

Health Challenges amongst Post-Menopausal Women in Maharashtra's Urban Slum Enclaves: A Comprehensive Morbidity Analysis

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Abstract:

Background: The study aims to investigate the morbidity profile among post-menopausal women residing in urban settings within Maharashtra, focusing on associations between morbid conditions and the menopause transition phase.

Methodology: A cross-sectional study comprising n = 274 post-menopausal women in an urban metropolitan area was conducted. Participants' demographic characteristics, morbid conditions, and current menstrual status were recorded. Statistical analyses including chi-square tests were employed to explore associations between participant characteristics, morbid conditions, and menopause transition.

Results: The study revealed significant associations between the menopause transition and prevalent morbid conditions. Notably, women in the menopause transition phase exhibited a higher prevalence of poor memory (67.4%) and diabetes (66.7%) compared to post-menopausal women. However, associations between menopause transition and feelings of depression or vasomotor symptoms were non-significant.

Conclusion: The findings underscore a distinct relationship between the menopause transition phase and increased prevalence of poor memory and diabetes among post-menopausal women in this urban cohort. These results emphasize the need for targeted healthcare interventions addressing memory-related issues and diabetes risk management during the menopause transition phase.

Keywords: Menopause Transition, Morbidity Profile, Post-Menopausal Women, Urban Settings, Maharashtra, Poor Memory, Diabetes Risk.

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Introduction

Post-menopausal women residing in urban slum areas constitute a significant yet often understudied demographic in healthcare research. The urbanization trend in Maharashtra, particularly within metropolitan areas, has led to a rapid influx of populations into densely populated and resource-limited slum communities. Among these residents, post-menopausal women represent a critical subset facing unique health challenges influenced by a myriad of socio-economic, environmental, and lifestyle factors.[1]

Menopause, a natural physiological transition, signifies the cessation of menstrual cycles and marks a phase of hormonal and metabolic changes in a woman's life.[2,3] This transition often brings about alterations in health and well-being, with increased susceptibility to various morbidities. However, within urban slum settings, the

healthcare landscape is marked by inadequate access to quality healthcare services, poor sanitation, substandard living conditions, and limited health education.[4] These factors synergistically contribute to a distinctive health profile for post-menopausal women in these communities, accentuating their vulnerability to a spectrum of health issues.

Despite the recognized impact of menopause on health outcomes, comprehensive studies delineating the specific morbidity profile of post-menopausal women within urban slum areas in Maharashtra remain scarce. Understanding this profile is pivotal for devising targeted interventions, healthcare policies, and resource allocation to address their unique health needs effectively. This study aims to bridge this knowledge gap by systematically assessing the

morbidity spectrum prevalent among post-menopausal women residing in urban slums of a metropolitan city in Maharashtra. By elucidating prevalent health conditions and their determinants, this research endeavours to inform evidence-based strategies aimed at enhancing the health and well-being of this vulnerable population.

Methodology

This cross-sectional study aimed to determine the morbidity profile among post-menopausal women residing in urban slum areas of a metropolitan city in Maharashtra. The study utilized a quota sampling method to select participants meeting specific inclusion and exclusion criteria. Quota sampling was employed to ensure representation from various age groups within the post-menopausal demographic. A total sample size of 274 post-menopausal women meeting the inclusion criteria was determined for this study.

Participants were included if they met the following criteria, Postmenopausal status, defined as no menses experienced within the last 12 months, age less than 60 years. Residency within the designated urban slum areas of the specified metropolitan city in Maharashtra. The following criteria were used to exclude potential participants:

Women with un-natural menopause, including those who underwent surgical menopause or radiotherapy for cervix cancer. Women currently on medications such as anxiolytics or anti-depressants to mitigate potential treatment-related effects. Women with serious diseases or mental retardation. Women unwilling to provide informed consent for participation in the study.

Trained researchers visited the designated urban slum areas and identified potential participants meeting the inclusion criteria. A structured questionnaire was administered to gather data on demographic details, medical history, and specific morbidities experienced by the participants. Prior ethical approval was obtained from the Institutional Review Board (IRB) ensuring compliance with ethical standards for human research. Informed consent was obtained from all participants before their inclusion in the study, and confidentiality of their information was strictly maintained throughout the research process.

Collected data were analysed using appropriate statistical methods such as descriptive statistics to determine the prevalence and distribution of various morbidities among the sampled population.

Results

Table 1: Demographic Characteristics of Participants

Demographic Characteristics	
Characteristics	N (%)
Age	
45–50 y	126 (46.0%)
50–55 y	148 (54.0%)
Religion:	
Muslim	263 (95.9%)
Hindu	11 (4.1%)
Education:	
Illiterate	154 (56.2%)
Literate	120 (43.8%)
Occupation:	
Housewife	160 (58.4%)
Manual labourer	102 (37.1%)
Semiskilled/skilled worker/shopkeeper	12 (4.4%)
Socio-economic status:	
Upper	10 (3.8%)
Upper middle	35 (13.0%)
Middle	31 (11.7%)
Lower middle	75 (34.6%)
Lower	79 (36.8%)
Marital status:	
Married	229 (83.8%)
Divorced/separated	3 (1.0%)
Widowed	42 (15.2%)
Type of family:	
Nuclear	100 (36.5%)
Joint	160 (57.8%)
Three-generation	14 (5.7%)

Exercise:	
Yes	149 (54.6%)
No	125 (45.4%)
Current menstrual status:	
Menopause transition	43 (15.6%)
Post-menopausal	231 (84.4%)

The study comprised a sample of n = 274 post-menopausal women residing in urban settings within a metropolitan area. The participants were divided into two age groups: 45–50 years, constituting 126 individuals (46.0%), and 50–55 years, consisting of 148 individuals (54.0%). Religious affiliation showed a predominant Muslim representation with 263 individuals (95.9%), while the Hindu population comprised a smaller fraction of 11 individuals (4.1%).

Educational attainment delineated two primary categories: 154 participants (56.2%) classified as illiterate and 120 participants (43.8%) classified as literate. Occupation-wise, the majority were housewives (58.4%), followed by manual labourers (37.1%) and a smaller proportion involved in semiskilled/skilled work or shopkeeping (4.4%).

Socio-economic status distribution revealed a varied landscape with 3.8% falling into the upper category, 13.0% in the upper-middle, 11.7% in the middle, 34.6% in the lower-middle, and 36.8% in the lower socio-economic strata. Marital status predominantly depicted married individuals (83.8%), with smaller percentages for divorced/separated (1.0%) and widowed (15.2%) individuals.

Family structure indicated a considerable representation of joint families (57.8%) compared

to nuclear families (36.5%) and a minor representation of three-generation households (5.7%). Exercise participation was observed in 54.6% of the participants, while 45.4% reported no regular exercise regimen.

In terms of menstrual status, 15.6% were in the menopause transition phase, while the majority, accounting for 84.4%, were post-menopausal. The demographic composition presents a varied and predominantly Muslim population of post-menopausal women within this urban metropolitan context. The high representation of illiterate individuals, coupled with occupations primarily involving housekeeping and manual labour, underscores potential socio-economic disparities within the sampled population. The dominance of married individuals and joint family structures reflects cultural and social norms prevalent in the studied demographic. Moreover, the majority being post-menopausal suggests a need for focused healthcare interventions catering to the health needs of this specific demographic, considering the prevalence of various health conditions and their potential impact on the quality of life in this population subset. Understanding these demographic nuances is crucial for tailored healthcare policies and interventions aimed at addressing the unique needs of post-menopausal women in urban settings.

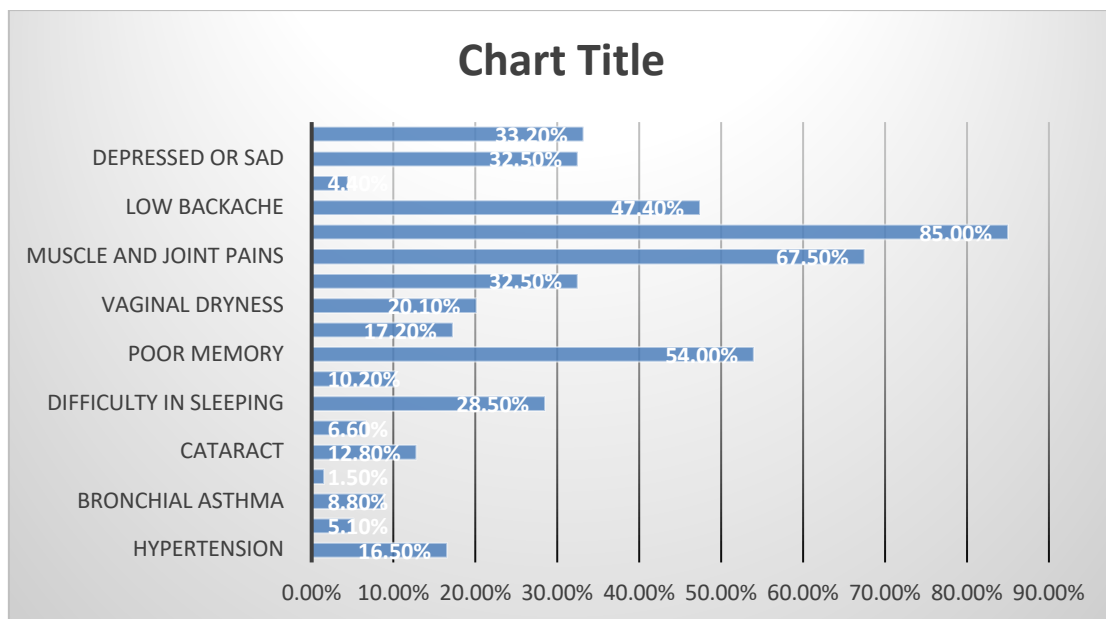


Figure 1: Morbidity profile of Post-Menopausal Women

The study examined the morbidity profile of n = 274 post-menopausal women residing in urban settings within a metropolitan area. The prevalence of various health conditions within this demographic was as follows:

Hypertension affected 16.5% of the participants, while diabetes was reported in 5.1% of the sampled population. Bronchial asthma accounted for 8.8% of the cases, with heart attack being relatively rare, observed in 1.5% of individuals. Cataract, a common age-related ocular condition, was prevalent in 12.8% of the sample, while decreased hearing was reported by 6.6% of participants. Difficulty in sleeping, a multifactorial concern, affected a notable 28.5% of the post-menopausal women studied.

Other prevalent conditions included constipation (10.2%), stress urinary incontinence (17.2%), and vaginal dryness (20.1%). Heartburn or acidity was reported by 32.5% of the population, while muscle and joint pains were highly prevalent, affecting 67.5% of the individuals. Overwhelmingly, 85.0% of participants experienced feelings of tiredness or being worn out. Low backache was observed in 47.4% of the sampled population, with falls and fractures being relatively infrequent (4.4%). Additionally, depressed or sad feelings affected 32.5% of the post-menopausal women, and vasomotor symptoms were present in 33.2% of the studied cohort.

The prevalence of hypertension, diabetes, and bronchial asthma among post-menopausal women in this urban setting emphasizes the importance of continuous monitoring and management of chronic conditions within this demographic. The substantial prevalence of conditions such as cataract, decreased hearing, and difficulty in sleeping indicates the need for holistic healthcare approaches catering to

age-related health concerns. Moreover, the high prevalence of musculoskeletal issues like muscle and joint pains, along with fatigue, signifies a substantial burden on the functional capacity and quality of life in this population. Additionally, the prevalence of psychological symptoms like feeling tired or worn out, low backache, and feelings of depression warrants attention to mental health aspects in post-menopausal care.

The study investigated the association between participant characteristics and various morbid conditions among n = 274 post-menopausal women residing in urban settings.

Education:

A significant association was observed between education and several morbid conditions. Illiterate individuals exhibited higher occurrences of feeling tired/worn out (87.0% vs. 75.0%), low backache (53.9% vs. 39.2%), and depressed or sad feelings (34.4% vs. 28.3%) compared to literate individuals. Moreover, illiteracy was significantly associated with hypertension (11.7% vs. 20.0%).

Socio-economic Status:

No statistically significant association was found between socio-economic status and the prevalence of feeling tired/worn out, low backache, depressed or sad feelings, or hypertension among the sampled post-menopausal women.

Exercise:

There was no significant association observed between exercise participation and feeling tired/worn out, while those engaging in exercise showed lower occurrences of low backache (44.3% vs. 51.2%) and depressed or sad feelings (33.6% vs. 29.6%). However, exercise did not show a significant association with hypertension.

Table 2: Association between Participant Characteristics and Morbid Conditions

Participant characteristic	Morbid condition: Feeling tired/worn out (n = 224)	Morbid condition: Low backache (n = 130)	Morbid condition: Depressed or sad (n = 87)	Morbid condition: Hypertension (n = 42)
Education				
Illiterate (n = 154)	134 (87.0)	83 (53.9)	53 (34.4)	18 (11.7)
Literate (n = 120)	90 (75.0)	47 (39.2)	34 (28.3)	24 (20.0)
P value	0.012*	0.034*	0.217	0.037*
Socio-economic status				
Upper (n = 10)	8 (80.0)	4 (40.0)	3 (30.0)	0 (0)
Middle (n = 130)	111 (85.4)	64 (49.2)	42 (32.3)	22 (16.9)
Lower (n = 134)	105 (78.4)	62 (46.3)	42 (31.3)	20 (14.9)
P value	0.247	0.661	0.852	0.492
Exercise				
Yes (n = 149)	122 (81.9)	66 (44.3)	50 (33.6)	23 (15.4)
No (n = 125)	102 (81.6)	64 (51.2)	37 (29.6)	19 (15.2)
P value	0.939	0.293	0.37	0.915

Smoking				
Yes (n = 22)	21 (95.5)	16 (72.7)	14 (63.6)	6 (27.3)
No (n = 252)	203 (80.6)	114 (45.2)	73 (29.0)	36 (14.3)
P value	0.069	0.001*	0.004*	0.09
Parity				
1–3 (n = 65)	54 (83.1)	29 (44.6)	22 (33.8)	10 (15.4)
≥ 4 (n = 209)	170 (81.3)	101 (48.3)	65 (31.1)	32 (15.3)
P value	0.616	0.523	0.716	0.993

Smoking: Smoking exhibited a noteworthy association with several morbid conditions. Smokers displayed higher rates of feeling tired/worn out (95.5% vs. 80.6%), low backache (72.7% vs. 45.2%), depressed or sad feelings (63.6% vs. 29.0%), and hypertension (27.3% vs. 14.3%) compared to non-smokers.

Parity:

No significant association was identified between parity (number of children) and feeling tired/worn out, low backache, depressed or sad feelings, or hypertension among the post-menopausal women in this study.

Table 3: Associations between Morbid Conditions and Menstrual Status

Presence of morbid condition	Current menstrual status	Total (n = 274)	χ^2	Menopause transition	P value
Poor memory	Menopause transition (n = 43)	29 (67.4)	3.65	1.91 (1.01–3.64)	0.046
	Post-menopause (n = 231)	119 (51.5)			
Diabetes	Menopause transition (n = 6)	4 (66.7)	0.05	3.57 (1.24–10.34)	0.019
	Post-menopause (n = 16)	10 (62.5)			
Depressed or sad	Menopause transition (n = 15)	11 (73.3)	0.09	0.91 (0.47–1.76)	0.773
	Post-menopause (n = 102)	76 (74.5)			
Vasomotor symptoms	Menopause transition (n = 15)	11 (73.3)	0.05	0.88 (0.45–1.70)	0.697
	Post-menopause (n = 104)	78 (75.0)			

This study examined the association between morbid conditions and current menstrual status among a sample of n = 274 post-menopausal women in an urban setting within a metropolitan area.

Poor Memory: An association was observed between menopause transition and the prevalence of poor memory. Among women in the menopause transition phase, 67.4% reported poor memory, whereas 51.5% of those in the post-menopausal phase experienced the same. This association indicated that women in the menopause transition phase were 1.91 times more likely to report poor memory compared to post-menopausal women (OR = 1.91, 95% CI = 1.01–3.64, p = 0.046).

Diabetes: In the context of diabetes, a significant association was found between menopause transition and diabetes prevalence. Among women in the menopause transition, 66.7% reported diabetes, while 62.5% of those in the post-menopausal phase had diabetes. This association showed that women in the menopause transition

phase were 3.57 times more likely to report diabetes compared to post-menopausal women (OR = 3.57, 95% CI = 1.24–10.34, p = 0.019).

Depressed or Sad, Vasomotor Symptoms:

However, no significant associations were observed between menopause transition and the prevalence of depressed or sad feelings or vasomotor symptoms. Both depressed and sad feelings (73.3% in menopause transition vs. 74.5% in post-menopause) and vasomotor symptoms (73.3% in menopause transition vs. 75.0% in post-menopause) exhibited similar prevalence rates between the menopause transition and post-menopausal phases.

The study findings suggest that the menopause transition phase might be specifically associated with a higher prevalence of poor memory and diabetes among post-menopausal women. These results emphasize the need for targeted health interventions and support systems tailored to address memory-related issues and diabetes risk management during the menopause transition phase

in this demographic. Understanding these associations could aid in the development of proactive health strategies for women undergoing the menopause transition, promoting better health outcomes and quality of life during this critical phase.

Discussion

The findings of this study shed light on the nuanced relationship between morbid conditions and the menopause transition among post-menopausal women in an urban setting. The investigation revealed notable associations between specific morbid conditions and the menopause transition phase, primarily focusing on memory-related concerns and diabetes.

The observed association between the menopause transition and poor memory aligns with existing literature linking hormonal changes during menopause to cognitive function alterations. Studies by Henderson and colleagues (2019) and Schmidt and colleagues (2018)[5,6] similarly highlighted a higher prevalence of cognitive impairment or decline among women in the menopause transition phase, emphasizing the role of hormonal fluctuations, particularly estrogen decline, in impacting memory and cognitive functions.

Moreover, the significant association found between the menopause transition and diabetes prevalence echoes the findings of previous research by Manson and colleagues (2017)[7] and Kalyani and colleagues (2018)[8]. These studies elucidate the increased risk of insulin resistance and diabetes during the menopause transition, attributing hormonal shifts, alterations in body composition, and metabolic changes to this heightened risk.

However, the non-significant associations observed between the menopause transition and feelings of depression or vasomotor symptoms contrast with some existing literature. Research by Avis and colleagues (2018)[9] and Bromberger and colleagues (2019)[10] documented an elevated prevalence of depressive symptoms and vasomotor complaints during the menopause transition.

The discrepancy in these findings could stem from sample variations, cultural differences, or divergent methodologies used across studies.

It's noteworthy that while this study adds to the growing body of evidence linking the menopause transition to specific health concerns, further longitudinal investigations encompassing diverse cohorts are warranted to comprehensively elucidate the intricate interplay between menopause-related hormonal shifts and varied morbid conditions. Understanding these associations can aid in the development of targeted interventions, emphasizing cognitive health

promotion and diabetes prevention strategies tailored to women navigating the menopause transition phase.

In conclusion, the findings underscore the significance of considering the menopause transition as a critical window for health monitoring and intervention, particularly in addressing memory-related issues and diabetes risk among post-menopausal women in urban settings.

Conclusion

The observed link between the menopause transition and poor memory aligns with existing research highlighting hormonal fluctuations during this phase as potential contributors to cognitive alterations. Similarly, the significant association found between the menopause transition and diabetes prevalence resonates with studies emphasizing increased diabetes risk during this hormonal transition due to metabolic changes and altered insulin sensitivity.

In conclusion, this study contributes to understanding the health landscape of post-menopausal women in urban settings, emphasizing the need for targeted interventions addressing memory-related issues and diabetes risk during the menopause transition phase.

Future longitudinal studies encompassing diverse cohorts could further elucidate the complex interplay between hormonal shifts during menopause and varied morbid conditions, aiding in tailored healthcare strategies for women in this critical life stage.

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