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Quality of Life among Rural Postmenopausal Women in Bangladesh

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Abstract

Background: Menopause is a natural phase in a woman's life. The transition through this period can significantly impact overall quality of life.

Objectives: This study was aimed to assess the quality of life among rural postmenopausal women and to find out the relationship between quality of life and socio-demographic conditions.

Methods: This cross-sectional study was conducted in 2018 on 384 postmenopausal women aged 40-70 years selected by convenient sampling in the rural areas of Faridpur District in Bangladesh. We used the Menopause-Specific QOL questionnaire (MENQOL) for measuring QOL in postmenopausal women. Chi-square, t-test, and ANOVA were used to estimate the statistically significant differences. A significant p value was considered when p less than 0.05.

Results: The mean menopausal age was 47.13± 4.300 years. The overall mean scores obtained for each domain was 7.42±1.387 in the sexual domain, 7.11±1.278 in the vasomotor domain, 7.09±.961 in the psychosocial domain and 7.00±1.079 in the physical domain. Higher scores had worse QOL. Our findings showed that menopausal women had worse QOL in all the domains naming sexual, vasomotor, psychosocial and physical domain. Using MENQOL scores, our study showed significant differences in QOL based on age, educational qualification of the respondents, the occupation of the respondents, educational qualification of the respondent's husband and type of house.

Conclusion: The mean scores of each domain suggest that menopausal symptoms are associated with lower quality of life of postmenopausal women.

Keywords: Quality of life, Menopause, Bangladesh, MENQOL

Introduction

Thousands of years ago, the Roman philosopher Lucius Annaeus Seneca emphasized the significance of quality of life (QOL) by stating, "It is quality rather than quantity that matters" **[1, 2]**. A key objective of health services for all individuals in the twenty-first century is to enhance quality of life **[3]**. The QOL in the postmenopausal period has taken a lot of attention particularly in recent years since nearly one-third of women are living in postmenopausal age **[1]**.

QOL has been outlined by the World Health Organization (WHO) as the 'individual's perceptions of their position in life within the context of the cultural and value systems within which they live and in relevancy their goals, expectations, standards, and considerations' **[1,4,5,6,7,8,9,10].** Quality of life (QOL) in relation to health encompasses multiple dimensions, including social, physical, and mental aspects that affect everyday life **[11, 12, 13]**. Every woman experiences a unique impact on her QOL after menopause, shaped by these key areas **[11]**.

Menopause is defined as the permanent absence of menstruation for 12 consecutive months or the loss of ovarian function leading to permanent amenorrhea **[14, 15, 16]**. Menopause is a natural phase in every woman's life, leading to a range of vasomotor, psychological, physical, and sexual symptoms **[14]**. There is a drop in the levels of estrogen and progesterone, the two most important hormones in the female body **[17]**. As a result of a lack of estrogen, a woman may experience decrease physical and mental well-being that is why a postmenopausal woman can be considered a risk population **[13,18,19]**.

Menopause usually occurs on average between the ages of 50 and 51 and literally refers to a woman's last menstruation period; however, age 40 is used as an arbitrary cut-off point for natural menopause. Women who have not menstruated during the past 12 months are said to be at the postmenopausal stage **[17]**.

The duration, intensity, and effects of menopausal symptoms can differ significantly among individuals and populations. For some women, the symptoms are severe enough to deeply impact their daily lives, personal well-being, social interactions, and overall quality of life **[7,20]**.

Over 80% of women experience physical or psychological symptoms in the year leading up to menopause, with varying degrees of discomfort and disruption in their lives, ultimately resulting in a reduced quality of life **[18,21]**. Despite a majority of women facing multiple symptoms, the literature still presents a gap on groups of symptoms consistently occur and what these symptoms be affected by the quality of life of postmenopausal women **[7,22]**.

Psychological, physical, vasomotor and sexual changes occurring in the postmenopausal period may disturb a woman's quality of life. Also, the quality of life of a woman in the post-menopausal age group is influenced by socio-cultural and behavioral factors compounded by their health-related perceptions and health-seeking behavior. Postmenopausal symptoms can lead to social consequences such as disruptions in women's domestic roles and economic activities, as well as harm to their psychological and emotional well-being, ultimately impacting their quality of life **[3]**.

The majority of studies on the quality of life of postmenopausal women have been carried out in developed countries, where different socio-cultural factors may shape both the perception of quality of life and the experience of menopausal symptoms. However, there is limited data available on the quality of life of postmenopausal women in developing countries **[7,18]**.

This study aims to highlight the extent of health-related challenges faced by postmenopausal women and examine the relationship between these issues and various socio-demographic factors. Additionally, it seeks to raise awareness among health authorities, encouraging them to implement appropriate measures to address the needs of menopausal women.

Methodology

This cross-sectional study was conducted among rural postmenopausal women in Faridpur district in Bangladesh from January, 2018 to December, 2018.

The study included all postmenopausal women residing in the study area who met the established inclusion and exclusion criteria.

Inclusion criteria:

Women eligible for the study were those aged 40 to 70 years, who had not experienced menstruation in the past 12 months, and had undergone natural menopause.

Exclusion criteria:

The women who had attained menopause surgically, who were severely ill physically and/or mentally and who were not willing to participate in the study were excluded from the study.

In this study, a total of 384 postmenopausal women were selected using a convenient sampling method. Data collection was carried out through face-to-face interviews, using a structured questionnaire.

The questionnaire was divided into two sections:

Part 1: Socio-Demographic Characteristics

This section gathered personal information about the participants, including age, gender, religion, educational background, family structure, monthly income, and expenses. It also covered marital status, number of children, and age at menopause. Additional variables such as the husband's educational level, occupation, type of house, total family income, and family expenditures were also included.

Part 2: MENQOL Questionnaire for Quality of Life

To assess the participants' quality of life, the MENQOL (Menopause-Specific Quality of Life) scale was used. This self-report measure evaluates the presence and severity of menopausal symptoms and how much they impact daily life. The MENQOL consists of 29 items, each corresponding to one of four domains of menopausal symptoms experienced in the past month:

- **Vasomotor** (items 1–3)
- **Psychosocial** (items 4–10)
- **Physical** (items 11–26)
- **Sexual** (items 27–29)

For each item, participants indicate whether the symptom was present, and if so, how bothersome it was on a scale from 0 (not bothersome) to 6 (extremely bothersome). The responses are systematically converted for scoring and data analysis. Each seven-point Likert scale response is translated into an eight-point scale ranging from 1 to 8. A score of "1" means the participant did not experience the symptom in the last month, while a "2" indicates the symptom was present but not bothersome. Scores from "3" to "8" reflect increasing levels of bother, corresponding to the original 1-6 range.

The final score for each MENQOL domain is the average of the converted item scores and ranges from 1 to 8. The severity of menopausal symptoms is classified as follows:

- **Mild**: Score range 2–4
- **Moderate**: Score of 5
- **Severe**: Score range 6–8.

Data were collected, coded, tabulated, and analyzed using SPSS software (version 20, IBM Corporation, Armonk, NY, USA). Descriptive statistics were applied to calculate percentages, frequencies, means, and standard deviations. To assess statistical significance, Chi-square tests, t-tests, and ANOVA were conducted. A p-value of less than 0.05 ($p < 0.05$) was considered statistically significant.

Formal ethical approval for this study was granted by the Institutional Review Board (IRB) of the National Institute of Preventive and Social Medicine (NIPSOM). Prior to data collection, informed written consent was obtained from each participant after providing a clear explanation of the study's objectives and purpose. All participants were treated with respect and equality, and their privacy and confidentiality were strictly upheld. Participation was entirely voluntary, and individuals were enrolled in the study only after signing the consent form.

Results

The mean age of the women in the study was 58.02 ± 7.574 years, with a mean menopausal age of 47.13 ± 4.300 years. The vast majority of participants (98%) were followers of Islam. Most of the respondents (97.4%) were housewives, and 92.7% were illiterate. In terms of marital status, 60.9% were married, 36.2% were widowed, and 2.9% were divorced. Among the 384 women surveyed, 51% had four or more children, while 49% had between zero and three children. A significant portion (63%) lived in joint families, and 60.9% resided in Klay houses. Additionally, 86.4% of the participants' husbands were illiterate, with only basic literacy skills. In terms of occupation, the majority (60%) of their husbands were engaged in agricultural work. **[Table 1]**

Table 1: Socio-demographic characteristics of the studied participants

Characteristics	**Number**	**Percentage (%)**
Age in years		
<50	69	18
>=50	315	82
Religion		
Muslim	378	98
Hindu	6	2
Level of education of the respondents		
Illiterate	356	92.7
Primary	24	6.3
Secondary	4	1
Occupation of the respondents		
Housewife	374	97.4
Day labor	10	2.6
Marital status		
Married	234	60.9
Widow	139	36.2
Divorced	11	2.9
Number of children of the respondents		
0-3	188	49.0
4 and more	196	51.0
Type of family of the respondents		
Joint family	240	63
Nuclear family	144	37
Type of housing of the respondents		
Klay house	234	60.9
Semi Concrete house	100	26
Concrete house	50	13
Education level of the respondent's husband		
Illiterate	332	86.4
Primary	36	9.4
Secondary	9	2.3
Higher secondary	4	1
Honors	3	.8
Occupation of the respondent's husband		
Farmer	232	60
Day labor	84	22
Businessman	39	10
Retired	29	8

Age of menopause of the respondents		
40-45	152	39.6
46-50	144	37.5
51-55	88	22.9

Table 2 indicated that the highest mean scores of symptoms in the vasomotor, psychosocial, physical and sexual domain were hot Flushes (7.49±1.101), experiencing poor memory (7.66±.982), aching in muscles and joints (7.57±1.148) and involuntary urination when laughing or coughing (7.57±1.056), vaginal dryness during intercourse (7.57±1.056) respectively.

Table 2: Mean Scores of MENQOL items (N=384)

Symptoms	**N**	**Mean ± SD**
A. Vasomotor		
Hot flushes	363	7.49±1.101
Night Sweats	317	7.15±1.498
Sweating	377	6.97±1.693
B. Psychosocial		
Dissatisfaction with personal life	310	6.93±2.011
Feeling anxious or nervous	338	7.07±1.424
Experiencing poor memory	377	7.66±.982
Accomplishing less than I used to	383	7.52±1.249
Feeling depressed, down or blue	342	6.87±1.690
Impatience with other people	197	6.94±1.402
Willing to be alone	122	6.37±2.050
C. Physical		
Flatulence (Wind) or gas pain	316	7.01±1.613
Aching in muscles and joints	348	7.57±1.148
Feeling tired or worn out	373	7.17±1.256
Difficulty in sleeping	296	7.26±1.272
Aches in back of neck or head	339	7.33±1.422
Decreases in physical strength	384	7.09±1.719
Decreased stamina	383	7.07±1.720
Feeling lack of energy	384	7.10±1.746
Dry skin	383	6.29±2.504
Weight gain	119	6.51±1.991
Increased facial hair	2	6.50±.707
Changes in appearance, texture or tone of skin	384	6.35±2.513
Feeling bloated	202	6.85±1.866
Low Backache	323	7.47±1.286
Frequent urination	232	7.39±1.104
Involuntary urination when laughing or coughing	199	7.57±1.056
D. Sexual		
Change in sexual desire	225	7.45±1.420
Vaginal dryness during intercourse	212	7.57±1.114
Avoiding intimacy	224	7.44±1.403

Table 3 illustrated the severity of the menopausal symptoms among the respondents. It was observed that the most severe symptoms in the vasomotor domain were hot flushes (85.7%). In the psychosocial domain, the most severe symptoms were experiencing poor memory (92.4%) and accomplishing less than they used to (91.4%). In physical domain the most severe symptoms were feeling lack of energy (86.5%) and decrease in physical strength (86.2%). Out of 60.9% married postmenopausal women, the most severe symptoms in sexual domain were changed in sexual desire (52.6%) followed by avoiding intimacy (52.1%).

Table 3: Distribution of the postmenopausal women according to the severity of menopausal symptoms (N=384)

Symptoms	**N**	**Mild**		**Moderate**		**Severe**	
		n	%	n	%	n	%
A. Vasomotor							
Hot flushes	363	10	2.6	24	6.3	329	85.7
Night sweats	317	21	5.5	31	8.1	265	69.0
Sweating	377	40	10.4	39	10.2	298	77.6
B. Psychosocial							
Dissatisfaction with personal life	310	45	11.7	7	1.8	258	67.2
Feeling anxious or nervous	338	26	6.8	31	8.1	281	73.2
Experiencing poor memory	377	10	2.6	12	3.1	355	92.4
Accomplishing less than I used to	383	16	4.2	16	4.2	351	91.4
Feeling depressed, down or blue	342	34	8.9	26	6.8	282	73.4
Impatience with other people	197	15	3.9	16	4.2	166	43.2
Willing to be alone	122	21	5.5	14	3.6	87	22.7
C. Physical							
Flatulence (wind) or gas pain	316	31	8.1	34	8.9	251	65.4
Aching in muscles and joints	348	16	4.2	10	2.6	322	83.9
Feeling tired or worn out	373	15	3.9	29	7.6	329	85.7
Difficulty in sleeping	296	10	2.6	33	8.6	253	65.9
Aches in back of neck or head	339	22	5.7	24	6.3	293	76.3
Decrease in physical strength	384	37	9.6	16	4.2	331	86.2
Decreased stamina	383	37	9.6	16	4.2	330	85.9
Feeling lack of energy	384	39	10.2	13	3.4	332	86.5
Dry skin	383	97	25.3	4	1.0	282	73.4
Increased facial hair	2					2	.5
Weight gain	119	22	5.7	3	.8	94	24.5
Changes in appearance, texture or tone of skin	384	96	25.0	5	1.3	283	73.7
Feeling bloated	202	26	6.8	8	2.1	168	43.8
Low backache	323	19	4.9	12	3.1	292	76.0
Frequent urination	232	5	1.3	19	4.9	208	54.2
D. Sexual							
Change in sexual desire	225	15	3.9	8	2.1	202	52.6
Vaginal dryness during intercourse	212	8	2.1	9	2.3	195	50.8
Avoiding intimacy	224	14	3.6	10	2.6	200	52.1

Table 4 illustrated the overall scores of menopausal quality of life for each MENQOL domain. It was observed that the highest mean score in sexual domain (7.42±1.387) followed by vasomotor (7.11±1.278) then psychosocial domain (7.09±.961) and finally physical domain (7.00±1.079).

Table 4: Mean Score for each MENQOL domain (N=384)

Domain	**Mean ± SD**	**Level of severity**
Vasomotor	7.11±1.278	Severe
Psychosocial	7.09±.961	Severe
Physical	7.00±1.079	Severe
Sexual	7.42±1.387	Severe

Table 5 highlights the comparison of MENQOL questionnaire scores across the four domains for women with varying socio-demographic characteristics. The analysis revealed that in the psychosocial domain, age and educational qualification of the respondents were significant factors. In the physical domain, the respondent's educational qualification, their husband's educational level, and the type of house were key predictors. In the sexual domain, the respondent's occupation emerged as a predictor of better quality of life among postmenopausal women.

Table 5: Mean scores per domain in menopausal women according to socio-demographic characteristics

Socio-demographic characteristics	Vasomotor	Psychosocial	Physical	Sexual
Age				
<50	7.08±1.312	6.85±1.047	7.05±.901	7.28±1.441
>=50	7.12±1.273	7.15±.935	6.99±1.115	7.47±1.367
	p=.817	**p=.022***	p=.646	p=.352
Religion				
Islam	7.12±1.275	7.10±.961	7.02±1.063	7.42±1.394
Hinduism	6.55±1.430	6.63±.936	6.22±1.658	7.50±1.118
	p=.241	p=.201	p=.054	p=.896
Education				
Illiterate	7.13±1.251	7.13±.934	7.05±1.022	7.41±1.380
Literate	6.86±1.589	6.65±1.195	6.33±1.507	7.53±1.505
	p=.278	**p=.012***	**p=.001***	p=.736
Occupation				
Housewife	7.12±1.259	7.10±.950	7.02±1.074	7.45±1.353
Day labor	6.87±1.927	6.83±1.337	6.45±1.167	6.14±2.093
	p=.543	p=.375	p=.104	**p=.022***
Type of family				
Nuclear	7.23±1.230	7.17±.985	7.06±1.064	7.39±1.358
Joint	7.04±1.304	7.05±.946	6.97±1.088	7.44±1.416
	p=.163	p=.256	p=.401	p=.786
Number of children				
0-3	7.08±1.313	7.10±1.035	7.00±1.059	7.31±1.372
4 and more	7.14±1.247	7.09±.887	7.00±1.099	7.53±1.399
	p=.677	p=.954	p=.993	p=.230
Number of Family Member				
1-6	7.10±1.295	7.11±.956	6.99±1.095	7.43±1.358
7-12	7.17±1.212	7.03±.987	7.04±1.015	7.40±1.511
	p=.669	p=.509	p=.746	p=.907
Education (Husband)				
Illiterate	7.11±1.274	7.12±.959	7.05±1.032	7.41±
Literate	7.11±1.315	6.92±.967	6.70±1.309	7.49±
	p=.987	p=.170	**p=.028***	p=.761
Occupation (Husband)				
Farmer	7.14±1.259	7.07±.986	7.01±1.080	7.45±1.374
Day labor	7.12±1.313	7.25±.855	7.17±.947	7.07±1.709
Businessman	7.09±1.172	6.90±.828	6.67±1.139	7.86±.587
Retired	6.90±1.490	7.07±1.181	6.89±1.275	7.34±1.403
	p=.819	p=.287	p=.116	p=.136
Type of house				
Klay house	7.04±1.327	7.12±.956	7.06±.987	7.52±1.247

Semi Concrete house	7.23±1.185	7.09±1.009	7.07±1.078	7.35±1.429
Concrete house	7.21±1.222	6.97±.892	6.60±1.386	7.11±1.835
	p=.362	p=.590	**p=.017***	p=.321
Monthly expenditure				
<500	7.16±1.267	7.01±1.006	6.98±1.035	7.37±1.357
500-1000	6.99±1.379	7.07±.972	6.95±1.216	7.54±1.266
>1000	7.19±1.122	7.30±.809	7.14±.919	7.30±1.693
	p=.429	p=.076	p=.419	p=.584
Monthly income (Family)				
<5000	7.21±1.261	7.07±1.087	7.04±1.042	7.39±1.396
5000-10000	6.95±1.363	7.08±.958	6.95±1.120	7.45±1.292
>10000	7.19±1.191	7.12±.865	7.02±1.068	7.41±1.478
	p=.176	p=.885	p=.778	p=.957
Monthly expenditure(family)				
<5000	7.13±1.389	7.08±1.065	7.01±1.069	7.37±1.387
5000-10000	7.01±1.260	7.06±.956	6.96±1.115	7.40±1.402
>10000	7.20±1.196	7.14±.874	7.04±1.051	7.48±1.385
	p=.464	p=.823	p=.848	p=.888
Age of menopause				
40-45	7.12±1.299	7.06±1.024	7.01±1.076	7.42±1.517
46-50	7.06±1.264	7.07±.906	7.05±.975	7.36±1.278
51-55	7.17±1.276	7.20±.938	6.92±1.240	7.52±1.323
	p=.818	p=.484	p=.676	p=.830

Discussion

Menopause is a natural transition that all women experience, but individual responses to menopause and the associated drop in estrogen can vary widely due to a range of genetic, cultural, lifestyle, socioeconomic, educational, and dietary influences. In recent years, menopause has gained attention as a significant factor in women's health. In this study, we assessed the quality of life (QOL) in women experiencing menopausal symptoms using the MENQOL (Menopause-Specific Quality of Life) scale. Numerous studies have shown that quality of life (QOL) is often reduced in menopausal women, as this phase is associated with various physical and psychological changes that can affect overall health outcomes **[14]**. Therefore, QOL of post-menopausal women is needed to be assessed. Thus, in this study, we have tried to evaluate the QOL of post-menopausal women both as a specific and cumulative effect of the four major domains related to her health and well-being, namely vasomotor, physical, sexual and psychosocial.

In the present study, the mean age of menopause was found to be 47.13 ± 4.30 years, which closely aligns with findings from several previous studies conducted in different regions. These include research by Karma et al. in Punjab **[14]**, Kamal and Seedhom in Egypt **[23]**, Waheed et al. in Pakistan **[9]**, Sagdeo and Arora in Nagpur [24], Poomala and Arounassalame in Puducherry **[25]**, Sarkar et al. in Jamnagar **[26]**, and Bansal et al. in Punjab **[27]**. However, this figure is lower compared to the study by Nisar and Sohoo in Sindh, Pakistan **[18]**, where the average age of menopause was reported as 52.17 ± 6.019 years.

In the current study shows the most common symptoms reported were decreases in physical strength (100%), feeling lack of energy (100%), changes in appearance, texture or tone of skin (100%), accomplishing less than I used to (99.7%), dry skin (99.7%), decreased stamina (99.7%), sweating (98.2%) and poor memory (98.2%). Whereas Kamal and Seedhom **[23]** showed that the most frequently reported menopausal symptoms were joint and muscular discomfort (82.1%) followed by physical and mental exhaustion (69.6%) and hot flushes (53.6%).

In the current study, the most severe symptoms identified in the vasomotor, psychosocial, physical, and sexual domains were hot flushes (85.7%), poor memory (92.4%), decrease physical strength (86.2%), and changes in sexual desire (52.6%) respectively. The most severe symptoms of the vasomotor, psychosocial and sexual domain were similar to the study done by Karma et al. in Punjab **[14]** and Mohamed et al. in Egypt **[7]**. However, the most severe physical symptoms differed from the present study. In their research, feeling tired or worn out (88%) and low back pain (41.9%) were reported as the most severe physical symptoms.

In this study, the highest mean score in the MENQOL domains was observed in the sexual domain (7.42 ± 1.387), followed by the vasomotor domain (7.11 ± 1.278), then psychosocial domain (7.09 ± 0.961), and lastly, the physical domain (7.00 ± 1.079). These findings align with the study conducted by Mohamed et al. in Egypt **[7]**. However, the results contradict those of Shobeiri et al. in Iran [4] where the highest mean score of the MENQOL domain was the physical domain (39.12 ± 1.95), followed by the psychosocial domain (19.36 ± 1.20), the vasomotor domain (11.65 ± 5.93), and the sexual domain (11.02 ± 5.66).

In this study, the highest mean scores of symptoms in vasomotor, psychosocial, physical, and sexual domains were hot flushes (7.49 ± 1.101), experiencing poor memory (7.66 ± 0.982), aching muscles and joints (7.57 ± 1.148), and vaginal dryness during intercourse (7.57 ± 1.056), respectively. In contrast, Shobeiri et al. in Iran [4] reported different findings, with the highest mean scores being night sweats (4.17 ± 2.08) for the vasomotor domain, anxiety or nervousness (3.34 ± 2.14) for the psychosocial domain, muscle and joint aches (3.41 ± 2.04) for the physical domain, and changes in sexual desire (3.77 ± 2.11) for the sexual domain.

Previous studies **[28]** examining the link between menopausal symptoms and various socio-demographic and lifestyle factors found that quality of life (QOL) was associated with lower socio-economic status, educational level, duration of menopause, physical activity, employment status, and age. In our study, we identified statistically significant associations between several of these factors and specific domains of QOL. Age was linked to the psychosocial domain; educational qualification correlated with both the psychosocial and physical domains; occupation was associated with the sexual domain; the husband's educational qualification was related to the physical domain; and the type of housing was also connected to the physical domain, all with p-values ≤ 0.05. However, a study by Karma et al. in Punjab **[14]** reported no statistically significant associations between age, education, occupation, number of children, and various menopausal symptoms.

Conclusion

The mean scores across each domain indicate that menopausal symptoms were linked to a decline in quality of life among the study participants. Key factors influencing postmenopausal quality of life included age, educational level, occupation, the husband's educational qualifications, and the type of housing. Women require increased care and support during the postmenopausal phase. Hence, developing effective intervention programs is essential to enhance the quality of life for postmenopausal women.

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