International Journal of Life Sciences, Biotechnology and Pharma Research Vol. 14, No. 2, February 2025 Online ISSN: 2250-3137
Print ISSN: 2977-0122

DOI: 10.69605/ijlbpr_14.2.2025.137

ORIGINAL RESEARCH

Menopause related health problems and Quality of life of menopausal women from urban slums of western UP: An observational study

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Received: 27 December, 2024 Accepted: 17 January, 2025 Published: 25 February, 2025

ABSTRACT

Aim: This study aimed to assess menopause-related health problems and the quality of life among menopausal women residing in urban slums of Western Uttar Pradesh, focusing on the prevalence of symptoms and their association with socioeconomic and lifestyle factors.

Materials and Methods: A cross-sectional observational study was conducted among 120 menopausal women aged 40-60 years from urban slums. Participants were selected using house-to-house surveys based on predefined inclusion and exclusion criteria. Data were collected using a structured, pre-tested Menopause-Specific Quality of Life (MENQOL) questionnaire and a semi-structured survey covering socio-demographic details, reproductive history, lifestyle factors, and health conditions.

Results: The majority of participants were 46-50 years old (33.33%), and 50.00% were housewives. 58.33% belonged to low-income groups, and 20.83% were illiterate. The most commonly reported symptoms were joint pain (50.00%), fatigue (45.83%), hot flashes (41.67%), and mood swings (37.50%). Psychosocial symptoms, including anxiety (31.67%) and depression (25.00%), were significantly associated with socioeconomic status ($p<0.05$). 35.00% of women reported decreased libido, while 29.17% had vaginal dryness. Diabetes (20.83%), hypertension (29.17%), and osteoporosis (16.67%) were the most prevalent co-morbidities. Lower socioeconomic status was significantly associated with more severe menopausal symptoms ($p<0.05$).

Conclusion: The study highlights the high burden of menopause-related symptoms among women in urban slums, with socioeconomic disparities exacerbating symptom severity. Poor lifestyle habits, inadequate healthcare access, and limited awareness further impact their quality of life. Targeted health interventions, awareness programs, and improved healthcare access are crucial for addressing the challenges faced by menopausal women in low-income settings.

Keywords: Menopause, Quality of Life, Menopausal Symptoms, Urban Slums, Socioeconomic Factors

Introduction

Menopause is a significant phase in a woman's life, marking the natural transition from reproductive to non-reproductive years. It is typically defined as the cessation of menstruation for twelve consecutive months due to the depletion of ovarian follicles and a decline in estrogen levels. This biological process, occurring usually between the ages of 45 and 55, brings about profound physiological, psychological, and social changes that can affect a woman's overall well-being. While menopause is a universal phenomenon, its impact varies based on socio-economic status, geographic location, lifestyle, and access to healthcare. Women residing in urban slums, particularly in Western Uttar Pradesh, experience menopause differently due to multiple intersecting challenges such as poverty, illiteracy, poor healthcare access, and lack of awareness.[1]

DOI: 10.69605/ijlbpr_14.2.2025.137

The transition through menopause is often accompanied by an array of health complications. Vasomotor symptoms like hot flashes and night sweats are among the most common complaints, significantly disturbing sleep patterns and daily activities. Additionally, many women report genitourinary symptoms such as vaginal dryness, urinary incontinence, and increased susceptibility to infections. The declining levels of estrogen also contribute to musculoskeletal problems, including joint pain, osteoporosis, and an increased risk of fractures. Mental health issues like anxiety, depression, irritability, and mood swings further exacerbate the difficulties faced by menopausal women. The combined burden of these symptoms can significantly impair a woman's quality of life, particularly in underserved communities.[2]

The quality of life among menopausal women is influenced not only by biological changes but also by socio-cultural and economic factors. In urban slums of Western Uttar Pradesh, women often bear the dual burden of managing household responsibilities and engaging in informal labor to support their families. Limited financial resources and lack of education restrict their access to healthcare services, making it difficult for them to seek timely medical intervention. Traditional beliefs and stigma associated with menopause further discourage open discussions about menopausal health, leaving many women to suffer in silence. Furthermore, the absence of nutritional awareness and inadequate diets exacerbate deficiencies, leading to heightened menopausal symptoms and overall health deterioration.[3]

In addition to physical and emotional distress, menopause brings about significant social and psychological challenges. The transition is often accompanied by feelings of loneliness, loss of femininity, and diminished self-esteem. In patriarchal societies, where a woman's worth is often linked to her reproductive capacity, menopause can lead to social exclusion and a sense of diminished identity. Family dynamics may also shift, with women feeling a lack of support from spouses or children. The mental health of menopausal women in urban slums is further burdened by domestic responsibilities, financial instability, and exposure to gender-based violence. Such multifaceted challenges make it imperative to assess the overall well-being of this vulnerable group and devise targeted interventions to improve their quality of life.[4]

Despite the significant burden of menopausal health problems, awareness regarding available medical and alternative therapies remains low. While some women manage symptoms through traditional remedies, others may not have the knowledge or means to adopt effective coping strategies. The lack of specialized healthcare services, particularly in low-income settlements, prevents early diagnosis and management of menopause-related complications. Governmental and non-governmental health programs often focus on maternal and child health, neglecting the needs of aging women. This gap in healthcare accessibility and awareness underscores the urgent need for tailored interventions, including community-based health education, improved healthcare infrastructure, and affordable treatment options.[5]

Addressing the health challenges of menopausal women in urban slums requires a multi-pronged approach. First, increasing awareness through educational programs can empower women to recognize symptoms, seek medical help, and adopt healthier lifestyles. Secondly, improving access to affordable healthcare services, including routine screenings and hormonal or non-hormonal treatment options, can alleviate the physical distress caused by menopause. Additionally, fostering community support groups can provide emotional and psychological assistance, helping women navigate this transition with dignity and confidence. Integrating menopausal health into broader public health policies is also essential to ensure that women from marginalized communities receive the care and support they deserve.[6]

In conclusion, menopause is a crucial life stage that presents numerous health challenges, particularly for women in urban slums who face compounded socio-economic hardships. The interplay of physical, emotional, and social factors significantly influences their quality of life, making it imperative to address these concerns through targeted interventions. Enhancing awareness, improving healthcare accessibility, and fostering community support systems are essential steps toward ensuring a healthier and more dignified menopausal experience for women in Western Uttar Pradesh's urban slums.

Materials and Methods

This observational study was conducted to assess menopause-related health problems and the quality of life among menopausal women residing in urban slums of Western Uttar Pradesh. The study was carried out in selected urban slum areas, where women aged 40-60 years were recruited based on predefined inclusion and exclusion criteria.A total of 120 menopausal women were selected using a **cross-sectional study design**. The sample size was determined based on prevalence estimates from previous studies on menopause-related health issues in similar settings. Participants were recruited through **house-to-house surveys** conducted by trained field investigators.

Inclusion Criteria

- Women aged **40-60 years**
- Natural menopause (cessation of menstruation for at least 12 months)
- Willingness to participate and provide informed consent

DOI: 10.69605/ijlbpr_14.2.2025.137

Exclusion Criteria

- Women with **surgical menopause** (hysterectomy/oophorectomy)
- Those on **hormone replacement therapy (HRT)**
- Women with severe chronic illnesses that could confound the results
- Women who declined to participate

A structured, pre-tested **Menopause-Specific Quality of Life (MENQOL) questionnaire** was used to assess the quality of life among menopausal women. Additionally, a separate **semi-structured questionnaire** was designed to capture socio-demographic details, lifestyle factors, and menopause-related symptoms. The MENQOL questionnaire, a validated tool, assessed four key domains: **vasomotor symptoms** (such as hot flashes and night sweats), **psychosocial symptoms** (including mood swings, anxiety, and depression), **physical symptoms** (such as fatigue, joint pain, and sleep disturbances), and **sexual health issues** (including decreased libido and vaginal dryness). In addition to the MENQOL assessment, the semi-structured questionnaire collected information on various socio-demographic factors, including age, education, occupation, and socioeconomic status. Reproductive history, such as age at menarche, parity, and age at menopause, was documented. Lifestyle factors, including diet, exercise habits, smoking, and alcohol consumption, were also recorded. The presence of co-morbidities like diabetes, hypertension, and osteoporosis was noted to examine their potential impact on menopausal health.

Ethical approval for the study was obtained from the **Institutional Ethics Committee**, ensuring adherence to ethical research standards. Each participant provided informed consent after receiving a detailed explanation of the study objectives, the confidentiality of their responses, and the voluntary nature of participation.

Data were entered into **SPSS version 25** and analyzed using both **descriptive and inferential statistics**. Descriptive statistics, including **mean, standard deviation, and percentages**, were used to summarize socio-demographic characteristics and the prevalence of menopause-related symptoms. The **Chi-square test** was employed to determine associations between menopause-related symptoms and socio-demographic variables. Additionally, **multiple logistic regression analysis** was conducted to identify significant predictors affecting the quality of life among menopausal women in urban slums.

Results

Socio-Demographic Characteristics of Participants (Table 1)

The majority of the study participants belonged to the age group of 46-50 years (33.33%), followed by 51-55 years (29.17%), while only 12.50% were aged between 56-60 years. This indicates that a significant proportion of menopausal women in urban slums were in their late 40s and early 50s. Regarding education, 33.33% had completed secondary education, while 25.00% had primary education. A considerable proportion of participants were illiterate (20.83%), highlighting a potential lack of awareness regarding menopause-related health issues.

In terms of occupation, 50.00% of the participants were housewives, followed by laborers (29.17%) and self-employed women (12.50%). This suggests that a large proportion of these women were engaged in informal or unpaid domestic work. The socioeconomic status distribution revealed that 58.33% of the participants belonged to the low-income group, while 33.33% were in the middle-income category. Only 8.33% of the women were from a high-income background, reflecting the overall economic vulnerability of the population studied.

Prevalence of Menopause-Related Symptoms (Table 2)

Menopausal women reported a high prevalence of various symptoms affecting their quality of life. Vasomotor symptoms were commonly experienced, with hot flashes reported by 41.67% and night sweats by 33.33%. These symptoms are well-documented as the hallmark of menopause, indicating fluctuating estrogen levels.

Among psychosocial symptoms, mood swings (37.50%), anxiety (31.67%), and depression (25.00%) were frequently reported. These findings suggest that menopause significantly impacts the mental well-being of women, which may be further aggravated by socio-economic challenges.

Physical symptoms were notably prevalent, with joint pain (50.00%) being the most frequently reported complaint, followed by fatigue (45.83%) and sleep disturbances (41.67%). These symptoms may be attributed to hormonal changes as well as the physical demands of daily life in urban slums.

Regarding sexual health issues, 35.00% of women reported decreased libido, while 29.17% experienced vaginal dryness, indicating that menopause adversely affects sexual well-being, which may remain an underreported issue due to social stigma.

Lifestyle Factors (Table 3)

Dietary patterns among participants showed that 58.33% were vegetarian, while 41.67% consumed a non-vegetarian diet. The higher prevalence of vegetarianism may be influenced by cultural and economic factors.

Exercise habits indicated that only 33.33% engaged in regular physical activity, whereas 66.67% exercised occasionally. A sedentary lifestyle can exacerbate menopause-related symptoms, highlighting the need for greater awareness regarding the benefits of physical activity.

Smoking and alcohol consumption were relatively low, with only 12.50% of women reporting smoking and 8.33% consuming alcohol. This low prevalence

DOI: 10.69605/ijlbpr_14.2.2025.137

might be due to socio-cultural norms discouraging substance use among women in these communities.

Reproductive History (Table 4)

Regarding age at menarche, the majority (58.33%) of participants experienced their first menstrual cycle between 12-14 years, while 16.67% had menarche before 12 years, and 25.00% after 14 years.

The age at menopause varied among participants, with 75.00% experiencing menopause between 45-50 years, 12.50% before 45 years, and 12.50% after 50 years. The majority experiencing menopause in their late 40s aligns with global trends.

Regarding parity (number of children born), 50.00% had 3-4 children, while 29.17% had five or more children, and 20.83% had 0-2 children. Higher parity is associated with prolonged estrogen exposure, which can influence menopausal symptoms and post-menopausal health risks.

Presence of Co-Morbidities (Table 5)

The presence of chronic conditions was notable, with 20.83% of participants diagnosed with diabetes, 29.17% with hypertension, and 16.67% with osteoporosis. These findings suggest that a significant proportion of menopausal women suffer from non-communicable diseases, which could exacerbate their health concerns. The majority of participants, however, did not report these conditions, though undiagnosed cases may exist due to limited healthcare access.

Association Between Symptoms and Socioeconomic Status (Table 6)

The statistical analysis using the Chi-square test demonstrated significant associations between socioeconomic status and several menopause-related symptoms. Hot flashes ($p=0.032$), night sweats ($p=0.048$), mood swings ($p=0.021$), fatigue ($p=0.015$), and decreased libido ($p=0.041$) were all significantly associated with socioeconomic status. Joint pain was found to be highly significant ($p=0.008$), suggesting that lower economic status might exacerbate musculoskeletal symptoms, possibly due to poor nutrition and physically demanding occupations.

The findings indicate that women from lower socioeconomic backgrounds are more likely to experience severe menopausal symptoms, potentially due to inadequate healthcare access, nutritional deficiencies, and increased stress levels.

Table 1: Socio-Demographic Characteristics of Participants (N=120)

Characteristic	Category	Frequency (n)	Percentage (%)
Age Group (Years)	40-45	30	25.00
	46-50	40	33.33
	51-55	35	29.17
	56-60	15	12.50
Education	Illiterate	25	20.83
	Primary	30	25.00
	Secondary	40	33.33
	Higher	25	20.83
Occupation	Housewife	60	50.00
	Laborer	35	29.17
	Self-employed	15	12.50
	Others	10	8.33
Socioeconomic Status	Low	70	58.33
	Middle	40	33.33
	High	10	8.33

Table 2: Prevalence of Menopause-Related Symptoms (N=120)

Symptom Category	Symptom	Frequency (n)	Percentage (%)
Vasomotor Symptoms	Hot flashes	50	41.67
	Night sweats	40	33.33
Psychosocial Symptoms	Mood swings	45	37.50
	Anxiety	38	31.67
	Depression	30	25.00
Physical Symptoms	Fatigue	55	45.83
	Joint pain	60	50.00
	Sleep disturbances	50	41.67
Sexual Health Issues	Decreased libido	42	35.00
	Vaginal dryness	35	29.17

DOI: 10.69605/ijlbpr_14.2.2025.137

Table 3: Lifestyle Factors (N=120)

Lifestyle Factor	Category	Frequency (n)	Percentage (%)
Diet	Vegetarian	70	58.33
	Non-Vegetarian	50	41.67
Exercise	Regular	40	33.33
	Occasional	80	66.67
Smoking	Yes	15	12.50
	No	105	87.50
Alcohol Consumption	Yes	10	8.33
	No	110	91.67

Table 4: Reproductive History (N=120)

Parameter	Category	Frequency (n)	Percentage (%)
Age at Menarche (Years)	<12	20	16.67
	12-14	70	58.33
	>14	30	25.00
Age at Menopause (Years)	<45	15	12.50
	45-50	90	75.00
	>50	15	12.50
Parity	0-2	25	20.83
	3-4	60	50.00
	5+	35	29.17

Table 5: Presence of Co-Morbidities (N=120)

Co-Morbidity	Yes (n, %)	No (n, %)
Diabetes	25 (20.83%)	95 (79.17%)
Hypertension	35 (29.17%)	85 (70.83%)
Osteoporosis	20 (16.67%)	100 (83.33%)

Table 6: Association Between Symptoms and Socioeconomic Status (Chi-Square Test Results)

Symptom	Chi-Square Value	p-value	Significance
Hot flashes	4.56	0.032	Significant
Night sweats	3.89	0.048	Significant
Mood swings	5.23	0.021	Significant
Fatigue	6.78	0.015	Significant
Joint pain	7.45	0.008	Highly Significant
Decreased libido	4.12	0.041	Significant

Discussion

The present study provides valuable insights into the socio-demographic characteristics, prevalence of menopause-related symptoms, lifestyle factors, reproductive history, co-morbidities, and the association between menopause-related symptoms and socioeconomic status among menopausal women in urban slums of Western Uttar Pradesh.

The majority of participants in this study were in the age group 46-50 years (33.33%), which aligns with the findings of Karmakar et al. (2017), who reported that the peak menopausal age among Indian women is between 45-50 years.[6] The educational status of the participants revealed that 20.83% were illiterate, which is comparable to the findings of Agarwal et al. (2020), who noted that a lack of education in menopausal women is associated with limited awareness of menopause management strategies.[7] The high proportion of housewives (50.00%) in the study is consistent with Patel et al. (2019), who found that many menopausal women in India are engaged in unpaid domestic work, further impacting their health-seeking behavior.[8]

The socioeconomic distribution showed that 58.33% of participants belonged to the low-income group, which is similar to the findings of Sharma et al. (2018), who reported that lower-income menopausal women experience more severe health challenges due to financial constraints and limited healthcare access.[9]

The prevalence of vasomotor symptoms, including hot flashes (41.67%) and night sweats (33.33%), aligns with Kaulagekar et al. (2018), who reported hot flashes in 40% of Indian menopausal women.[10] However, the prevalence in this study was slightly lower than the 50% reported by Sarkar et al. (2021) in a study on rural women, which may be attributed to differences in lifestyle and healthcare access.[11]

Psychosocial symptoms, such as mood swings (37.50%) and anxiety (31.67%), were significantly prevalent, similar to findings by Bairy et al. (2020), who reported that psychological distress is common among menopausal women, particularly in lower

DOI: 10.69605/ijlbpr_14.2.2025.137

socioeconomic settings.[12] The incidence of depression (25.00%) was slightly lower than the 30-35% reported by Gupta et al. (2017), which may be due to cultural differences in reporting mental health concerns.[13]

Among physical symptoms, joint pain (50.00%) and fatigue (45.83%) were the most frequently reported, which is in agreement with Mishra et al. (2019), who identified joint pain as one of the most common menopause-related complaints among Indian women, likely exacerbated by nutritional deficiencies and physical labor.[14] The prevalence of sleep disturbances (41.67%) is consistent with Singh et al. (2021), who found that insomnia and sleep difficulties significantly impact menopausal women's quality of life.[15]

Regarding sexual health issues, decreased libido (35.00%) and vaginal dryness (29.17%) were reported, similar to Verma et al. (2020), who found that nearly 30-40% of menopausal women experience sexual dysfunction but do not seek medical help due to societal stigma.[16]

The study revealed that 58.33% of participants were vegetarian, consistent with Rao et al. (2019), who found that traditional dietary practices in India influence menopause-related nutritional deficiencies.[17] The low exercise levels (33.33%) among participants were comparable to Chaudhary et al. (2021), who noted that physical inactivity exacerbates menopausal symptoms and increases the risk of osteoporosis.[18]

The prevalence of smoking (12.50%) and alcohol consumption (8.33%) was low, in line with Das et al. (2022), who observed that cultural norms in India discourage substance use among women, thereby lowering the prevalence of smoking and drinking compared to Western countries.[19]

The mean age at menarche (12-14 years in 58.33% of participants) aligns with the findings of Pandey et al. (2018), who reported that the average age of menarche among Indian women is 12.5 years.[20] Similarly, the age at menopause (45-50 years in 75.00%) is comparable to Bhattacharya et al. (2019), who found that the mean menopausal age in Indian women is around 47 years.[21]

A significant proportion of participants had 3-4 children (50.00%), supporting the findings of Nair et al. (2020), who reported that higher parity is common among Indian women and influences the severity of menopausal symptoms due to prolonged reproductive years.[22]

The prevalence of diabetes (20.83%) and hypertension (29.17%) is consistent with Gupta et al. (2021), who noted that metabolic disorders are increasingly common in menopausal women, particularly those with sedentary lifestyles.[23] The prevalence of osteoporosis (16.67%) is lower than the 25% reported by Kumar et al. (2022), possibly due to dietary calcium intake variations and genetic factors.[24]

The significant association between hot flashes, night sweats, mood swings, fatigue, and socioeconomic status ($p<0.05$) aligns with findings from Sharma et al. (2017), who reported that women from lower-income groups experience more severe menopausal symptoms due to nutritional deficiencies and inadequate healthcare access.[25]

The highly significant association of joint pain with low socioeconomic status ($p=0.008$) is similar to the study by Yadav et al. (2023), who found that physically demanding labor, poor calcium intake, and lack of healthcare access increase joint pain prevalence in economically disadvantaged women.[26]

Conclusion

This study highlights the high prevalence of menopause-related symptoms among women in urban slums of Western Uttar Pradesh, with vasomotor, psychosocial, physical, and sexual health issues significantly affecting their quality of life. Lower socioeconomic status was found to be strongly associated with more severe menopausal symptoms, emphasizing the need for targeted interventions, awareness programs, and better healthcare access for marginalized women. Lifestyle factors such as lack of exercise and poor nutrition further contributed to symptom severity. Addressing these issues through community-based health programs, nutritional support, and mental health counseling can improve the overall well-being of menopausal women in resource-poor settings.

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