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Original Research Article

A community-based study on menopausal symptoms and quality of life in postmenopausal women in a rural area of West Bengal

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ABSTRACT

Background: Menopausal health demands priority in Indian scenario due to increase in life expectancy and growing population of menopausal women. There is considerably lack of awareness about the effects of the menopausal symptoms in women in India. This study was done to find out the sociodemographic and behavioural characteristics of the study population, to assess Quality of Life (QOL) of the study population by Menopause-Specific Quality of Life Questionnaire (MENQOL) and to elicit the association between menopausal symptoms and sociodemographic and behavioural characteristics of the respondents.
Methods: It was a cross-sectional community based observational study conducted from 1st July-31st August 2024 in a rural area of West Bengal among 120 postmenopausal women. Data was obtained using a structured questionnaire and was analysed using SPSS version 21.0.
Results: Out of 120 postmenopausal women; vasomotor symptoms seen: hot flushes-67.5%, psychosocial symptoms: anxiety and nervousness-36.7% cases, physical symptoms: feeling tired and difficulty in sleeping-39.2%, sexual changes: 27.5%-avoiding intimacy. Tests of association revealed statistically significant association between: Vasomotor symptoms of study participants and their age, education, type of house. Psychological symptoms and age of the participants. Physical symptoms and education of the participants. No significant association was found between sexual symptoms and socio-demographic characteristics of the study subjects.
Conclusions: The results show that menopause causes both physical and psychiatric problems. A large number of women in the world suffer from menopausal symptoms and the problem cannot be ignored.

Keywords: Quality of life, Postmenopausal women, Menopausal symptoms

INTRODUCTION

World Health Organization has defined post-menopausal women as those women who have stopped menstrual bleeding one year ago or stopped having periods as a result of medical or surgical intervention (hysterectomy/oophorectomy) or both. It is a stage when the menstrual cycle stops for longer than 12 months, and there is a drop in the levels of oestrogen and progesterone, the two most important hormones in the female body (World Health Organization,1996). The onset of physiological development not only marks the end of women's reproductive function but also introduces them to a new phase of life.[1] This phase of life is shrouded with lots of myths and taboos.[2] Early recognition of symptoms can help in reduction of discomfort and fears among women. With increasing life expectancy, women spend 1/3rdof life in this phase.[3] The elderly population is increasing every year, and it is projected that it would increase to 12% of the total population by the year 2025. In the Western world, the

most typical age range for menopause is between ages of 40 and 61.[4] Average age of menopause is around 48 years, but it strikes Indian women as young as 30-35 years.[5] Some of the important and common symptoms women can experience during menopausal transition are changes in periods, hot flushes and night sweats, problems with vagina and bladder, changes in sexual desire, sleep problems, mood swings, etc.

There are also some serious medical concerns related to menopause e.g. osteoporosis and heart disease risk that may grow due to age-related increase in weight, blood pressure, and cholesterol levels. Some women have severe symptoms that profoundly affect their personal and social functioning, and quality of life (QOL).[6] QOL is defined by WHO as the "individual's perceptions of their position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards, and concerns.".[7]

This cultural aspect of menopausal symptoms has been described in number of studies among Asian women, including Japanese and Chinese women.[8,9] Studies on issues relating to menopause, especially among rural women, are lacking in India. With this background, the current study has been carried out in a rural area of West Bengal.

METHODS

This was a cross-sectional community based, observational, descriptive study conducted from 1st July 2024 to 31st August 2024 in Jagadishpur block, Howrah, West Bengal which is the rural field practice area of Calcutta National Medical College, Kolkata. Ethical clearance was obtained from the Institutional Ethics Committee of Calcutta National Medical College, Kolkata.

The study population included all the postmenopausal women in the said study area who were permanent residents of the area and who gave informed verbal consent. Women receiving any kind of hormone therapy; those with presence of medical conditions e.g. diabetes, hypertension, cardiac disease and thyroid disorders; locked houses or the women who did not give the consent were excluded from the study. The duration of study period was 8 weeks. Considering 2 days a week, data collection was done on 16 days. Assuming the total time required to explain the purpose of the study and other ethical issues, interviewing and attending to any query, it took around 30-40 minutes for each participant to complete the schedule. Keeping this in mind, convenient sample size of 120 was taken. Convenient sampling technique was used.

A predesigned and pre-tested structured schedule was used to collect data regarding sociodemographic characteristics of the postmenopausal women and QOL due to menopausal symptoms based on four domains (vasomotor, psychosocial, physical, and sexual) using the 29-item MENQOL questionnaire by interview method. The responses to the questions were adapted to a 2-point scale consisting of Yes and No options from a 6-point severity scoring pattern in the original version considering the difficulty to answer on a 6-point scale due to low level of education of the respondents.

The MENQOL (Menopause Specific Quality of Life Questionnaire) was introduced in 1996 as a tool to assess health-related QOL in the menopausal period. Vasomotor (items 1-3), Psychosocial (items 4-10), Physical (items 11-26), and Sexual (items 27-29). Items pertaining to a specific symptom are rated as present or not present, and if present, how bothersome on a zero (not bothersome) to six (extremely bothersome) point scale.Means are computed for each subscale by dividing the sum of the domain's items by the number of items within that domain. Data was collected by interview method and presented by tabulation, mean, standard deviation, proportion, percentage, etc. Suitable statistical tests of significance were used as applicable. All statistical analysis was performed using Statistical Packages of Social Sciences (SPSS), version 21.0 (IBM SPSS Inc. Somer, New York).

The independent variables in this study were: Sociodemographic and economic characteristics of the postmenopausal women: age in years, religion- (hindu/muslim), caste- (general/OBC/SC), type of family- (nuclear/joint), marital status- (married/widow), education (illiterate/primary/secondary/higher secondary), occupation- (working/homemaker), type of living house- (kutcha/pukka/mixed), PCI- (lower/upper lower/lower middle/upper middle). The dependant variables were 4 domains of menopausal symptoms as in 29-item MENQOL questionnaire (the Menopause Specific Quality of Life Questionnaire).

Table 1: MENQOL questionnaire.

Domains of dependant variables	Menopausal symptoms
Vasomotor	1. Hot flushes
	2. Night sweats
	3. Sweating
Psychological	4. Dis-satisfaction with personal life
	5. Feeling anxious or nervous
	6. Experiencing poor memory

Continued.

Domains of dependant variables	Menopausal symptoms
	7. Accomplishing less than I used to do
	8. Feeling depressed or down
	9. Impatience with other people
	10. Willing to be alone
Physical	11. Flatulence or gas pains
	12. Aching in muscles or joints
	13. Feeling tired or worn out
	14. Difficulty in sleeping
	15. Aches in back of neck or head
	16. Decrease in physical strength
	17. Decrease in stamina
	18. Feeling lack of energy
	19. Dry skin
	20. Facial hair
	21. Weight gain
	22. Changes in appearance, texture, tone of skin
	23. Feeling bloated
	24. Low backache
	25. Frequent urination
	26. Involuntary urination when laughing or coughing.
Sexual	27. Change in sexual desire
	28. Vaginal dryness during intercourse
	29. Avoiding intimacy

RESULTS

Present study observed, majority of the postmenopausal women (36.7%) were in the age group of 46-50 years. The mean age was 49.38±4.22 years with a minimum age of 43 years and maximum age of 58 years. 87.5% of the study population were Hindu and 50% of them were illiterate. 91.7% were homemakers and were currently married. 56.7% of them belonged to nuclear families. 43.3% of them belonged to lower socioeconomic status.

The occurrence of vasomotor symptoms in the study population was average with 67.5% of them reporting hot flushes, 43.3% reporting sweating and 37.5% complaining of night sweats. Most prevalent psychosocial symptoms reported were feeling of anxiety and nervousness (36.7%) and feeling depressed (35.8%). Among other psychological symptoms such as "accomplishing less than I used to do" was 32.5%, experiencing poor memory was 30.8%, dissatisfaction with personal life was 30.0%.Physical symptoms were quite varying in occurrence with feeling tired and difficulty in sleeping- 39.2% followed by aches in back of neck or head-38.3%, flatulence-37.5%, decrease in stamina 35.8%.

Only 6.7% occurrence of facial hair. 30.0%-low backache, 28.3%-frequent urination, 24.2%- drying skin and changes in appearance, texture, tone of skin,16.7%. Involuntary urination when laughing or coughing. Among sexual changes reported by participants were 27.5% reporting of avoiding intimacy, 26.7%- changes in sexual desire and 19.2% of them complaining of vaginal dryness during intercourse. The association between socio-demographic characteristics and MENQOL Questionnaire domain using Pearson's chi square test.

There is statistically significant association between, vasomotor symptoms of the study participants and their age, education, type of house; psychological symptoms and age of the participants; physical symptoms and education of the participants. No significant association was found between sexual symptoms and socio-demographic characteristics of the study subjects.

Binary logistic regression analysis between Socio-demographic characteristics and MENQOL Questionnaire domain. There is statistically significant association between: vasomotor symptoms of the study participants and their age, education, type of house, psychological symptoms and age of the participants, physical symptoms and education of the participants. No significant association was found between sexual symptoms and socio-demographic characteristics of the study subjects.

Multinomial logistic regression analysis between socio-demographic characteristics and MENQOL Questionnaire domain. There is statistically significant association between: vasomotor symptoms of the study participants and their age, education; psychological symptoms and age of the participants. No significant association was found between sexual symptoms and socio-demographic characteristics of the study subjects.

Table 2: Distribution of study subjects according to socio-demographic characteristics (n=120).

Characteristics		Frequency (%)
Age (in years)	41-45	30 (25.0)
Mean=49.38; Median=49.00; S.D=4.22	46-50	44 (36.7)
	51-55	35 (29.2)
	56-60	11 (9.1)
Religion	Hindu	105 (87.5)
	Muslim	15 (12.5)
Caste	SC	21 (17.5)
	OBC	22 (18.3)
	General	77 (64.2)
Type of family	Nuclear	68 (56.7)
	Joint	52 (43.3)
Marital status	Married	110 (91.7)
	Widow	10 (8.3)
Education	Illiterate	60 (50.0)
	Primary	40 (33.3)
	Secondary	13 (10.8)
	Higher secondary	7 (5.8)
Occupation	Working	10 (8.3)
	Homemaker	110 (91.7)
Type of living house	Kuccha	15 (12.5)
	Pucka	10 (8.3)
	Mixed	95 (79.2)
SES status	Lower	52 (43.3)
	Upper lower	53 (44.2)
	Lower middle	10 (8.3)
	Upper middle	5 (4.2)

Table 3: Assessment of quality of life by menopause specific quality of life questionnaire (n=120).

Symptoms present		Frequency (%)	
		Yes (%)	**No (%)**
Vasomotor	Hot flushes	81 (67.5)	39 (32.5)
	Night sweats	45 (37.5)	75 (62.5)
	Sweating	52 (43.3)	68 (56.7)
Psychological	Dis-satisfied personal life	36 (30.0)	84 (70.0)
	Feeling anxious	44 (36.7)	76 (63.3)
	Experiencing poor memory	37 (30.8)	83 (69.2)
	Accomplishing less than used to do	39 (32.5)	81 (67.5)
	Feeling depressed	43 (35.8)	77 (64.2)
	Impatience with other people	40 (33.3)	80 (66.7)
	Willing to be alone	31 (25.8)	89 (74.2)
Physical	Flatulence	45 (37.5)	75 (62.5)
	Aching in muscles or joints	45 (37.5)	75 (62.5)
	Feeling tired or worn out	47 (39.2)	73 (60.8)
	Difficulty in sleeping	47 (39.2)	73 (60.8)
	Aches in back of neck or head	46 (38.3)	74 (61.7)
	Decrease in physical strength	39 (32.5)	81 (67.5)
	Decrease in stamina	43 (35.8)	77 (64.2)
	Feeling lack of energy	42 (35.0)	78 (65.0)
	Dry skin	29 (24.2)	91 (75.8)
	Facial hair	8 (6.7)	112 (93.3)
	Weight gain	22 (18.3)	98 (81.7)
	Changes in appearance, texture, tone of skin	29 (24.2)	91 (75.8)

Continued.

Symptoms present		Frequency (%)	
	Feeling bloated	24 (20.0)	96 (80.0)
	Low backache	36 (30.0)	84 (70.0)
	Frequent urination	34 (28.3)	86 (71.7)
	Involuntary urination when laughing/coughing	20 (16.7)	100 (83.3)
Sexual	Change in sexual desire	32 (26.7)	88 (73.3)
	Vaginal dryness during intercourse	23 (19.2)	97 (80.8)
	Avoiding intimacy	33 (27.5)	87 (72.5)

Table 4: Association B/W socio-demographic characteristics and MENQOL questionnaire domain (n=120).

Characteristics		Vasomotor Mean=1.48, S.D=1.27		Significance (Pearson's chi square)
		Yes (%)	**No (%)**	
Age in years	<50	37 (59.7)	25 (40.3)	0.00
	≥50	13 (22.4)	45 (77.6)	
Religion	Hindu	45 (42.9)	60 (57.1)	0.48
	Muslim	5 (33.3)	10 (66.7)	
Caste	OBC and general	38 (38.4)	61 (61.6)	0.11
	SC	12 (57.1)	9 (42.9)	
Type of family	Nuclear	26 (38.2)	42 (61.8)	0.38
	Joint	24 (46.2)	28 (53.8)	
Marital status	Married	45 (40.9)	65 (59.1)	0.57
	Widow	5 (50.0)	5 (50.0)	
Education	Illiterate	35 (58.3)	25(41.7)	0.00
	Literate	15 (25.0)	45(75.0)	
Occupation	Working	5 (50.0)	5 (50.0)	0.57
	Homemaker	45 (40.9)	65(59.1)	
Type of house	Kuccha	10 (66.7)	5 (33.3)	0.03
	Pukka and mixed	40 (38.1)	65(61.9)	
SES	Lower and upper lower	46 (43.8)	59(56.2)	0.20
	Lower middle and upper middle	4 (26.7)	11(73.3)	
		Psychological Mean=2.25, S.D=1.44		**Significance (Pearson's chi square)**
		Yes (%)	**No (%)**	
Age in years	<50	35 (56.5)	27 (43.5)	0.00
	≥50	19 (32.8)	39 (67.2)	
Religion	Hindu	47 (44.8)	58 (55.2)	0.89
	Muslim	7 (46.7)	8 (53.3)	
Caste	OBC and general	41 (41.4)	58 (58.6)	0.08
	SC	13 (61.9)	8 (38.1)	
Type of family	Nuclear	34 (50.0)	34 (50.0)	0.20
	Joint	20 (38.5)	32(61.5)	
Marital status	Married	50 (45.5)	60 (54.5)	0.74
	Widow	4 (40.0)	6 (60.0)	
Education	Illiterate	32 (53.3)	28 (46.7)	0.06
	Literate	22 (36.7)	38 (63.3)	
Occupation	Working	6 (60.0)	4 (40.0)	0.31
	Homemaker	48 (43.6)	62 (56.4)	
Type of house	Kuccha	7 (46.7)	8 (53.3)	0.89
	Pukka and mixed	47 (44.8)	58 (55.2)	
SES	Lower and upper lower	49 (46.7)	56 (53.3)	0.33
	Lower middle and upper middle	5 (33.3)	10 (66.7)	

Continued.

Characteristics		Physical Mean=4.63, S.D=2.19		Significance (Pearson's chi square)
		Yes (%)	No (%)	
Age in years	<50	33 (53.2)	29 (46.8)	0.19
	≥50	24 (41.4)	34 (58.6)	
Religion	Hindu	51 (48.6)	54 (51.4)	0.53
	Muslim	6 (40.0)	9 (60.0)	
Caste	OBC & General	45 (45.5)	54 (54.5)	0.33
	SC	12 (57.1)	9 (42.9)	
Type of family	Nuclear	32 (47.1)	36 (52.9)	0.91
	Joint	25 (48.1)	27 (51.9)	
Marital status	Married	51 (46.4)	59 (53.6)	0.40
	Widow	6 (60.0)	4 (40.0)	
Education	Illiterate	34 (56.7)	26 (43.3)	0.04
	Literate	23 (38.3)	37 (61.7)	
Occupation	Working	4 (40.0)	6 (60.0)	0.62
	Homemaker	53 (48.2)	57 (51.8)	
Type of house	Kuccha	8 (53.3)	7 (46.7)	0.62
	Pukka & Mixed	49 (46.7)	56 (53.3)	
SES	Lower & Upper lower	49 (46.7)	56 (53.3)	0.62
	Lower middle & Upper middle	8 (53.3)	7 (46.7)	
		Sexual Mean=0.73, S.D=0.97		**Significance (Pearson's chi square)**
		Yes (%)	**No (%)**	
Age in years	<50	29 (46.8)	33 (53.2)	0.55
	≥50	24 (41.4)	34 (58.6)	
Religion	Hindu	45 (42.9)	60 (57.1)	0.44
	Muslim	8 (53.3)	7 (46.7)	
Caste	OBC & General	44 (44.4)	55 (55.6)	0.89
	SC	9 (42.9)	12 (57.1)	
Type of family	Nuclear	29 (42.6)	39 (57.4)	0.70
	Joint	24 (46.2)	28 (53.8)	
Marital status	Married	51 (46.4)	59 (53.6)	0.10
	Widow	2 (20.0)	8 (80.0)	
Education	Illiterate	29 (48.3)	31 (51.7)	0.35
	Literate	24 (40.0)	36 (60.0)	
Occupation	Working	2 (20.00	8 (80.0)	0.10
	Homemaker	51 (46.4)	59 (53.6)	
Type of house	Kuccha	6 (40.0)	9 (60.0)	0.72
	Pukka and mixed	47 (44.8)	58 (55.2)	
SES	Lower and upper lower	45 (42.9)	60 (57.1)	0.44
	Lower middle and upper middle	8 (53.3)	(46.7)	

Table 5: Binary Logistic Regression of association B/W socio-demographic characteristics & MENQOL domain (n=120).

Characteristics		N	OR (95% CI)			
			Vasomotor	Psychological	Physical	Sexual
Age (years)	<50	62	5.12 (2.30-11.39)	2.66 (1.26-5.59)	1.61 (0.78-3.32)	1.24 (0.60-2.56)
	≥50	58	1	1	1	1
Religion	Hindu	105	1.50 (0.47-4.69)	0.92 (0.31-2.74)	1.41 (0.47-4.26)	0.65 (0.22-1.94)
	Muslim	15	1	1	1	1
Caste	OBC & General	99	0.46 (0.18-1.21)	0.43 (0.16-1.14)	0.62 (0.24-1.61)	1.06 (0.41-2.76)
	SC	21	1	1	1	1
Type of	Nuclear	68	0.72 (0.34-1.50)	1.60 (0.76-3.33)	0.96 0.46-1.97)	0.86 (0.41-1.49)

Continued.

Characteristics		N	OR (95% CI)			
family	Joint	52	1	1	1	1
Marital status	Married	110	0.69 (0.18-2.53)	1.25 (0.33-4.67)	0.57 (0.15-2.15)	3.45 (0.70-17.02)
	Widow	10	1	1	1	1
Education	Illiterate	60	4.20 (1.93-9.14)	1.97 (0.95-4.09)	2.10 (1.01-4.36)	1.40 (0.68-2.89)
	Literate	60	1	1	1	1
Occupation	Working	10	1.44 (0.39-5.28)	1.93 (0.51-7.25)	0.71 (0.19-2.68)	0.28 (0.05-1.42)
	Home-maker	110	1	1	1	1
Type of house	Kuccha	15	3.25 (1.03-10.19)	1.08 (0.36-3.19)	1.30 (0.44-3.86)	0.82 (0.27-2.47)
	Pukka and mixed	105	1	1	1	1
SES	Lower and upper lower	105	2.14 (0.64-7.17)	1.75 (0.56-5.47)	0.76 (0.25-2.26)	0.65 (0.22-1.94)
	Lower-middle and upper-middle	15	1	1	1	1

Table 6: Multinomial Logistic Regression of association b/w socio-demographic characteristics & MENQOL domain (n=120).

Characteristics		N	AOR (95% CI)			
			Vasomotor	**Psychological**	**Physical**	**Sexual**
Age (in years)	<50	62	0.26(0.10-0.66)	0.38 (0.16-0.91)	0.70 (0.31-1.60)	0.67
	≥50	58	1	1	1	1
Religion	Hindu	105	1.16 (0.31-4.37)	1.41 (0.41-4.88)	0.92 (0.28-3.05)	1.72
	Muslim	15	1	1	1	1
Caste	OBC & General	99	1.07 (0.34-3.32)	1.66 (0.56-4.89)	1.35 (0.47-3.85)	0.99
	SC	21	1	1	1	1
Type of family	Nuclear	68	1.08 (0.44-2.61)	0.49 (0.21-1.13)	0.85 (0.39-1.85)	0.99
	Joint	52	1	1	1	1
Marital status	Married	110	0.87 (0.17-4.30)	0.63 (0.14-2.76)	1.72 (0.42-7.04)	0.30
	Widow	10	1	1	1	1
Education	Illiterate	60	0.24 (0.09-0.62)	0.50 (0.21-1.17)	0.52 (0.23-1.17)	0.71 (0.31-1.62)
	Literate	60	1	1	1	1
Occupation	Working	10	0.53 (0.11-2.49)	0.72 (0.16-3.09)	1.47 (0.34-6.25)	3.66 (0.67-19.96)
	Home-maker	110	1	1	1	1
Type of house	Kuccha	15	0.49 (0.13-1.89)	1.29 (0.38-4.36)	1.07 (0.32-3.55)	1.44 (0.42-4.97)
	Pukka and mixed	105	1	1	1	1
SES	Lower and upper lower	105	0.42 (0.10-1.78)	0.62 (0.18-2.11)	1.51 (0.49-4.68)	1.49 (0.48-4.60)
	Lower-middle and upper middle	15	1	1	1	1

DISCUSSION

The present study found the mean age of menopause to be 49.38±4.22 years and median age as 49 years. A similar study by Karmakar et al in a rural area of West Bengal found the mean age of menopause as 45.93±8.37 years whereas a study by Nisar and Shoo in Sindh Pakistan found the mean age of menopause as 52.17±6.019 years.[10,11]

The most prevalent menopausal symptoms reported were feeling of anxiety & nervousness (36.7%), feeling tired and difficulty in sleeping (39.2%), decrease in stamina (35.8%), depression (35.8%). The occurrence of vasomotor symptoms were-hot flushes (67.5%), sweating (43.3%) and night sweats (37.5%).

Sagdeo and Arora in a comparative study in rural and urban women showed that most common problem was joint and muscular symptoms (60.4%) followed by hot flushes and night sweats (36.7%).[12] The least found symptoms were facial hair (6.7%), vaginal dryness during intercourse (19.2%). Poomala and Arounassalame in Puducherry and Sarkar et al in Jamnagar showed that the least found symptoms were increase in facial hair (15%) and feeling of dryness during intimacy (10.8%).[13,14] In this study, small sample was taken due to limited time, manpower and resources. The symptoms were self-reported by the study participants, so there is chance of over/under reporting.

CONCLUSION

The results of the study support the popular belief that menopause causes both physical and psychiatric problems. Almost all areas or domains evaluated were impaired in menopausal women. A large number of

women all over the world suffer from menopausal symptoms and the problem cannot thus be ignored.

Further study of other variables is required which may affect the health status of the post-menopausal women. Education, creating awareness and providing suitable interventions to improve the quality of life in the postmenopausal women are important social and medical issues which need to be addressed.

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