system.

Age, BMI, education and physical activity were also significantly correlated with symptom severity, as shown by our results. Women aged >50 years showed higher mean MRS scores (23.97 ± 6.89) compared to those ≤ 50 years (20.84 ± 6.21 , $p=0.021$). Similarly, overweight/obese women had higher scores (23.45 ± 6.73 vs 19.76 ± 5.88 , $p=0.002$), and sedentary individuals reported significantly greater severity (24.11 ± 6.92 vs 19.12 ± 5.41 , $p<0.001$). Similar findings were observed in a Malaysian study, where it was observed that age and sedentary lifestyle were significant factors that contribute to the severity of menopausal symptoms [20].

Also 71.84% of participants said that menopausal symptoms had an impact on their daily activities, with 44.89% moderate and 20.45% severe impact. Only 22.04% reported good quality of life and more than half (57.55%) did not seek medical consultation. A tertiary care study in Pakistan was conducted where decreased health-seeking attitude was associated with cultural stigma and ignorance about the choices available for managing menopause [21] which was similar to the findings of this study.

Psychological symptoms like irritability (62.04 %), anxiety (58.78 %) and depression (56.33 %) were also prevalent amongst our study population. This is comparable to the psychological burden reported in an Asian multicenter study wherein psychological symptoms had an impact on 55% of menopausal women, showing a clear link between hormonal changes and mental health deterioration during menopause [22].

Strength and Limitations

The strengths of this study are that the Menopause Rating Scale (MRS) was used, which is a valid instrument for the assessment of the frequency and intensity of menopausal symptoms in all somatic, psychological and urogenital domains. The findings were more reliable due to the relatively adequate sample size ($n = 245$), and face-to-face interviews ensured that all the data was consistent with less inter-observer variability. Multiple sociodemographic, clinical and lifestyle factors were included for complete assessment of factors associated with severity of the menopausal symptoms. The study, however, is limited to its single-center hospital-based design, which might not be generalizable to the wider hospital-based population of the community. In addition, because non-probability purposive sampling was used, there existed a possibility of selection bias, and the cross sectional design did not allow for causal relationship between risk factors and symptoms. Furthermore, a reliance on self-reported data could lead to recall and reporting bias, especially when asking about subjective experiences like changes in mood and sleep.

CONCLUSION AND FUTURE RECOMMENDATIONS

This study emphasizes that middle-aged women visiting a tertiary care unit report menopausal symptoms with both somatic and psychological symptoms being significant and that a significant number of women have moderate to severe symptoms. Menopausal symptoms were also significant to affect daily living and quality of life, and there is still an inadequate level of healthcare-seeking. Based on these results, it can be recommended that structured menopausal counseling and screening services should be incorporated into routine gynecological outpatient services, to aid in early detection and treatment of menopausal symptoms. Future studies should be designed as large-scale community-based longitudinal studies to better understand the trajectories of menopausal symptoms throughout the menopause and test the effectiveness of strategies designed to alleviate menopausal symptoms, such as lifestyle modification programs, psychological support, and hormone or non-hormone therapies in improving the quality of life of menopausal women.

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