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Original Research Article

Nutritional status and health seeking behaviour of postmenopausal women: a cross sectional study in North India

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ABSTRACT

Background: Menopause is the permanent cessation of menstruation resulting from the loss of follicular activity of the ovaries. It is a stage when the menstrual cycle stops for longer than 12 months and there is a drop in the levels of estrogen and progesterone, the two most important hormones in the female body (WHO, 1996). The onset of this physiological development not only marks the end of women's reproductive function but also introduces them to a new phase of life. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhea, for which there is no other obvious pathological or physiological cause. The age at which menopause occurs varies widely ranging from late thirties to late fifties with the range for most women being between ages 48 and 55 years. This period is marked by fluctuations in reproductive hormones.
Methods: The present study community based cross-sectional study to examine variations in menopausal characteristics between rural and urban women. Data on socio demographic variables, reproductive history, and menopausal symptoms were collected from postmenopausal women (rural 200; urban 200) the survey was conducted among women who had attained menopause, in rural and urban area of Allahabad.
Results: Majority of the study participants were in the age group of 50-60 years and attained menopause at the age between 45-50 years. Symptoms of joint pains were reported by 57% of rural and 55% of urban women. The percentage of women seeking treatment for their problems was higher in the urban areas i.e., 71.0% as compared to 29.5% in rural area. Similarly among the urban women, majority of them 75.0% sought treatment from private clinics, and the remaining 25.0% sought treatment from government hospitals. There is a need to address their problem and establish health care centers for them.
Conclusions: The study shows that postmenopausal women suffer from various physical as well as problems related to menopausal hormonal changes with varied frequencies. There is a need to address their problem and establish health care centers for them.

Keywords: Menopause, Rural, Urban, Nutritional status, IEC, BCC

INTRODUCTION

More than 80% of women experience physical or psychological symptoms in the year approaching menopause with various distresses in their lives, leading to decrease in quality of life.[1] These changes make them more vulnerable to physical health problems and mental health disorders.[2] Factors that affect age at menopause may have important clinical implications because early menopause is associated with an increased risk of cardiovascular disease and osteoporosis, whereas delayed menopause has been associated with increased risk of

breast cancer and endometrial cancer. These associations may result from the direct effect of menstrual function (or cessation of function) and the related hormone changes, or may be an indirect result of the other factors that are associated with age at menopause. The relationship of menopausal age with the risk factors for such medical conditions makes age at menopause an important epidemiological issue.[3] With increasing life expectancy, women spend 1/3rd of life in this phase. It is estimated that by the end of 2015 there will be 130 million elderly women in India, necessitating substantial amount of care. Menopausal symptoms, though well tolerated by some women, may be particularly troublesome in others. Severe symptoms compromise overall quality of life for those experiencing them. There is under-reporting of symptoms among Indian women due to socio cultural factors.[4] The cohort of postmenopausal women is increasing in India. The abrupt endocrine changes during menopausal transition have important impacts on the physiology of female body which exacerbate risks for many diseases and disabilities during postmenopausal life. Further, life expectancy is higher for females than males across the globe including India. Thus, in general, females lead a longer postmenopausal life in countries like India. India is a vast country with variations in terms of ecology, ethnicity, socioeconomic status, cultural norms, social values, as well as distribution, availability and accessibility of health care resources.[5] The current national program on reproductive health focuses on women between 15 and 45 years of age and very less attention is being paid to women beyond reproductive age unless conditions become worse. The information on menopausal symptoms and the way women choose to treat these symptoms are essential for designing appropriate delivery of healthcare services and to ensure easy transition to old age.[6] This study was taken up with the objective of assessing the nutritional status and health seeking behavior pattern among the postmenopausal women with a view to improve health care services for them.

METHODS

A postmenopausal woman aged 45 and above has been taken as study unit. The study has been conducted in a 12 month period from August, 2013 to July 2014. It is a cross- sectional study done in randomly selected urban wards and rural blocks of Allahabad district. Multi-stage random sampling was done. In the first stage, urban wards of Allahabad city and various blocks of Tehsils were listed. In the second stage, two wards from urban areas and two blocks from rural areas were selected randomly. These were ward number 49 and 36 in urban area and Jasra and Saidabad blocks from rural area. In the third stage, various colonies of the selected urban wards and various villages of the selected blocks of rural areas were listed. In the fourth stage, two colonies per ward i.e., Allenganj and George town from ward 49 and Behrana and Ram Bagh from ward 36 and two villages per block i.e., Jasra and Rera from block Jasra and Dum Duma and Benipur from Saidabad were selected randomly and in the final stage, household units in the identified colonies and villages were visited to find eligible participants. Households were visited till the required sample size was met. The study was conducted in urban wards and rural blocks of Allahabad district with a population of 59, 54,391. The percentage of females above the age 40 years (according to NFHS III) is 25.2%. Thus the total population of females above age of 40 years is likely to be 15, 00506. The sample size was calculated as 384 as per the formula. A team of investigators was formed. Members of the team briefed the postmenopausal women about the purpose and significance of the study and requested for voluntary participation. The women were explained that the information given by them would be confidential. The identified women were interviewed in privacy and desired information was collected on a pre- tested and pre- designed schedule through oral questionnaire method. A total of 400 postmenopausal women were interviewed. Information was collected on background characteristics, socio- economic status, and psychological status. General health examination was carried out.

Objectives

- To determine the distribution of personal habits dietary habits and nutritional status of menopausal women.
- To determine the pattern of health seeking behavior among rural and urban postmenopausal women and suggest ways and means to improve the health services for these women.

Data analysis

Data was analyzed using the SPSS and MS Excel. Using frequency distribution, percentage and Chi-square test was applied wherever applicable. The value of $p<0.05$ was considered as significant for this study.

RESULTS

Table 1 reveals the percentage distribution of rural and urban women according to socio demographic variables among rural and urban respondents followed by age of the women, age at menopause, caste, religion, type of family, marital status, education of the women and her husband, occupation of the women and her husband, parity, socioeconomic status of the respondents (Table 2). Distribution of rural and urban women according to personal and dietary habits are depicted in Out of the total rural women, only 13 (6.5%) women smoked bidi, while among the urban women, none of them smoked. Statistically significant difference was observed between rural and urban women regarding smoking habits ($p<0.05$). Among rural women 64 (32.0%) chewed tobacco while no urban women, chewed tobacco. This difference of tobacco chewing between rural and urban women was found to be statistically significant ($p<0.05$).

Among rural women, 84 (42.5%) chewed betel, while only 1 urban woman (0.5%) chewed betel. Statistically, significant difference regarding chewing of betel was observed between rural and urban women ($p<0.05$). Majority of the rural women 139 (69.5%) consumed vegetarian diet and remaining 61 (30.5%) consumed non-vegetarian diet, while majority of urban women 102 (50.5%) consumed non-vegetarian diet, followed by 98 (49.0%) who were vegetarians. The difference in dietary pattern between the rural and urban women was found to be statistically significant ($p<0.05$).

Table 1: Distribution of postmenopausal women according to demographic profile.

S. N.	Socio demographic variables	Category	Rural (200) n (%)	Urban (200) n (%)
(a)	Age in years	45–50	20 (10)	16 (8)
		50–55	47 (23.5)	48 (24)
		55–60	54 (27)	60 (30)
		60–65	41 (20.5)	36 (18)
		65–70	22 (11.5)	24 (12)
		70–75	11 (5.5)	8 (4)
		>75	5 (2.5)	6 (3)
(b)	Religion	Hindu	196 (98)	195 (97.5)
		Muslim	4 (2)	4 (2)
		Christian	0 (0)	1 (0.5)
(c)	Caste	General	60 (30)	76 (38)
		Backward	96 (48)	90 (55)
		Schedule caste	34 (17)	30 (15)
		Schedule Tribe	10 (5)	4 (2)
(d)	Type of Family	Nuclear	65 (30.5)	140 (69.5)
		Joint	135 (69.5)	60 (30.5)
(e)	Marital Status	Married	145 (72.5)	189 (94.5)
		Widowed	55 (27.5)	10 (5)
		Separated	0 (0)	1 (0.5)
(f)	Parity	0	4 (2)	6 (3)
		1	6 (3)	25 (12.5)
		2	39 (19.5)	71 (35.5)
		3	151 (75.5)	98 (49)
	Total		200 (100)	
(g)	Education of women	Illiterate	172 (86)	21 (10.5)
		Primary	13 (6.5)	30 (15)
		High School	13 (6.5)	18 (9)
		Intermediate	2 (1)	34 (17)
		Graduate	0 (0)	67 (33.5)
		Post Graduate	1 (0)	29 (14.5)
		Professional	2 (0)	1 (0.5)
	Total		200 (100)	
(h)	Occupation of women	Housewife	142 (71)	162 (81)
		Service	3 (1.5)	36 (18)
		Business	5 (2.5)	2 (1)
		Labour	17 (8.5)	0 (0)
		Agriculture	33 (16.5)	0(0)
	Total		200 (100)	
(i)	Education of husband	Illiterate	95 (65.52)	0 (0)
		Primary	23 (15.8)	4 (2.1)
		High School	9 (6.2)	11 (5.8)
		Intermediate	13 (8.9)	22 (11.6)
		Graduate	4 (2.7)	97 (51.4)
		Post Graduate	1 (0.6)	45 (23.8)
		Professional	0 (0)	10 (5.8)
	Total		189 (100)	

(j)	Occupation of husband	Unemployed	1 (0.6)	0 (0.0)
		Retired	20 (13.7)	161 (85.18)
		Business	2 (1.3)	28 (14.82)
		Labour	46 (31.7)	0 (0.0)
		Agriculture	76 (52.4)	0 (0.0)
	Total		189 (100)	
(k)	Socio economic status	(Upper) >5156 Rs	0 (0)	37 (18.5)
		(Upper Middle) 2578- 5155 Rs	6 (3)	49 (24.5)
		(Lower Middle) 1547- 2577Rs	11 (5.5)	76 (38)
		(Upper Lower) 773 -1546 Rs	97 (48.5)	27 (13.5)
		Lower <773 Rs	86 (43)	11 (5.5)
	Total		200 (100)	
(m)	Age at menopause	35–40	6 (3)	5 (2.5)
		40–45	50 (25)	43 (21.5)
		45–50	128 (64)	119 (59.5)
		50–55	16 (8)	33 (16.5)
	Total		200 (100)	

Table 2: Distribution of women according to personal habits and dietary habits.

Characteristics	Response	Women				Statistical Values	
		Rural (n=200)		Urban (n=200)			
		No.	%	No.	%	Chi- square	p value
Smoking	Yes	13	6.5	0	0.0	13.437	<0.05
	No	187	93.5	200	100.0		
Tobacco	Yes	64	32.0	0	0.0	76.190	<0.05
	No	136	68.0	200	100.0		
Betel chewing	Yes	84	42.5	1	0.5	104.518	<0.05
	No	115	57.5	199	99.5		
Diet	Vegetarian	139	69.5	98	49.0	17.406	<0.05
	Non-vegetarian	61	30.5	102	51.0		

Table 3: Distribution of women according to nutritional status.

Nutritional status	Women			
	Rural (n=200)		Urban (n=200)	
	No.	%	No.	%
Underweight (<18.50)	33	16.5	18	9.0
Normal (18.50-24.99)	115	57.5	90	45.0
Overweight (>25)	34	17.0	56	28.0
Pre-Obese (>25.00- 29.00)	11	5.5	15	7.5
Obese (30.00-40.00)	7	3.5	21	10.5
p value	<0.05			

In Table 3, out of the total 200 rural women, 33 (16.5%) were underweight, 115 (57.5%) were having normal nutritional status, 34 (17.0%) were overweight, 11 (5.5%) were pre- obese, and 7 (3.5%) were obese. Among urban women 18 (9.0%) were underweight, 90 (45.0%) were having normal nutritional status, 56 (28.0%) were overweight, 15 (7.5%) were pre- obese and 21(10.5%) were obese. The difference in nutritional status between the rural and urban women was found to be statistically significant (p<0.05). In Table 4, among the total 400 postmenopausal women 201 (50.25%) sought treatment while 199 (49.75%) did not seek any treatment. The percentage of women seeking treatment was higher in the urban areas 142 (71.0%) as compared to 59 (29.5%) in rural areas and it was found to be statistically significant. It can be observed from the above table that out of the 59 rural women who took treatment, 5 (8.47%) took specific treatment and 54 (91.52%) took non- specific treatment. Among rural women who took specific treatment 3 and 2 (5.1% and 3.4%) respectively took antihypertensive and antidiabetic drugs. Among those who took non- specific treatment majority 42 (71.1%) took pain killers, 5 (8.5%)

took antiallergic, 4 (6.8%) took calcium and 1 (1.7%) each took antipyretic, antibiotic and cough syrup. Among 142 urban women who took treatment, 44 (31.1%) took specific treatment and 98 (69.6%) took non- specific treatment. In urban area among the women who took specific treatment majority 23 (16.2%) took antihypertensive followed by 19 (13.5%) who took antidiabetics and only 2 (1.4%) took thyroxin. Among those who were taking non- specific treatment majority 64 (45.7%) took painkillers, followed by 17 (12.0%) who took antipyretic, 9 (6.3%) took calcium and 6 (4.2%) were on antibiotic and only 2 (1.4%) women took antiallergic.

Table 4: Distribution of menopause women's according to treatment taken.

Variables	Response	Women				
		Rural (n=200)		Urban (n=200)		P value
		No.	%	No.	%	
Treatment taken	Yes	59	29.5	142	71.0	<0.05
	No	141	70.5	58	29.0	
Specific treatment	Antidiabetics	3	5.1	19	13.5	<0.05
	Anti-hypertensives	2	3.4	23	16.2	
	Thyroxin	0	0.0	2	1.4	
Non-specific Treatment	Antipyretic	1	1.7	17	12.0	<0.001
	Calcium	4	6.8	9	6.3	
	Antibiotic	1	1.7	6	4.2	
	Cough Syrup	1	1.7	0	0.0	
	Ant allergic	5	8.5	2	1.4	
	Painkillers	42	71.1	64	45.7	

Table 5: Distribution of menopause women's according to preference for type of treatment.

Treatment	Women				
	Rural (n=200)		Urban (n=200)		
	No.	%	No.	%	P value
Allopathy	184	92.0	194	97.0	<0.05
Homeopathy	13	6.5	6	3.0	
Ayurvedic	3	1.5	0	0.0	

Table 6: Distribution of menopause women's according to the preference of place for treatment.

Place of Treatment	Women				
	Rural (n=200)		Urban (n=200)		
	No.	%	No.	%	P value
Private clinics	161	80.5	150	75.0	<0.05
Government hospital	39	19.5	50	25.0	

Table 5 reveals the distribution of rural and urban women according to their preference for type of treatment. Among rural and urban, majority 184 and 194 (92.0% and 97.0%) respectively preferred allopathic treatment for their medical ailments, followed by 13 (6.5%) and 6 (3.0%) rural and urban women respectively who preferred homeopathic treatment. Only 3 (1.5%) rural women preferred ayurvedic treatment while no urban women preferred ayurvedic treatment for their medical problems. Statistically, significant difference regarding preference for type of treatment was observed between rural and urban women ($p<0.05$). Table 6 reveals the distribution of rural and urban women according to choice for place of treatment. Out of the total rural women, majority 161 (80.5%) preferred treatment from private clinics, and the rest 39 (19.5%) from government hospitals. Similarly among the urban women, majority 150 (75.0%) preferred to go to private clinics for treatment, and the remaining 50 (25.0%) preferred government hospitals. Statistically, significant difference regarding preference for place of treatment was observed between rural and urban women ($p<0.05$).

DISCUSSION

In the present study we found only 13 (6.5%) women in rural area smoked bidi, 64 (32.0%) chewed tobacco and 84 (42.5%) chewed betel, while among the urban women, none of them smoked and chewed tobacco while only one urban woman (0.5%) chewed betel. In a study conducted by Torok et al in Timisoara, Romania the habit of smoking was found in 19.20% of women which is higher than the present study.[7] Tandon et al conducted their study in rural health centre of Bakshi Nagar, Jammu and

reported that the habit of smoking was found in 0.5% of women and tobacco chewing in 4.0% of women which is lower than the present study.[8] Majority of the rural women 139 (69.5%) were vegetarians diet and remaining 61(30.5%) were non-vegetarian, while majority of urban women 102 (50.5%) were non-vegetarians and 98 (49.0%) were vegetarians. Veigas et al in Mangalore, Karnataka in his study reported that 95.0% of participants were non- vegetarians which is higher as compared to the present study.[9] In the present study 115 (57.5%) rural postmenopausal women and 90 (45.0%) urban women had normal BMI and 33 (16.5%) rural and18 (9.0%) urban women were underweight whereas 34 (17.0%) rural women and 56 (28.0%) urban women were overweight. Eleven (5.5%) and 15 (7.5%) rural and urban women respectively were in pre- obese group. Obesity was seen in only 7 (3.5%) rural women and in 21 (10.5%) urban women. The study conducted by Mahajan et al in Shimla, Himachal Pradesh showed that 58% women belonged to normal range of BMI which is comparable to the rural findings of the present study while 27% were overweight and 12% were obese in their study which is comparable to the urban findings of the present study and only 3.0% were underweight which is lower than both rural and the urban findings of this study.[3] Another study by Singh et al in Raipur Chhattisgarh reported that 32.73% of participants were overweight and obesity was seen in 30.65% of women which was higher than the current study.[10] A study conducted by Masoni et al in Rosario Argentina reported normal BMI in 23% women which is lower than the present study and a higher percentage of overweight and obese women i.e., 40.5% and 36.5% respectively.[11] Under current demographic trends, menopausal and postmenopausal health has emerged as an important public health concern in India owing to improved economic conditions, rapid lifestyle changes, and increased longevity. Generally, women have more complex and stressful aging process than men do, as a consequence of hormonal changes that occur during menopausal transition.[5] The onset of this physiological development not only marks the end of women's reproductive function but makes them more vulnerable to a new set of health problems including cardiovascular diseases, osteoporosis.

Recommendation

Menopausal health demands priorities in Indian scenario due to increase in life expectancy and growing population of menopausal women. Great efforts are required to educate and make these women aware of menopausal symptoms, reduction of discomfort and enable them to seek appropriate medical care. In India, postmenopausal women are yet to be covered in any specific health programme in contrast to their younger counterparts (RCH, ICDS etc) hence policy makers should evaluate successful programmes for the menopausal women of other countries and adopt them to suit local conditions and economic viability.

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