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Study of Menopausal Symptoms among Perimenopausal Women at a Tertiary Care Centre in Kerala

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ABSTRACT

BACKGROUND: Menopause is a natural transition in a woman's life, commonly occurring around the age of 51 years, and is associated with a wide range of physical, psychological, and urogenital symptoms. Perimenopausal women often experience these symptoms with varying severity, which can significantly affect their quality of life. In India, menopausal symptoms are frequently under-reported due to sociocultural factors and lack of awareness. This study aimed to assess the proportion and severity of menopausal symptoms among perimenopausal women using the MRS (Menopause Rating Scale) and to emphasize the need for appropriate counselling and management.

MATERIALS AND METHODS: A descriptive cross-sectional study was conducted over one year (March 2024–May 2025) at the Department of Obstetrics and Gynaecology, Government Medical College, Thrissur, Kerala. A total of 200 perimenopausal women aged 40–55 years attending the outpatient department, bystanders of inpatients, and healthcare workers were included using convenient sampling. Data on sociodemographic characteristics, clinical details, and menopausal symptoms were collected through interviews using a semi-structured questionnaire. Symptom severity was assessed using the Menopause Rating Scale, covering somatovegetative, psychological, and urogenital domains. Data were analyzed using SPSS version 25 and expressed as frequencies and percentages.

RESULTS: The mean age of participants was 46.96 ± 2.75 years. The mean overall MRS score was 14.98 ± 6.61. Somatovegetative symptoms were the most prevalent, followed by psychological and urogenital symptoms. Joint complaints (79%) and depression (74.5%) were the most common symptoms. Vaginal dryness (53.5%), sleep disturbances (47.5%), and hot flushes (46.5%) were also frequently reported. Only one participant had severe hot flushes requiring hormone therapy, and none had an MRS score >16 necessitating routine hormone replacement therapy.

CONCLUSION: Perimenopausal women commonly experience mild to moderate menopausal symptoms, predominantly somatic in nature. Low educational and socioeconomic status may limit awareness and access to care. Early identification, counselling, and health education are essential to improve symptom management and quality of life among perimenopausal women.

Keywords: Menopause, Perimenopause, Menopause Rating Scale, Menopausal Symptoms, Hormone Therapy.

INTRODUCTION

Menopause is defined as the permanent cessation of menstruation for 12 consecutive months and typically occurs around the age of 51 years. It marks the end of a woman's reproductive phase and is associated with significant hormonal changes, primarily a decline in estrogen levels. The timing of menopause and the severity of its symptoms are influenced by multiple factors, including genetics, environmental exposures, surgical history, lifestyle practices, and reproductive history.

Common menopausal symptoms such as hot flashes, night sweats, mood disturbances, and sleep problems arise largely due to estrogen deficiency, and timely consultation with healthcare providers can facilitate effective symptom management.[1,2]

Based on menstrual history, women are classified into three stages: premenopausal women with regular menstrual cycles, perimenopausal women who experience menstrual irregularities or whose last menstrual period occurred within the past 12 months, and postmenopausal women who have not menstruated for more than 12 months in the absence of other causes such as pregnancy, lactation, or medical treatment.[3] The perimenopausal phase is often characterized by the onset of menopausal symptoms and represents a critical window for early identification and intervention.

Common complaints during menopause include vasomotor symptoms, vaginal dryness, nervousness, mood changes, and sleep disturbances. Although these symptoms are commonly attributed to estrogen deficiency, their exact etiology is not fully understood. Not all women experience menopausal symptoms, and their severity and response to treatment vary widely, indicating that factors beyond hormonal changes-such as knowledge, attitudes, perceptions, and behavioral responses to menopause-also play an important role.[3]

The MRS is an internationally recognized and validated tool used to assess the severity of menopausal symptoms and their impact on a woman's quality of life. It evaluates 11 symptoms across three domains-somatovegetative, psychosocial, and urogenital-using a 5-point severity scale ranging from 0 (no symptoms) to 4 (severe symptoms), enabling standardized assessment and monitoring.[1,2]

With increasing life expectancy, women now spend nearly one-third of their lives in the postmenopausal period. By 2015, India was projected to have approximately 130 million elderly women, many of whom require long-term health support. However, sociocultural norms often result in under-reporting of menopausal symptoms, as women tend to suffer silently due to social expectations.[4,5] Despite this growing need, India currently lacks dedicated health programs addressing postmenopausal care, as existing initiatives primarily focus on women of reproductive age, leaving postmenopausal health largely neglected.[5]

Aims and Objectives

The study aimed to assess the proportion and severity of menopausal symptoms among perimenopausal women attending Government Medical College, Thrissur, using the MRS. Additionally, the study sought to provide counselling to women regarding menopausal transition, create awareness about hormone therapy, and discuss available alternative treatment options for the effective management of significant menopausal symptoms.

MATERIALS AND METHODS

Study Design

This was a descriptive cross-sectional study conducted over a period of one year, from March 2024 to May 2025, in the Department of Obstetrics and Gynaecology at Government Medical College, Thrissur, Kerala, India. The study population comprised perimenopausal women aged 40–55 years, including those attending the outpatient department, bystanders of inpatients, and healthcare workers associated with the department.

Inclusion and Exclusion Criteria

Perimenopausal women aged 40–55 years attending the outpatient department of Obstetrics and Gynaecology at Government Medical College, Thrissur, were included in the study. Bystanders of inpatients admitted to antenatal, postnatal, and gynaecology wards, as well as healthcare workers and hospital staff within the department who met the age criteria and provided informed consent, were also included. Women with serious debilitating illnesses, those unable to communicate due to mental disability, individuals unwilling to participate or provide consent, and women who had undergone surgical menopause were excluded from the study.

Sample Size Calculation

Sample size calculation was done as,

$n = Z^2 \times p \times (1-p) / e^2$

Where,

n = Sample size

P = Prevalence, 46% taken from the previous study

E = Margin of error (taken as 15% of p)

Z =1.96 for 5% level of significance

Therefore $n = 1.96^2 \times 46 \times 54 / (0.15 \times 46)^2$ n=200

Data Collection Procedure

Eligible study subjects-perimenopausal women aged 40–55 years attending the outpatient department, bystanders of inpatients, and healthcare workers in the Department of Obstetrics and Gynaecology at Government Medical College, Thrissur-were identified and selected using a convenient sampling method. After explaining the purpose of the study, informed written consent was obtained prior to data collection. Data were collected over a period of one year from 200 participants through face-to-face interviews using a semi-structured questionnaire to obtain general information, sociodemographic details, and menopause-related complaints. Menopausal symptoms were assessed across three domains-somatovegetative, psychosocial, and urogenital-using the Menopause Rating Scale (MRS), where symptoms were graded as none (0), mild (1), moderate (2), or severe (3). Mean overall MRS scores and mean subscale scores were calculated and analyzed using frequencies and percentages. Following assessment, participants received brief counselling regarding menopausal changes, the role of hormone therapy, and available alternative treatment options for significant menopausal symptoms.

Statistical Analysis

Data were coded and entered into Microsoft Excel and subsequently analyzed using SPSS version 25. Menopausal symptoms were evaluated using the Menopause Rating Scale (MRS). The overall mean MRS score, as well as the mean scores and standard deviations for each subscale (somatovegetative, psychological, and urogenital domains), were calculated. The results were summarized and presented as frequencies and percentages for each symptom.

RESULTS

Variable	Category	n (%)
Age (in years)	40–44	35 (17.5)
	45–49	132 (66.0)
	≥50	33 (16.5)
Education	Illiterate	2 (1.0)
	Primary	154 (77.0)
	Secondary	40 (20.0)
	Higher secondary & above	4 (2.0)
Marital status	Married	184 (92.0)
	Widow	11 (5.5)
	Divorced/separated	5 (2.5)
Socio-economic status	BPL	191 (95.5)
	APL	9 (4.5)

Table 1. Socio-Demographic Profile of Study Participants (n = 200)

Table 1 observes that most participants were aged 45–49 years, married, had primary-level education, and belonged to the below-poverty-line socioeconomic category.

Occupation	n (%)
Unemployed	67 (33.5)
Semi-skilled	89 (44.5)
Skilled	9 (4.5)
Clerical/farm/shop	34 (17.0)
Semi-professional	1 (0.5)

Table 2. Occupational Status of Study Participants

Table 2 illustrates that semi-skilled employment was the most common occupational category among the study population.

Comorbidity	Present n (%)
Diabetes mellitus	60 (30.0)
Hypertension	24 (12.0)
Other NCD/chronic illness	15 (7.5)
Permanent disability	1 (0.5)
Any comorbidity	**76 (38.0)**

Table 3. Clinical Profile and Comorbidities

Table 3 demonstrates that over one-third of participants had at least one comorbidity, with diabetes being the most prevalent.

MRS Parameter	Mean ± SD
Overall MRS score	14.98 ± 6.61

Somatovegetative domain	17.56 ± 9.63
Psychological domain	13.59 ± 8.44
Urogenital domain	13.07 ± 9.23

Table 4. Menopause Rating Scale (MRS) Scores

Table 4 highlights that somatovegetative symptoms had the highest mean scores, indicating greater symptom burden in this domain.

Symptom	**Mild–Moderate n (%)**	**Severe n (%)**
Hot flushes & sweating	137 (68.5)	1 (0.5)
Palpitations	27 (13.5)	0
Sleep disturbances	95 (47.5)	0
Joint complaints	151 (75.5)	7 (3.5)

Table 5. Severity of Somatovegetative Symptoms

Table 5 shows that joint complaints and sleep disturbances were the predominant somatovegetative symptoms, while severe symptoms were rare.

Symptom	**Present n (%)**
Depression	149 (74.5)
Anxiety	31 (15.5)
Memory problems	72 (36.0)

Table 6. Severity of Psychosocial Symptoms

Table 6 depicts depression as the most frequently reported psychosocial symptom among perimenopausal women.

Symptom	**Present n (%)**
Vaginal dryness	107 (53.5)
Urinary complaints	91 (45.5)
Sexual complaints	74 (37.0)

Table 7. Severity of Urogenital Symptoms

Table 7 summarizes that vaginal dryness was the most common urogenital symptom, followed by urinary and sexual complaints.

DISCUSSION

This hospital-based descriptive cross-sectional study was conducted in the Department of Obstetrics and Gynaecology at Government Medical College, Thrissur, over a period of one year and included 200 perimenopausal women aged 40–55 years. The majority of participants belonged to the 45–49-year age group (66%), with a mean age of 46.96 ± 2.75 years. This finding reflects the transitional phase during which menopausal symptoms commonly begin to manifest. Similar observations have been reported in studies from Nepal, where the mean age at menopause ranged from 49 to 49.9 years, while studies from rural districts showed a slightly higher mean age at menopause.[2] In Kerala, a comparable mean menopausal age of 50.58 years has been reported in an Ernakulam-based study.[6]

Educational status revealed that most participants had only primary education (77%), followed by secondary education (20%). This pattern was comparable to findings from Nepal, where primary-level education predominated.[2] Lower educational status may limit awareness regarding menopausal changes and available treatment options, thereby influencing symptom perception and reporting. Several studies have shown that women with higher education levels tend to have better access to health information and healthcare services, resulting in improved quality of life and lower MRS scores.[7] However, some studies have failed to demonstrate a significant association between education and quality of life in postmenopausal women.[8]

Most participants were employed in semi-skilled occupations (44.5%), while one-third were unemployed. A large majority (95.5%) belonged to the below-poverty-line socioeconomic category. Socioeconomic disadvantage may contribute to increased symptom burden due to limited healthcare access and increased psychosocial stress. Previous studies have noted that musculoskeletal complaints are more prevalent among women engaged in casual or semi-skilled work, reflecting the cumulative impact of physical labour and life-long socioeconomic stressors.[9]

In the present study, 92% of women were married. Married women generally reported a better quality of life compared to unmarried, divorced, or widowed women, likely due to greater social support and emotional stability. This observation is

consistent with earlier studies showing more positive attitudes and better quality of life among married menopausal women.[10,11]

Comorbidities were common, with 30% of participants having diabetes mellitus and 12% having hypertension. These findings are clinically significant, as metabolic and cardiovascular comorbidities can exacerbate menopausal symptoms and influence treatment choices. Menopause-related metabolic changes are known to increase insulin resistance and cardiovascular risk, underscoring the importance of holistic care in this population.[12,13]
The most frequently reported menopausal symptom was joint pain (79%), followed by depression (74.5%). The mean overall MRS score was 14.98 ± 6.61, indicating moderate symptom severity. Somatovegetative symptoms were more prevalent than psychological and urogenital symptoms. This contrasts with findings from a Nepalese study, where psychological symptoms were more predominant.[14] Joint pain emerged as the most common somatovegetative symptom, consistent with existing literature linking estrogen deficiency to musculoskeletal complaints.[15,16]

Among psychological symptoms, depression was the most common, followed by memory problems and anxiety. Hormonal fluctuations during perimenopause are known to influence mood and cognitive function, making this phase a vulnerable period for psychological disturbances.[17–20] Vaginal dryness was the most common urogenital symptom, followed by urinary and sexual complaints, findings that align with other regional and international studies.[14,21-23]

Only one participant experienced severe hot flushes requiring hormone replacement therapy, and none had an MRS score exceeding 16. This suggests that while menopausal symptoms were common, most were mild to moderate and manageable with counselling and non-pharmacological interventions.

The findings emphasize that menopausal symptoms are influenced not only by hormonal changes but also by socioeconomic status, education, occupation, marital status, and comorbid conditions. Early identification, targeted health education, and individualized counselling are essential to improve symptom management and quality of life among perimenopausal women.

Limitations
Menopausal symptoms and their severity are inherently subjective and may vary widely among individuals. In addition to hormonal changes, factors such as knowledge, attitudes, perceptions, and health-related behaviours significantly influence the experience and reporting of menopausal symptoms. Sociodemographic variables, including education level, profession, occupation, and socioeconomic status, can further affect women's awareness, attitudes toward menopause, and perception of symptom severity, thereby influencing how these symptoms are recognized, interpreted, and reported.

CONCLUSION

To conclude, this study highlights that menopausal symptoms are common among perimenopausal women and can significantly affect quality of life, with joint complaints and depression being the most prevalent. Somatic symptoms were more prominent than psychological and urogenital symptoms, although all domains contributed to overall symptom burden. Lower educational status, poor socioeconomic conditions, and the presence of comorbidities such as diabetes and hypertension further influenced symptom perception and management. Most symptoms were of mild to moderate severity, emphasizing the importance of early identification, health education, and counselling rather than routine pharmacological intervention. The findings underscore the need for integrated, women-centered healthcare strategies, targeted educational programs, and supportive policies to improve awareness, timely care, and overall well-being of perimenopausal women, particularly in resource-limited settings.

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