

Menopause-Specific Quality of Life of Rural Women

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Abstract

Background: Menopause is a natural process, but it causes hormonal and biological changes in the body, which can result in drastic effects on quality of life (QOL) of women. **Objective:** The study was conducted to assess the menopause-specific QOL (MENQOL) of rural women. **Subjects and Methods:** A descriptive cross-sectional design was used to assess MENQOL of rural women of the selected villages of Punjab. A total of 150 menopausal women were selected using simple random sampling technique. The MENQOL questionnaire was administered to assess the QOL in relation to menopausal symptoms. **Results:** The mean score of overall QOL was 3.4274 ± 0.99 , which revealed a moderate impact of menopausal symptoms on the QOL. Stepwise linear regression revealed the significant impact of 16 out of 29 menopausal symptoms on QOL. Furthermore, MENQOL was found to be significantly associated with education, marital status, and sleep pattern of women. **Conclusions:** There is a significant effect of menopausal symptoms on QOL of women which emphasizes the need to create awareness among menopausal women regarding menopausal symptoms and management to improve their QOL.

Keywords: Menopause-specific quality of life, menopausal symptoms, menopause, rural women

INTRODUCTION

The natural process of menopause is highly associated with a set of vasomotor, psychosocial, physical, and sexual symptoms contributed by the hormonal and biological changes in the body.^[1-3] These menopausal symptoms negatively affect the quality of life (QOL) and the overall health of women.

The prevalence of these symptoms has been studied vastly, showing a range of findings. Majority of studies report poor life quality associated with menopausal symptoms; most prevalent symptoms identified include hot flushes, backache, decrease in physical strength, physical and mental exhaustion, night sweats, irritability, depression, anxiety, poor sexual desire, and vaginal dryness.^[4-7] Menopause also increases the risk for certain conditions such as osteopenia, osteoporosis, decreased lung capacity, and cardiovascular problems.^[8,9] Furthermore, a significant association of menopause-specific QOL (MENQOL) with sociodemographic variables is empirically proven.^[10]

Menopause and its related symptoms are highly prevalent in Indian rural settings with insufficient empirical data for the same. On average, women spend one-third of their life in the menopausal state. Thus, it is crucial to find out various menopausal effects as well as their relationship with QOL, which can provide the basis for the need to create awareness

about the same and identifying evidence-based interventions to improve the health status and menopausal QOL of affected women.

SUBJECTS AND METHODS

A descriptive cross-sectional research design was used to study the MENQOL of the rural women in the selected villages of district Patiala, Punjab. A sampling frame of menopausal women was obtained from five villages of district Patiala. Sample size was calculated based on the prevalence of vasomotor symptoms reported by Karmakar *et al.* in 2017.^[4] As per their study, the prevalence of vasomotor symptoms ranged between 40% and 60%. The formula used for calculating the sample was $N = 4pq/I^2$, where P = prevalence proportion, $q = p - 1$, and I = allowable error. With the allowable error of 10% and 95% confidence interval, $n = 4 \times 0.6 \times 0.4 / 0.1 \times 0.1 = 96$. To improve the external validity of the findings of the study, a total of 150 menopausal women were selected by simple

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random sampling technique using a computer-generated random number table. Women who had acquired menopause and who were willing to participate in the study were included, whereas women with induced menopause due to treatment or surgery were excluded.

The study was conducted in 2019. Home visits were conducted after obtaining permission from the Sarpanch of villages to conduct the study. The study was approved by the institutional review board (Ref. No. IRB/DON/CU/2018-19/02). Informed consent was taken from each subject and confidentiality of information was maintained throughout. During the home visits, data were collected using standardized tools: MENQOL Questionnaire.^[11] The tool has 29 items in total, to assess the menopausal symptoms divided into four domains, i.e., “vasomotor” (3 items), “psychosocial” (7 items), “physical” (16 items), and “sexual” (3 items). The sociodemographic data such as age, education, occupation, income, husband’s occupation, husband’s education, type of family, marital status, reproductive history, lifestyle, comorbidities, and any treatment for menopausal symptoms were also collected.

For each item of MENQOL, scoring was done from 1 to 8. The scores were then added and the mean score was calculated. Interpretation of level of QOL was made based on the mean score, i.e., 1–2 (no effect on QOL), 2–4 (mild decline in QOL), 4–6 (moderate decline in QOL), and 4–8 (severe decline in QOL).

The data were analyzed using statistical package SPSS version 23.0. (Statistical Package for Social Sciences, IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0 Armonk, NY: IBM Corp.) The mean, standard deviation, frequency, and percentage were used for descriptive presentation of data. Stepwise linear regression was used to predict the final model with significant menopausal symptoms affecting the QOL. Chi-square and ANOVA were used to find out the association and impact of selected demographic variables on QOL of rural women.

RESULTS

The study consisted of 150 women with a mean age of 59.81 ± 10.10 years. The age of attaining menopause ranged between 36 and 58 years, and the mean age was 47.76 ± 4.47 years. The mean duration of postmenopause was 11.91 ± 9.05 years. The majority of the women were illiterate (66.7%) and homemakers (81.3%). 74.7% of women were married and 24% of them were widows. Furthermore, the majority of the women lived in a joint family (72.7%). 93.3% reported having family support for menopause-related problems. The data on lifestyle patterns revealed that majority of the women were vegetarian (69.3%), followed moderate physical activity (58%) and reported taking 5–8 h of sleep everyday (64%).

Table 1 shows that the most prevalent menopausal symptoms were avoiding intimacy in sexual domain (93.3%), Anxiety and

Table 1: Menopausal symptoms and related quality of life among rural women (n=150)

Menopausal symptom	Frequency (%)
Vasomotor	
Hot flushes or flashes	112 (74.7)
Night sweats	100 (66.7)
Sweating	85 (56.7)
Psychosocial	
Dissatisfaction with my personal life	93 (62.0)
Feeling anxious or nervous	114 (76.0)
Poor memory	104 (69.3)
Accomplishing less than I used to	108 (72.0)
Feeling depressed, down, or blue	81 (54.0)
Being impatient with other people	82 (54.7)
Feeling of wanting to be alone	60 (40.0)
Physical	
Passing gas or gas pain	92 (61.3)
Aching in muscles and joints	133 (88.7)
Feeling tired or worn out	131 (87.3)
Difficulty in sleeping	105 (70.0)
Aches in back of neck or head	118 (78.7)
Decreased in physical strength	132 (88.0)
Decrease in stamina (energy to keep going)	123 (82.0)
Lack of energy	124 (82.7)
Dry skin	104 (69.3)
Weight gain	80 (53.3)
Increased facial hair	31 (20.7)
Changes in appearance, texture or tone of my skin	100 (66.7)
Feeling bloated	76 (50.7)
Low backache	115 (76.7)
Frequent urination	72 (48.0)
Involuntary urination when laughing or coughing	47 (31.3)
Sexual	
Decrease in my sexual desire	137 (91.3)
Vaginal dryness	97 (64.7)
Avoiding intimacy	140 (93.3)

nervousness in psychological domain (76%) and hot flushes in vasomotor domain (74.7%). Furthermore, the most prevalent physical symptom was aching in muscle and joints (88.7%). Furthermore, it was found that the QOL in relation to different domains of menopausal symptoms was mildly affected as the mean + standard deviation scores of the MENQOL in vasomotor, psychosocial, physical, and sexual domains were 3.32 ± 1.61 , 3.30 ± 1.32 , 3.52 ± 1.16 , and 3.32 ± 1.02 , respectively.

The association of the selected demographic variables on MENQOL was analyzed, which showed a significant association of QOL with education ($P = 0.02$) and marital status ($P = 0.01$), whereas occupation, monthly income, and type of family were not significantly associated with QOL. Furthermore, it was observed that majority of the illiterate and married women as well as widows reported mild-to-moderate effect of menopausal symptoms on QOL.

The main impact of menopause is the onset of certain symptoms and changes which can affect the QOL of women. Stepwise

Table 2: Significant menopausal symptoms affecting quality of life (n=150)

Variables	Unstandardized β	Coefficients Std. Error	Standardized Coefficients β	t	P	ANOVA		
						R ²	F	P
(Constant)	0.290	0.225	0.290	1.288	0.200	0.802	33.723	0.000
Frequent urination	0.197	0.097	0.099	2.028	0.045			
Feeling anxious or nervous	0.205	0.107	0.088	1.917	0.057			
Low backache	0.488	0.108	0.208	4.509	0.000			
Dissatisfaction with my personal life	0.235	0.101	0.115	2.323	0.022			
Involuntary urination when laughing or coughing	0.289	0.096	0.135	3.002	0.003			
Passing gas or gas pain	0.285	0.091	0.140	3.137	0.002			
Weight gain	0.277	0.085	0.139	3.242	0.001			
Night sweats	0.340	0.099	0.161	3.442	0.001			
Accomplishing less than I used to	0.418	0.109	0.189	3.835	0.000			
Poor memory	0.306	0.095	0.142	3.214	0.002			
Changes in appearance, texture or tone of my skin	0.273	0.097	0.130	2.814	0.006			
Dry skin	0.303	0.095	0.141	3.177	0.002			
Avoiding intimacy	0.406	0.161	0.102	2.521	0.013			
Feeling bloated	0.181	0.086	0.091	2.104	0.037			
Hot Flushes or flashes	0.263	0.108	0.115	2.432	0.016			
Difficulty in sleeping	0.221	0.098	0.102	2.256	0.026			

Table 3: Impact of lifestyle on menopause-specific quality of life of rural women (n=150)

Variable	Frequency	Vasomotor mean	Psychosocial mean	Physical mean	Sexual mean
Dietary pattern					
Vegetarian	104	3.32 (1.60)	3.47 (1.31)	3.73 (1.21)	3.30 (1.00)
Nonvegetarian	37	3.45 (1.69)	2.79 (1.23)	3.07 (0.80)	3.45 (1.14)
Eggetarian	9	2.81 (1.47)	3.33 (1.31)	2.88 (1.08)	3.00 (0.74)
F, significance		0.56, 0.57	3.77, 0.02*	6.21, 0.003*	0.797, 0.45
Physical activity					
Sedentary	61	3.44 (1.52)	3.73 (1.31)	3.70 (1.18)	3.11 (1.13)
Moderate	87	3.19 (1.66)	2.95 (1.21)	3.37 (1.14)	3.46 (0.93)
Heavy	2	5.00 (0.00)	5.35 (0.50)	4.31 (0.44)	3.33 (0.47)
F, significance		1.51, 0.22	9.6, 0.00*	1.99, 0.14	2.15, 0.11
Sleep pattern (h)					
<5	38	4.28 (1.54)	4.27 (1.09)	4.32 (1.16)	3.43 (1.13)
5-8	96	2.98 (1.43)	2.89 (1.19)	3.20 (1.00)	3.29 (0.97)
More than 8	16	3.08 (1.92)	3.43 (1.35)	3.53 (1.15)	3.18 (1.08)
F, significance		10.12, 0.00*	18.3, 0.00*	15.17, 0.00*	0.40, 0.66

*Significant at the level of 0.05

regression was performed to find out the significance of specific menopausal symptoms on the QOL of rural women. Table 2 depicts that after applying the stepwise regression, 16 symptoms were included in the final model. On the basis of standardized coefficient β , the order of influence of menopausal symptoms was determined and it was found that most influential factor affecting the QOL was “low backache” ($\beta=0.208$) and the least influential symptom was “feeling anxious or nervous” ($\beta = 0.088$).

Table 3 presents the effect of lifestyle habits on the MENQOL of rural women. Findings revealed that dietary patterns had a significant impact on the psychosocial and physical domain of menopausal QOL ($P < 0.05$). However, physical activity had a noteworthy impact on the psychosocial domain of menopausal QOL and the women who reported heavy physical

activity had a greater reduction in QOL due to psychological symptoms ($P = 0.00$). Sleep patterns also had a significant impact on the vasomotor, psychological, and physical domain of QOL, and there was significant reduction in QOL due to vasomotor, psychological, and physical menopausal symptoms among women who reported <5 h sleep per day ($P < 0.05$).

DISCUSSION

The common symptoms identified in various domains were found to be coherent with many studies.^[4,7,8] Karmakar *et al.* (2017) in their study reported that hot flushes (60%) and feeling depressed (88%) were the most prevalent symptoms in vasomotor and psychosocial domains respectively. Ninety-three percent of respondents were having bodily

symptoms such as decreased strength and energy, and the most prevalent sexual symptom was “change in sexual desire” reported by 40% of women.^[4]

The study findings revealed the overall mild effect of menopausal symptoms on the quality of life of rural women. Furthermore, women reported a decline in menopausal quality of life majorly due to the symptoms in the physical domain followed by vasomotor & sexual domain, and the psychosocial domain was reported to have the least effect. Similar results were reported in a study conducted in South India, which stated the occurrence of highbrow signs of menopause: hot flushes, night sweats, and vaginal dryness.^[12] Another study conducted in Gujarat on rural couples reported high prevalence of vasomotor (21.35%), physical (91.5%), and psychosocial (44.7%) symptoms. “QOL and Bother” analysis disclosed the mild-to-moderate impact of menopause on QOL.^[13] Further, a systematic review of 23 primary studies reported more dominant symptoms in physical and psychological domain than the vasomotor and sexual domain among Asian females.^[14] Furthermore, there was a significant association of QOL with education and marital status, similar to another study which showed the significant relationship with age and QOL. Education had a significant impact on the physical and psychosocial domain and the marital status also influenced the QOL.^[15] Such outcomes of these studies highlight the need for strengthening the primary health care services focusing on the health-care needs of postmenopausal women, as these symptoms impact the QOL of menopausal women.

CONCLUSIONS

The study findings divulge that QOL of women declines due to menopausal symptoms that impact the physical, mental, and social well-being of women and point toward the need for education and awareness of women regarding these symptoms and appropriate interventions to manage to improve the QOL of rural women.

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Conflicts of interest

There are no conflicts of interest.

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