ORIGINAL ARTICLE

Menopausal symptoms and its effect on quality of life in urban versus rural women: A cross-sectional study

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ABSTRACT

Aim and Objective: To analyze the menopause-related symptoms and its impact on quality of life in post-menopausal women from urban and rural area.

Materials and Methods: A cross-sectional 1-year study was carried among women of urban (*n* = 490) and rural (*n* = 380) areas, attending the outpatient department in the urban area and a house-to-house survey in rural areas, by interviews with the help of a pretested semi-structured standard questionnaire. For assessment of the menopausal symptoms menopause rating scale (MRS) and for quality of life, World Health Organization Quality of Life Scale (WHO QOL-BREF) questionnaire was used.

Results: There was a significant difference between the MRS total scores of the urban (14.67 ± 6.64) and rural (16.08 ± 7.65) group. The somatic, psychological, and urogenital symptoms were high in rural women than in urban women. The results were not significant for urogenital subscale. The mean raw scores of physical health, psychological, social relationships, and environmental domains was more in urban than in rural women. The mean transformed scores (4-20) of physical health, psychological, social relationships, and environmental domains was more in urban than in rural women. The mean transformed scores (0-100) including the physical health, psychological, social relationships, and environmental domains was more in urban than in rural women. The result was not significant for physical health.

Conclusion: The high proportions and the scores of MRS were observed in both rural and the urban women. The severity of symptoms was found more distressing for rural women. The quality of life in urban society was average and better than in rural women.

Key Words: Menopausal symptoms, post-menopausal women, quality of life

INTRODUCTION

Menopause is a natural biological phenomenon in a women's life. Currently, menopause affects the lives of millions of women globally and will be an issue of increasing concern as the population ages over the next few decades. The overall health and well-being of mid-aged women has become a major public health concern around the world. More than 80% of women experience physical or psychological symptoms in the year approaching menopause, leading to decrease in Quality of Life (QOL).[1]

Various studies existing from foreign countries have indicated that menopause is negatively related to QOL by menopausal symptoms based on their severity.[2-5]

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The study of QOL in the post-menopause has become an essential component in clinical practice. Most studies on QOL of post-menopausal women exist from developed countries. A very little information exists about this in developing countries like India.

Thus, present study was undertaken to determine the menopause related symptoms and its impact on QOL in urban and rural post-menopausal women.

MATERIALS AND METHODS

A cross-sectional 1-year study was conducted in the Department of Obstetrics and Gynecology, SMGS

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Hospital, Government Medical College, Jammu and in the rural field practice area, Ranbir Singh Pura.

Any women who has achieved menopause naturally, irrespective of her marital status and parity, was a potential participant of the study. Women undergoing treatment for cancer, or in remission, women with history of using oral contraceptives pills, hormone replacement therapy, and phytoestrogens were excluded from the current analysis.

The participant women of urban area attending the outpatient department, where as rural women were interviewed with a house-to-house survey, with the help of a pretested semi-structured standard questionnaire. The study protocol was approved by the Institutional Ethical Committee.

Information regarding socio-demographic profile and reproductive parameters (such as parity, age of menarche, regularity of menses, age of menopause, and years since last menstruation) were recorded.

For assessment of the menopausal symptoms Menopause Rating scale (MRS)[6] was used. MRS is an 11-item questionnaire. It contains three independent dimensions: Psychological, somatic, and urogenital subscale. Each of the 11 symptoms in MRS contained in the scale can get 0 (no complaints) or up to 4 scoring points (severe symptoms) depending on the severity of the complaints perceived by the women completing the scale. The composite scores for each of the dimensions (subscales) are based on adding up the scores of each item of the respective dimensions. The composite score (total score) is the sum of the dimension scores, and is proportional to the severity of subjectively perceived symptoms.[7]

For the assessment of health-related quality of life (HRQOL). The World Health Organization Quality of Life Scale (WHO QOL-BREF) questionnaire in English Version[8] translated to local language was used for it. The scores were calculated according to the standard methods where, the raw scores were converted to transformation scores. The first transformation converts scores to range of 4-20 and the second transformation converts domain scores to 0-100 scale. Higher scores reflect better QOL. The WHO QOL-BREF contained 26 items, categorized under 4 main domains: Physical, psychological, social, and environmental.

A separate 5-point scale ranging from never (4) to always (0 point) was used for the measurement of each item. Total score of each domain was 108; the higher score indicating a good QOL, a lower score indicating a poor QOL and high effect of menopausal symptoms on QOL. Those who obtained scores from 0 to 33.3% were considered poor QOL, from 33.3 to 66.7% were considered average QOL, and more than 66.7% were considered to have good QOL.

Statistical analysis

The data was analyzed by computer software MS Excel and Statistical Package for the Social Sciences (SPSS) Version 21.0 for Windows. The quantitative variables were presented as mean and standard deviation. Menopausal symptoms were grouped and presented as percentages. QOL was assessed by WHO QOL questionnaire and scored in four different domains. Comparisons were also reported according to selected variables.

RESULTS

Four hundred and ninety urban and 380 rural women participated in the current analysis. There was a significant difference between the MRS total scores of the urban (14.67 ± 6.64) and rural (16.08 ± 7.65) group. The somatic, psychological, and urogenital symptoms were high in rural women than in urban women. But the results were not statistically significant for urogenital subscale [Tables 1-3].

Mean scores of hot flushes and sweating was more in rural (1.66 ± 1.25) as compared to urban (1.45 ± 1.03) women. The mean score of heart discomfort was 1.20 ± 1.04 in urban women which is more as compared to 1.16 ± 1.06 of the rural women. The score of sleeping problems was more, i. e., 1.44 ± 1.29 in the rural women compared to 1.30 ± 1.08 in urban women. Muscle and joint problems had a score of 1.61 ± 1.16 in urban women which was less as compared to that of rural women (1.77 ± 1.22) [Tables 1-3].

Depressive mood score was 1.33 ± 1.16 in urban women which was less compared to 1.57 ± 1.25 of the rural women. Irritability was in 1.34 ± 1.10 urban women as compared to 1.44 ± 1.29 rural women. Anxiety score was 1.30 ± 1.06 in urban women as compared to 1.42 ± 1.13 in the rural women [Table 3]. Physical and mental exhaustion score was 1.59 ± 1.14 in urban women as compared to 1.93 ± 1.18 in the rural women. Sexual problems score was 1.96 ± 1.51 in urban women as compared to 1.91 ± 1.69 in the rural women [Tables 4 and 5]. Bladder problems score was in 0.87 ± 1.01 in urban women as compared to 1.01 ± 1.10 in the rural women. Scores for dryness of vagina was 0.68 ± 0.92 in urban women as compared to 0.71 ± 1.02 in the rural women.

The mean raw scores of physical health, psychological, social relationships, and environmental domains is more in urban than in rural women. The mean transformed scores (4-20) of physical health, psychological, social relationships, and environmental domains is more in urban than in rural

Table 1: Comparison of urban and rural menopausal women according to menopause rating scale

Menopause rating scale	Menopausal women		Statistical inference ('t'-test for equality of means)
	Urban (n = 490) Mean ± SD	Rural (n = 380) Mean ± SD	
Psychological subscale	5.57±3.44	6.38±3.80	t=3.28 P=0.001 (Highly significant)
Somatic subscale	5.57±3.06	6.05±3.33	t=2.192 P=0.029 (Significant)
Urogenital subscale	3.53±2.48	3.64±2.80	t=−0.650 P=0.516 (Not significant)
Total score	14.67±6.64	16.08±7.65	

Table 2a: Comparison of urban and rural women according to mean menopause rating scale scores per subscale and symptoms

Subscale and symptoms	Menopausal women	
	Urban (n = 490) Mean ± SD	Rural (n = 380) Mean ± SD
Somatic		
Hot flushes, sweating	1.45±1.03	1.66±1.25
Heart discomfort	1.20±1.04	1.16±1.06
Sleeping problems	1.30±1.08	1.44±1.29
Muscle and joint problems	1.61±1.16	1.77±1.22
Psychological		
Depressive mood	1.33±1.16	1.57±1.25
Irritability	1.34±1.10	1.44±1.29
Anxiety	1.30±1.06	1.42±1.13
Physical and mental exhaustion	1.59±1.14	1.93±1.18
Urogenital		
Sexual problems	1.96±1.51	1.91±1.69
Bladder problems	0.87±1.01	1.01±1.10
Dryness of vagina	0.68±0.92	0.71±1.02

women. The mean transformed scores (0-100) including the physical health, psychological, social relationships, and environmental domains is more in urban than in rural women. But the result is not statistically significant for physical health.

DISCUSSION

The present study revealed that proportion of menopausal symptoms was significantly high in both rural and urban women. The findings of the present study showed that the, women in the rural area suffered from severe menopausal symptoms such as: musculoskeletal, hot flushes, vasomotor, sexual, genito-urinary, and sweating as compared to urban women. This was in concordance to the finding made by

Table 2b: Comparison of urban and rural women according to menopause rating scale scores and percentages per subscale and symptoms

Subscale and symptoms	Menopausal women	
	Urban (n =490) No. (%)	Rural (n = 380) No. (%)
Somatic		
Hot flushes, sweating	379 (79.38)	294 (77.36)
Heart discomfort	342 (69.79)	258 (67.89)
Sleeping problems	358 (73.06)	259 (68.15)
Muscle and joint problems	396 (80.81)	298 (78.42)
Psychological		
Depressive mood	350 (71.42)	276 (72.63)
Irritability	367 (74.89)	257 (67.63)
Anxiety	363 (74.08)	280 (73.68)
Physical and mental exhaustion	369 (76.87)	296 (77.89)
Urogenital		
Sexual problems	365 (74.48)	243 (63.94)
Bladder problems	262 (53.46)	215 (56.57)
Dryness of vagina	209 (42.65)	150 (39.47)

Table 3: Comparison of menopausal women from urban and rural areas according to World Health Organization Quality of Life Scale (WHO QOL-BREF) raw score

WHO QOL-BREF raw score	Menopausal women	
	Urban (n = 490) Mean ± SD	Rural (n = 380) Mean ± SD
Domain 1: Physical health	26.72±5.13	25.11±3.78
Domain 2: Psychological	21.50±3.70	20.31±4.02
Domain 3: Social relationships	9.56±2.62	8.15±2.73
Domain 4: Environment	30.81±6.45	27.27±5.66

Table 4: Comparison of menopausal women from urban and rural areas according to World Health Organization Quality of Life Scale (WHO QOL-BREF) transformed score (4-20)

WHO QOL-BREF transformed score (4-20)	Menopausal women	
	Urban (n = 490) Mean ± SD	Rural (n = 380) Mean ± SD
Domain 1: Physical health	13.30±2.00	13.13±2.05
Domain 2: Psychological	14.36±2.27	13.95±2.38
Domain 3: Social relationships	12.75±3.49	10.87±3.64
Domain 4: Environment	15.40±3.22	13.63±2.83

the Yohanis *et al.*,[9] but contradictory to Martinez[10] as in their study in rural women menopausal symptoms were less severe. However, with regards to frequency of symptoms, a higher proportion of urban women have been reported to suffer as put by various workers compared to the rural women. This result was in concordance to Sagdeo and Arora,[11] the percentage of all menopausal symptoms were more in urban women as compared to rural. Martinez[10]

Table 5: Comparison of menopausal women from urban and rural areas according to World Health Organization Quality of Life Scale (WHO QOL-BREF) transformed score (0-100)

WHO QOL-BREF transformed score (0-100)	Menopausal women		Statistical inference
	Urban (n = 490)	Rural (n = 380)	
Domain 1: Physical health	57.29	56.56	t=1.184; P=0.237; (Not significant
Domain 2: Psychological	64.62	60.09	t=−2.602; P=0.009; (Highly significant
Domain 3: Social relationships	53.13	43.48	t=7.708; P=0.000; (Highly significant
Domain 4: Environment	70.84	58.71	t=8.462; P=0.000; (Highly significant

too stated that there was a greater frequency of menopausal symptoms in urban women.

The joint and muscle problems, physical and mental exhaustion, sleep disorders, hot flushes were the most common symptoms reported in our study which was similar to various studies conducted in India and abroad by Sagdeo and Arora,[11] Jahanfar *et al.,*[12] Nisar and Sohoo,[13] Poomalar and Bupathy,[14] and Ashrafi *et al.*[15] But the results are not consistent with the finding of other studies of Madhukumar *et al.,*[16] Sharma *et al.,*[17] Puri *et al.*,[18] Vijayalakshmi *et al.*,[19] and Borker *et al.*[20]

Another aspect worth mentioning is that the urogenital symptoms including sexual problems, bladder problems, and dryness of vagina were less frequent both in the rural and in urban women; the individual and overall scores of MRS were also low for urogenital domain especially more so in urban women but the difference was not found to be statistically significant. Similar findings were reported by Nisar *et al.*[21]

Vasomotor instability or menopausal hot flushes was believed to be due to sympathetic discharge but its hormonal basis cannot be ruled out. Our study is line with Adhi *et al.*,[22] Chuni and Sreeramareddy,[23] Jacob *et al.,*[24] and Nisar and Sohoo[12] on hot flushes but not in line with the studies of Mahajan *et al.,*[25] and Sharma *et al.*[17]

These differences in frequencies of symptoms may be because of differences of race, life style, culture, genetics, diet, and the co-morbid diseases.

In the present study, we have found the WHO QOL-BREF scores for all domain lower for rural women; it indicates that not only the menopausal symptoms but aging, increasing frequency of chronic illness, and social deprivation may have negative impact on QOL of menopausal women.

We did not find significant difference in scores for physical domain of WHO QOL-BREF. The physical domain access the influences on the QOL of factors like activities of daily living, dependence on medicinal substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity can be explained by the fact that the urban sample was hospital-based which could be the reason for lower score on the physical health.

In our study, the rural women showed a considerably worse QOL in the psychological, social, and the environmental domains of the WHO QOL questionnaire when compared to their urban counterparts and the results were statistically significant. Rural women were more of low socio-economic status so were more likely to encounter financial problems, issues of unemployment or underemployment, discrimination; there was the lack of education, poorer access to health services, higher levels of personal health risk factors, and environmental issues linked to road travel and occupation, whereas the women living in the urban area were having have more opportunities to be involved in social, cultural, or economic activities. In contrast, women in rural areas are more labile to a diminished self-esteem at the end of their child-bearing age. In professionally non-active psychosomatic syndromes, such as anxiety, depression, enhance a greater discomfort, which makes them limit their contacts with acquaintances or friends. Sleep disorders — particularly, insomnia — as well as sleep continuity disorders, sexual disorders influence women's everyday functional life and their lifestyle. In this respect, the investigated women also reported problems of different intensity. Therefore, it was not unexpected that rural females possess higher risk of anxiety and depression social and environmental problems. Our results were similar to the conclusions reached by Zolnierczuk-Kieliszek *et al.,*[26] estimated that scores for depression and anxiety were higher in rural women. But were contradictory to Yohanis *et al.*,[9] who concluded the QOL showed no significant difference between rural and urban women. The reason for the discrepancy because of the character and culture of rural communities in their study that they were more accepting to the differences they have experienced since menopause, the idea that menopause is a natural thing that must happen in every menopausal woman and not just a peruses aging or loss of beauty, but also a process of maturation.

But there was lack of awareness of its cause, effect, and management pertaining to it. A wide gap in the knowledge has been documented in women from rural and urban area in developing countries.

The current study had some limitations as secondary causes of amenorrhea were not ruled out and co-morbidities and medication play an important role on QOL issues which was not addressed in the current analysis.

CONCLUSION

The high proportions and the scores of MRS were observed in both rural and the urban women. The severity of symptoms was found more distressing for rural women. The QOL in urban society where the symptoms experienced were less severe was average and better than the QOL in rural women having severe menopause symptoms. Thus, the current study warrants an urgent need to create awareness about menopausal health among both urban and rural post-menopausal women.

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