

Menopausal symptoms and quality of life in women above 40 years in an urban resettlement colony of East Delhi

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ABSTRACT

Background: Awareness of menopausal symptoms and their effects on the quality of life is extremely important for better management of symptoms. **Objectives:** The objectives of this study was to assess the prevalence of menopausal symptoms and its effect on the quality of life in women >40 years and determine the association of sociodemographic, obstetric, and other factors with menopause. **Materials and Methods:** A cross-sectional study was conducted in 105 women aged 40 years and above residing in an urban resettlement colony of Delhi. An interviewer-administered questionnaire was used to obtain information about sociodemographic and menstrual history. Quality of life related to menopause and its symptoms were measured using the menopause-specific quality of life questionnaire. Statistical analysis was done using SPSS 20.0. **Results:** Majority of the participants were married (70%), literate (50.5%), unemployed (92.4%), and belonged to upper-lower socioeconomic class (65.7%). The most prevalent symptom was decrease in physical strength in 85.7% of women. The prevalence (89%) and mean score of botheration (3.05 ± 0.917) for physical domain of symptoms was highest and it was significantly associated with the age of subjects and attainment of menopause ($P < 0.05$). Psychosocial domain was also significantly affected by the age of participants. Sexual domain of symptoms was least prevalent (11%) and had the least mean score of botheration (1.38 ± 1.134). Mean age of menopause was 44.6 years. Awareness regarding menopause was poor (1.9%). **Conclusions:** Physical symptoms are the most prevalent. Both physical and psychosocial symptoms are associated with age of participants, while only physical symptoms are associated with menopause attainment. The awareness of menopausal symptoms was very poor in the participants.


KEY WORDS: Menopause; Quality of Life; Menopausal Symptoms

INTRODUCTION

Menopause is a critical period in a woman's life that not only marks the end of reproductive ability but is also associated with multiple physical, vasomotor, psychological, and sexual

complaints.^[1] Due to increase in the life expectancy, the number of women experiencing the menopausal phase is also increasing.^[2]

Awareness of menopausal symptoms, hormonal changes, and their effects on the quality of life is extremely important for better management of symptoms and for decreasing the morbidity such as heart disease and osteoporosis associated with menopause.^[3] The World Health Organization (WHO) defines quality of life as an individual's perception of their position in life in the context of culture and value system in which they live with relation to their goals, expectations, standards, and concerns.^[4]

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Fatigue, lack of energy, muscle, and joint pains are the most frequent menopausal symptoms observed in studies from other countries.^[5,6] In India, menopause and its related symptoms are often neglected due to embarrassment, hesitation, and lack of awareness in women due to the presence of social stigmas in society.^[7]

There are very few studies till date focusing on the prevalence of menopausal symptoms and the quality of life after menopause in Indian women.^[8-10] This study was aimed to assess the prevalence of menopausal symptoms and their effect on the quality of life of women residing in Nand Nagri, an urban resettlement colony, in East Delhi.

MATERIALS AND METHODS

A cross-sectional, descriptive study was conducted during August 2016–September 2016 in Nand Nagri, an urban resettlement colony located in East Delhi. The population size of Nand Nagri is approximately 65,000. As no similar study was available in literature for Delhi, thereby, assuming the proportion of the menopausal symptoms to be prevalent among women in this age group (>40 years) as 50%, with 95% confidence interval and 10% absolute precision, the minimum sample size was calculated to be 96, using Epi Info 7.

Nand Nagri consists of five blocks subdivided into 21 subblocks, with each subblock having two Anganwadis, of which one Anganwadi was randomly selected. A list of women aged 40 years and above listed in the survey register of the selected Anganwadi was made and five women were randomly selected using computer-generated random numbers and a final sample of 105 (21 × 5) was selected. A written informed consent for participation was obtained from the randomly selected women and then was interviewed for the study. Relevant history and anthropometric measurements along with information about awareness of menopausal symptoms were collected using pretested, structured, interviewer-administered questionnaire. The menopause-specific quality of life questionnaire was used in the present study. It is a validated questionnaire for the assessment of menopausal women's symptoms under the vasomotor, psychosocial, physical, and sexual domains.

Postmenopausal women, as defined by the WHO, are those who have stopped menstrual bleeding 12 months ago or stopped having menstruation as a result of medical or surgical intervention (oophorectomy with or without a hysterectomy).

Women who were suffering from any severe physical or mental illness requiring hospitalization and not fit to comprehend and answer the questionnaire were excluded from the study. The study protocol was approved by the Institutional Ethical Committee.

The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS) software version 20.0. Mean age of menopause, prevalence of menopausal symptoms, and mean quality of life score for various domains were computed. Independent samples *t*-test was used to compare the means of continuous variables to study association between various factors and menopause.

RESULTS

Table 1 shows that majority of the women were 40–50 years of age (42%), married (70%), housewives (92.4%), and illiterate (49.5%) and belonged to upper lower socioeconomic class.

Most of the women had waist circumference more than the cutoff (≥ 80 cm) suggested by the WHO (70%) while the number of women having body mass index in normal or overweight category was 33.3%. Majority (81.9%) of the females had menarche between 11 and 15 years of age and more than half (60%) of them got married at <18 years of age. Approximately three-fourth (76.2%) had already attained menopause at the time of study, mean age at menopause being 44.6 years with more than half (63.75%) of them having experienced >10 years of postmenopausal years.

Table 1: Sociodemographic characteristics of the study participants (*n*=105)

Parameter assessed	Percentage (%)
Age distribution (year)	
40–50	41.9
50–60	28.6
>60	29.5
Women with hysterectomy	11.4
Marital status	
Married	70
Widowed	29
Divorced	1
Occupation	
Housewife	92.4
Unskilled worker	2.9
Semi-skilled worker	4.8
Education	
Illiterate	49.5
Primary school	22.9
Middle school	25.7
High school	1.9
Socioeconomic status	
Lower	6.7
Upper lower	65.7
Lower middle	22.9
Upper middle	4.8

As shown in Table 2, a high prevalence of decrease in physical strength (85.7%), decrease in stamina (84.7%), and lack of energy (83.8%) was found among the respondents. In the age group of 40–50 years, feeling tired (77.2%) and aches in the back of head or neck (75%) were the most prevalent menopausal symptoms. Decrease in physical strength (100%) and decrease in stamina (96.6%) were the most prevalent symptoms in the 51–60 years' age group and in women >60 years of age.

Table 3 shows the mean scores of botherations for various domains. Here, mean score of botheration of each domain, namely vasomotor domain, psychosocial domain, physical domain, and sexual domain ranges from 1 to 8. As seen, the mean score of botheration was highest for the physical

domain of symptoms (3.05); hence, this is the most prevalent domain of symptoms among the study participants.

Physical symptoms were found to be present in 89.5% of women. Among the 105 respondents, 70.5% were suffering from psychosocial symptoms and 36.2% of women were experiencing vasomotor symptoms. Sexual symptoms were present in 11.4% of women.

Only 2 women (1.9%) were aware of the symptoms of menopause.

To study the association, an independent samples *t*-test was conducted to compare various domains of symptoms among

Table 2: Prevalence of menopausal symptoms

Symptoms	(40–50 years) <i>n</i> = 44	(51–60 years) <i>n</i> = 30	(>60 years) <i>n</i> = 31	Total (%)
Vasomotor domain				
Hot flushes or flashes	5 (11.3)	8 (26.6)	3 (9.6)	16 (15.2)
Night sweats	11 (25)	14 (46.6)	6 (19.3)	31 (29.5)
Sweating	13 (29.5)	15 (50)	8 (25.8)	36 (34.2)
Psychosocial domain				
Dissatisfaction with my personal life	9 (20.4)	11 (36.6)	9 (29)	29 (27.6)
Feeling anxious or nervous	21 (47.7)	18 (60)	15 (48.3)	54 (51.4)
Poor memory	16 (36.3)	18 (60)	14 (45.1)	48 (45.7)
Accomplishing less than I used to	11 (25)	18 (60)	13 (41.9)	42 (40)
Feeling depressed	9 (20.4)	9 (30)	9 (29)	27 (25.7)
Being impatient with other people	14 (31.8)	14 (46.6)	12 (38.7)	40 (38)
Feeling of wanting to be alone	4 (9)	7 (23.3)	10 (32.2)	39 (37.1)
Physical domain				
Flatulence	30 (68.1)	17 (56.6)	26 (83.8)	73 (69.5)
Aching in muscle and joints	33 (75)	21 (70)	28 (90.3)	82 (78)
Feeling tired	34 (77.2)	25 (83.3)	27 (87)	86 (81.9)
Difficulty sleeping	14 (31.8)	10 (33.3)	17 (54.8)	41 (39)
Aches in back of head or neck	33 (75)	24 (80)	25 (80.6)	82 (78)
Decrease in physical strength	30 (68.1)	30 (100)	30 (96.7)	90 (85.7)
Decrease in stamina	30 (68.1)	29 (96.6)	30 (96.7)	89 (84.7)
Lack of energy	30 (68.1)	28 (93.3)	30 (96.7)	88 (83.8)
Dry skin	0	4 (13.3)	9 (29)	13 (12.3)
Weight gain	17 (38.6)	7 (23.3)	6 (19.3)	30 (28.5)
Increased facial hair	0	0	0	0
Changes in appearance, texture of skin	2 (4.5)	3 (10)	7 (22.5)	12 (11.4)
Feeling bloated	27 (61.3)	13 (43.3)	24 (77.4)	64 (60.9)
Low backache	31 (70.4)	18 (60)	27 (87)	76 (72.3)
Frequent urination	17 (38.6)	9 (30)	16 (51.6)	42 (40)
Involuntary urination while coughing/laughing	7 (15.9)	5 (16.6)	11 (35.4)	23 (21.9)
Sexual domain				
Decreased in sexual desire	3 (6.8)	3 (10)	3 (9.6)	9 (8.5)
Vaginal dryness	3 (6.8)	3 (10)	5 (16.1)	11 (10.4)
Avoiding intimacy	3 (6.8)	3 (10)	4 (12.9)	10 (9.5)

study participants having age <50 years and age >50 years. The mean score of botheration for the psychosocial domain and physical domain was significantly higher in women <50 years as compared to those more than 50 years. The table also shows the association between various domains of symptoms and attainment of menopause in the study participants. The mean score of botheration of physical domain of symptoms was greater in the study participants that have attained menopause as compared to those who have not (3.15 vs. 2.69). This association was statistically significant ($P < 0.028$) [Table 4].

DISCUSSION

The study was aimed to assess the prevalence of menopausal symptoms and its effect on the quality of woman’s life using standard and valid questionnaires.

Various studies conducted in different parts of the world have reported a wide range of the prevalence of menopausal symptoms.^[1,11,12] In the present study, we found that the most prevalent symptom was decrease in physical strength in 85.7% of women followed by decrease in stamina in 84.7% of women and lack of energy in 83.8% of women [Table 3]. This

is in concordance with the study conducted by Sharma *et al.*, wherein they observed fatigue and lack of energy as the most common complaints, while Som and Ray also showed feeling tired and lack of energy as the most prevalent symptoms.^[5,9] In contrast to these studies, Aaron *et al.* reported the highest prevalence of sexual symptoms.^[13] This could be accounted by the difference in questionnaires and methods used to assess the prevalence of the menopausal symptoms.

In our study, the mean age of the attainment of menopause was found to be 44.6 ± 2 years [Table 2]. This is comparable with other studies in which the mean age was 45.2 years.^[9,14] The range of age of menopause attainment varies in Indian women from 40.3 to 48.8 years as compared to 48–51 years in women in developed countries.^[3] Poor socioeconomic status, ethnic and genetic factors might be responsible for lower age of the attainment of menopause.

In our study, we found that majority of the women complained of physical symptoms (3.05 ± 0.917) and psychosocial symptoms (2.30 ± 1.352) [Table 4]. This is consistent with most of the other studies conducted across Asia and in Indian women, where it was found that majority of study participants were experiencing physical symptoms.^[1,3,5,9,12,14] While few other studies have reported differently, a higher prevalence of sexual symptoms was observed in South Indian women and diminished visual acuity was the most common complaint in Chandigarh women.^[10,13] This difference can be explained on the basis of higher literacy and awareness rates in these regions.

In our study, physical symptoms showed a higher prevalence while sexual symptoms were reported by very few of the participants and none reported increased facial hair. Bairy *et al.* also showed that increased facial hair was the

Table 3: Mean scores of botheration for various domains

Domain	Mean score of botheration±SD
Vasomotor	2.08±1.610
Psychosocial	2.30±1.352
Physical	3.05±0.917
Sexual	1.38±1.134

Table 4: Association between mean scores of botheration of various domains and parameters of the study participants

Variable domain score	Vasomotor	Psychosocial	Physical	Sexual
Mean score of botheration in study participants having				
Age <50 years	1.84	1.88	2.78	1.27
Age >50 years	2.25	2.59	3.23	1.46
Levene’s test for equality of variance				
F	6.201	16.69	0.794	3.365
Sig.	0.0.14	0	0.375	0.069
P value	0.199	0.008*	0.012*	0.377
Mean score of botheration in study participants having				
Attained menopause	2.05	2.39	3.15	1.45
Not attained menopause	2.17	1.98	2.69	1.16
Levene’s test for equality of variance				
F	0.134	1.855	0.051	5.297
Sig.	0.715	0.176	0.823	0.023
P Value	0.74	0.193	0.028*	0.266

*denotes $P < 0.05$

least common complaint (3.3%) and Kaur *et al.* reported sexual symptoms and breast heaviness as the symptom with lowest prevalence.^[4,10] While, Som and Ray reported sexual symptoms along with physical symptoms, as the most prevalent symptoms in Kolkata women.^[9] The awareness in the community in Nand Nagri regarding menopause was very low (1.9%). In the present study, lower literacy rates and poor socioeconomic status may be responsible for lack of awareness and hesitation in women to come up and express their complaints.^[7]

Vasomotor symptoms were less prevalent in our study population similar to reports that show that Indian women are least likely to report vasomotor symptoms.^[15-19] We found that the physical domain of symptoms is significantly affected by the age of the subjects and attainment of menopause. This could possibly be explained by the low awareness among the study participants due to which they confuse the physical menopausal symptoms with the age-related changes. While, the psychosocial domain of symptoms was affected only by age. This is consistent with the results of cross-sectional study conducted by Nisar and Sohoo in Pakistani women, wherein they found that with the transition from peri- to post-menopausal age, there is a gradual decrease in the score for psychosocial domain and increase in score for physical domain.^[9,11] The chronological aging as well as the ovarian aging might be responsible for affecting the physical and psychosocial domains of the quality of life in menopausal women.^[9] The number of follicles in the ovary, which is responsible for production of hormones, is decreasing rapidly resulting in a fall in the hormone levels which are responsible for the symptoms experienced by the women.^[20]

CONCLUSIONS

While one of the limitations of the present study was that the study was conducted in a small sample, we can conclude that the prevalence of physical and psychosocial symptoms is higher than the vasomotor and sexual symptoms in women in an urban resettlement colony in East Delhi. Furthermore, physical domain of symptoms is affected by the age and attainment of menopause while psychosocial domain is only affected significantly by the age. The mean age of menopause was found to be 44.6 years. The awareness of menopause among the study participants was poor. Thus, there is a need to spread awareness among general public about menopause using information, education, and communication tools. Sensitization of grass root workers such as ASHA and Anganwadi worker should be done regarding the importance of menopause. There should be the provision of health services for this age group of women to alleviate their symptoms. Further studies are needed to understand the epidemiology of menopausal symptoms and their effect on quality of life of women in the Indian context as there is a paucity of available literature.

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REFERENCES

1. Al Dughaiter A, Al Mutairy H, Al Ateeq M. Menopausal symptoms and quality of life among Saudi women visiting primary care clinics in Riyadh, Saudi Arabia. *Int J Womens Health* 2015;7:645-53.
2. US Census Bureau 1996 Global aging into the 21st Century-The Wall Chart by US. Available from: <https://www.census.gov/content/dam/Census/library/publications/2016/demo/p95-16-1.pdf>. [Last accessed on 2018 Dec].
3. Bairy L, Adiga S, Bhat P, Bhat R. Prevalence of menopausal symptoms and quality of life after menopause in women from South India. *Aust N Z J Obstet Gynaecol* 2009;49:106-9.
4. Study protocol for the world health organization project to develop a quality of life assessment instrument (WHOQOL). *Qual Life Res* 1993;2:153-9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/8518769>
5. Sharma S, Tandon VR, Mahajan A. Menopausal symptoms in urban women. *JK Sci* 2007;9:13-7.
6. Shah R, Kalgutkar S, Savardekar L, Chitlang S, Iddya U, Balaiah D. Menopausal symptoms in urban Indian women. *Obstet Gynecol Today* 2004;11:667-70.
7. Nachtigall LE. The symptoms of perimenopause. *Clin Obstet Gynaecol* 1998;41:921-7.
8. Stöppler M. Menopause. Available from: https://www.medicinenet.com/menopause/article.htm#menopause_definition_and_facts. [Last accessed on 2018 Dec].
9. Som N, Ray S. Menopause-specific quality of life of urban women in West Bengal, India. *Menopause Int* 2012;18:99-105.
10. Kaur S, Walia I, Singh A. How menopause affects the lives of women in suburban Chandigarh, India. *Climacteric* 2004;7:175-80.
11. Nisar N, Sohoo NA. Frequency of menopausal symptoms and their impact on the quality of life of women: A hospital based survey. *J Pak Med Assoc* 2009;59:752-6.
12. Nisar N, Sohoo N. Severity of Menopausal symptoms and the quality of life at different status of Menopause: A community based survey from rural Sindh, Pakistan. *Int J Collab Res Intern Med Public Health* 2010;2:118-30.
13. Aaron R, Muliylil J, Abraham S. Medico-social dimensions of menopause: A cross-sectional study from rural South India. *Natl Med J India* 2002;15:14-7.
14. Poomalar GK, Arounassalame B. The quality of life during and after menopause among rural women. *J Clin Diagn Res* 2013;7:135-9.
15. Fu SY, Anderson D, Courtney M. Cross-cultural menopausal experience: Comparison of Australian and Taiwanese women. *Nurs Health Sci* 2003;5:77-84.
16. Punyahotra S, Dennerstein L, Lehert P. Menopausal experiences of Thai women. Part I: Symptoms and their correlates. *Maturitas* 1997;26:1-7.

17. Punyahotra S, Dennerstein L. Menopausal experiences of Thai women. Part 2: The cultural context. *Maturitas* 1997;26:9-14.
18. Haines CJ, Xing SM, Park KH, Holinka CF, Ausmanas MK. Prevalence of menopausal symptoms in different ethnic groups of Asian women and responsiveness to therapy with three doses of conjugated estrogens/medroxyprogesterone acetate: The pan-Asia menopause (PAM) study. *Maturitas* 2005;52:264-76.
19. Sharma VK, Saxena M. Menopausal symptomatology: Its influence on the attitude and subjective adaptation level of middle aged climacteric (Indian) women in Agarwal. *Dimens Indian Womanhood* 1993;1:317-36.
20. Menopause: Overview. Available form: <https://www.ncbi.nlm.nih.gov/books/NBK279311/>.

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