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Assessment of symptoms and quality of life among menopausal women using standard MENQOL questionnaire

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A B S T R A C T

Introduction: Menopause is associated with a decline in estrogen levels that trigger a number of physical and physiological changes affecting quality of life. **Objective:** To assess the quality of life (QoL) and associated factors in postmenopausal women. **Methods**: A total of 245 post-menopausal women aged >40 years (75.1% aged 50 years or above, mean duration of menopause 5.90 years) were enrolled in the study after excluding those with chronic physical or psychological illnesses. Socio-demographic and clinical details were noted and QoL was assessed using MENQOL questionnaire. Data was analyzed using SPSS 25.0 software with help of Chi-square, ANOVA and Independent samples 't'-tests. **Results**: Symptom and psychosocial issue most severely affected were decrease in sexual desire (77.6%), avoiding intimacy (75.9%), vaginal dryness (66.5%), hot flushes, night sweats and sweating (63.3% each) respectively. QoL impairment by 66.7%, 46.3%, 37.8% and 75.6% was seen for vasomotor, psychosocial, physical and sexual domains respectively. Overall quality of life was affected by 58.6%. Among sociodemographic factors, occupation, family type, socioeconomic status, religion and marital status affected the QoL. Among clinical factors, chronic illness and addictions had a protective effect against QoL decline while duration of menopause and high BMI and specific comorbidities affected the QoL adversely. The findings of study showed a high impact of menopause on QoL of women. Sociodemographic and clinical factors had deterministic effects on QoL decline that need to be explored further using an exhaustive assessment in a larger study population in view of their study-specific roles in different studies. **Conclusion:** This cross-sectional study evaluated symptoms and quality of life (QoL) among 245 post-menopausal women in rural Barabanki using the MENQOL questionnaire. Common symptoms included fatigue, reduced physical strength, and decreased sexual desire. The sexual and vasomotor domains were most severely impacted, with an overall QoL reduction of 58.6%. Poor QoL was significantly associated with factors such as occupation, joint family status, lower socioeconomic class, higher BMI, and longer time since menopause. Addictions, particularly to tobacco and betel+tobacco, were linked to lower QoL scores. The study highlights a substantial burden of menopausal symptoms and impaired QoL, particularly in sexual and psychosocial domains, among women from socioeconomically disadvantaged rural settings.

Keywords: Menopause, Quality of life, MENQOL, Sociodemographic, Clinical factors.

INTRODUCTION

Menopause represents a significant physiological transition marked by the cessation of ovarian function and a sharp decline in estrogen levels, leading to a variety of systemic effects on physical, psychological, and sexual health[1]. These effects are manifested through vasomotor symptoms, urogenital atrophy, mood disturbances, sleep disruption, musculoskeletal and

cardiovascular changes, and metabolic dysfunction[2–3]. Despite the wide-ranging impact of these changes, the quality of life (QoL) of menopausal women remains an underexplored aspect, particularly in low-resource and rural settings[4]. Estrogen deficiency not only compromises physical health through conditions such as osteoporosis and cardiovascular disease[5], but also affects mental well-being by disrupting neuroendocrine and neurotransmitter pathways[6–7].

This cross-sectional study was conducted in Department of Obstetrics and Gynecology at Dr. KNS Memorial Institute of Medical Sciences, Barabanki, Uttar Pradesh to assess the symptom profile and QoL of 245 post-menopausal women using the MENQOL questionnaire.

Materials and Methods

This prospective descriptive study was conducted over 18 months (January 2023–June 2024) in the Department of Obstetrics and Gynecology at Dr. KNS Memorial Institute of Medical Sciences, Barabanki, Uttar Pradesh, following ethical approval. A total of 245 postmenopausal women aged over 40 years (within 1–10 years of natural menopause) attending the gynecology OPD or admitted to the ward were enrolled based on predefined inclusion and exclusion criteria. After informed consent, sociodemographic and clinical data—including BMI, medical and obstetric history, and addictions—were collected. Menopausal symptoms and quality of life were assessed using the validated Hindi version of the Menopause-Specific Quality of Life Questionnaire (MENQOL), covering vasomotor, psychosocial, physical, and sexual domains. Face-to-face interviews lasting 25–30 minutes were conducted. Data were analyzed using IBM SPSS version 25.0, with Chi-square and ANOVA tests used to assess associations, considering $p < 0.05$ as statistically significant.

Inclusion criteria:

1) women of age >40 years who have attained menopause (1-10 years).
2) willing to give consent for participation in the study.

Exclusion criteria:

In women

1) who had attained surgical menopause
2) who are on medications such as anxiolytics, antidepressants, antipsychotic drugs
3) on hormone replacement therapy
4) suffering from any severe physical or mental illness requiring hospitalization and not fit to comprehend and answer the questionnaire

Results

In this study of postmenopausal women, the majority were aged 50–54 years (39.2%), married (85.7%), homemakers (73.9%), and from low socioeconomic (73.5%) and rural (72.2%) backgrounds. While many women did not report symptoms such as difficulty sleeping (62.9%), weight gain (86.9%), or increased facial hair (98.4%), a significant proportion experienced moderate to severe symptoms including hot flushes, night sweats, and excessive sweating (63.3% each), muscle and joint pain (60.4%), fatigue (60.8%), lack of energy (56.7%), and low backache (55.5%). Sexual issues were also prominent, with decreased sexual desire reported by 77.6%, avoidance of intimacy by 75.9%, and vaginal dryness by 66.5%. Quality of life scores indicated the highest impact in the physical (mean score 36.32 ± 16.36) and psychosocial domains (19.46 ± 10.12). Sociodemographic factors such as occupation, socioeconomic status, family type, religion, and marital status significantly influenced symptom severity and quality of life. Notably, women who were employed, of lower socioeconomic status, or living in rural areas reported worse physical health, while Muslim women, widows, and homemakers/self-employed women experienced more severe sexual health challenges. These findings underscore the multifaceted effects of menopause on women's health and quality of life, shaped by social and demographic contexts.

Discussion

Age & sociodemographic factors

The majority of women in the present study were aged 50 years or older (75.1%), predominantly Hindu (70.6%), married (85.7%), illiterate (70.2%), housewives (73.9%), living in joint families (79.6%), and from lower or lower-middle socioeconomic strata (73.5%), primarily residing in rural areas (72.2%). This profile reflects the typical rural, underprivileged female population in North India. Comparable studies from different Indian regions show variations: **Vasudeva and Senthilvel**[3] reported a fully literate, semi-urban South Indian cohort with similar socioeconomic status but higher education levels; Singh et al. described an urban Western Indian sample with a younger age distribution and more illiteracy; **Kalhan et al.'s**[2] rural Haryana population mirrored this study's profile closely, while **Sheereen and Kadarkar**[1] observed younger, more educated women in rural Maharashtra. Despite regional differences, these studies consistently represent women from lower socioeconomic backgrounds across diverse sociocultural contexts in India.

Nutritional Status, Obstetric and Clinical Profile

In this study, the majority of postmenopausal women (57.6%) had a normal BMI (18.5–24.9 kg/m²), with only 4.1% underweight despite their predominance from rural, lower socioeconomic backgrounds. Notably, 38.4% were overweight or obese, aligning with findings by **Vasudeva and Senthilvel**[3], indicating that menopause-associated weight gain transcends socioeconomic status. Parity was high, with 87.8% having more than three children, contrasting with some studies reporting lower parity. Most women attained menopause after 45 years (64.5%), with a mean duration of 5.9 years, comparable to other Indian studies where menopause typically occurs between 45 and 50 years. The duration of menopause varied across studies, which may influence quality of life outcomes due to differing adaptation periods. Twenty percent of participants reported chronic illnesses, a factor often excluded in comparable research but significant given its independent impact on quality of life. Personal habits such as tobacco use were present in 20% of women; however, the influence of such behaviors on postmenopausal quality of life remains unclear and warrants further investigation.

Post-menopausal Symptoms and their severity

In this study, the most prevalent postmenopausal symptoms across vasomotor, psychosocial, physical, and sexual domains were feeling of accomplishing less (86.5%), fatigue (84.1%), decreased physical strength (83.7%), lack of energy, and reduced sexual desire (82.9% each). The symptoms with the greatest severity included decreased sexual desire (77.6%), avoiding intimacy (75.9%), vaginal dryness (66.5%), and vasomotor symptoms such as hot flushes and night sweats (63.3%). These findings are consistent with prior studies where hot flushes and decreased sexual desire were also predominant, although variations exist in the severity and type of psychosocial and physical symptoms reported. The presence of chronic illnesses in nearly 20% of participants likely contributed to the prominence of fatigue and reduced physical strength. Overall, vasomotor and sexual symptoms appear directly linked to hormonal changes, whereas psychosocial and physical symptoms are influenced by broader health and sociodemographic factors.

Domain-wise and Overall Quality of Life

In the present study, mean quality of life (QoL) scores were 12±7.75 (vasomotor), 19.46±10.12 (psychosocial), 36.32±16.36 (physical), and 13.60±6.69 (sexual) out of maximum scores of 18, 42, 96, and 18 respectively. These correspond to average impacts of 66.7%, 46.3%, 37.8%, and 75.6%, indicating that the sexual domain was most affected while the physical domain was least affected. The overall mean QoL score was 81.39±30.09, reflecting a 58.6% average impact on women's quality of life.

Comparable studies, such as **Sheereen and Kadarkar**[1], also found the sexual domain to be the most affected (71%) and reported similar overall QoL impacts (~53%). **Kalhan et al.**[2] reported a higher prevalence (70.2%) of poor QoL, possibly due to using a less comprehensive assessment scale than the MENQOL used in this study. Singh et al. observed a lower impact on vasomotor symptoms and higher on sexual symptoms, possibly related to their study population having a longer postmenopausal duration (>10 years) compared to approximately 5 years in this study, suggesting coping mechanisms develop over time. **Krishnapriya et al.**[4] found vasomotor symptoms to be the worst affected and sexual symptoms the least affected, again possibly due to longer menopause duration.

Overall, variations in QoL domain impacts among studies may be influenced by differences in menopausal duration, assessment tools, and population characteristics.

In the present study, occupation emerged as the most influential sociodemographic factor affecting quality of life (QoL) across all four domains, followed by joint family status, which impacted vasomotor, physical, and psychosocial domains. Other factors such as age, socioeconomic status, rural residence, religion, and marital status showed domain-specific associations but did not significantly influence overall QoL scores. Notably, poor overall QoL was significantly associated with occupation, joint family status, and lower socioeconomic status. Housewives and self-employed women reported better QoL compared to women engaged in formal employment or daily wage labor, while those living in joint families had higher QoL scores than women in nuclear families. These findings partially contrast with earlier studies that reported education, marital status, and socioeconomic status as significant factors, highlighting variability likely due to differences in population characteristics and study designs. The complex interplay between sociodemographic factors and clinical variables underscores the need for comprehensive multivariate analyses in larger cohorts.

Regarding clinical factors, our study revealed some intriguing associations. Poor QoL in the vasomotor domain was linked with the absence of chronic illnesses and hypothyroidism, while psychosocial QoL was adversely affected by higher BMI, absence of hypertension, presence of heart disease, and lack of addiction. Similarly, the physical domain was negatively influenced by absence of addiction. Sexual domain QoL correlated with higher parity, longer duration of menopause, and presence of hypertension. Overall, poor QoL was significantly associated with higher BMI and shorter duration since menopause. Interestingly, tobacco and betel use appeared to have a protective effect on QoL, potentially serving as coping mechanisms to alleviate menopausal symptoms. This counterintuitive finding may reflect adaptive resilience in women

with chronic illnesses or addictions, whose baseline quality of life may already be compromised, thereby diminishing the relative impact of menopausal changes. These results emphasize the importance of considering the duration, severity, and management of comorbidities and addictions in future studies. Comparisons with previous research reveal inconsistent associations of clinical factors with QoL domains, further reinforcing the complexity of menopause's impact on women's health.

Limitations and Recommendations

One limitation of this study was the modest sample size, which may have constrained the ability to fully assess the impact of diverse sociodemographic and clinical factors. Additionally, the study did not capture data on coping mechanisms such as yoga, physical activity, or psychosocial interventions, which could influence menopausal quality of life. The sample was predominantly composed of rural Hindu women from lower socioeconomic backgrounds, limiting generalizability. Despite these limitations, the study offers valuable insights into the impact of menopause on quality of life among underrepresented populations. Future research should aim to include larger, more diverse samples, explore pre- versus postmenopausal comparisons, and examine the role of hormone replacement therapy and psychological interventions in improving quality of life.

Conclusion

This cross-sectional study assessed the symptom profile and quality of life (QoL) among 245 post-menopausal women in rural Lucknow using the MENQOL questionnaire. The majority of participants were over 50 years of age, illiterate, housewives, and belonged to lower socioeconomic strata. Commonly reported symptoms included a feeling of reduced accomplishment (86.5%), fatigue (84.1%), decreased physical strength (83.7%), lack of energy, and diminished sexual desire (82.9%). The most severely affected domains were sexual (75.6% impact), vasomotor (66.7%), psychosocial (46.3%), and physical (37.8%), with an overall mean QoL score showing a 58.6% reduction. Poor QoL in various domains was significantly associated with sociodemographic factors such as occupation, joint family status, socioeconomic class, and religion. Clinically, higher BMI, longer time since menopause, hypertension, parity, and absence of chronic illness or addiction were linked with lower QoL scores in different domains. Tobacco and betel+tobacco use were significantly associated with poorer overall QoL. The findings highlight a substantial decline in QoL among post-menopausal women, particularly in the sexual and psychosocial domains, and underscore the influence of both sociodemographic and clinical factors, especially in resource-limited rural settings.

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Table 1: Demographic and Social Profile of Study Population (N=245)

SN	Characteristics	Statistics	
		No.	%
1-	Age Group		
	40-44 yrs	6	2.4
	45-49 yrs	55	22.4
	50-54 yrs	96	39.2
	55-59 yrs	32	13.1
	60 & above	56	22.9
2-	Religion		
	Hindu	173	70.6
	Muslim	72	29.4
3-	Marital Status		
	Married	210	85.7
	Widow	35	14.3
4-	Educational Status		
	Illiterate	172	70.2
	Primary	24	9.8
	Middle	15	6.1
	High School	11	4.5
	Intermediate	10	4.1
	Graduate & above	13	5.3
5-	Occupation		
	Housewife	181	73.9
	Agriculture/Farmer/Daily wage labour	34	13.9
	Job holder	11	4.5
	Self employed	6	2.4
	Service class	13	5.3
6-	Type of family		
	Joint	195	79.6
	Nuclear	50	20.4
7-	Socio-economic status		
	Low	180	73.5
	Lower middle	29	11.8
	Middle	31	12.7
	Upper middle	5	2.0
8-	Residential status		
	Rural	177	72.2
	Urban	68	27.8
9-	Dietary Habit		
	Vegetarian	180	73.5
	Non-vegetarian	1	0.4
	Mixed	64	26.1

Table 2: Clinical Profile of Study Population (N=245)

SN	Characteristics	Statistics	
		No.	%
1-	BMI		
	<18.5 kg/m²	10	4.1
	18.5-24.9 kg/m²	141	57.6
	25-29.9 kg/m²	73	29.8
	≥30 kg/m²	21	8.6
2-	Parity		
	Nullipara (P0)	1	.4
	Primipara (P1)	10	4.1
	P2	19	7.8

	P3 and above	215	87.8
3-	Age at menopause		
	<45 years	87	35.5
	45-50 years	121	49.4
	51-55 years	24	9.8
	>55 years	13	5.3
4-	Mean Duration of Menopause (Range)	5.93±3.41 (1-12) years	
5-	Chronic illness*	50	20.4
	Hypertension	22	9.0
	Type 2 DM	24	9.8
	Hypothyroidism	9	3.7
	Heart disease	3	1.2
	Chronic constipation	1	0.4
6-	Addiction	49	20.0
	Betel	9	3.7
	Beedi smoking	2	0.8
	Tobacco	32	13.1
	Betel+Tobacco	6	2.4

*Multiple chronic illness in patients

Table 3: Severity of Symptoms of QoL

SN	Symptom	No symp (0-1)		Mild Symp (2)		Moderate symp (3-4)		Severe symp (5-6)	
		No.	%	No.	%	No.	%	No.	%
1-	Hot flush	67	27.3	5	2.0	18	7.4	155	63.3
2-	Night sweats	67	27.3	6	2.4	17	6.9	155	63.3
3-	Sweating	69	28.2	6	2.4	15	6.1	155	63.3
4-	Dissatisfaction with personal life	114	46.5	36	14.7	50	20.4	45	18.4
5-	Feeling anxious or nervous	87	35.5	10	4.1	49	20.0	99	40.4
6-	Experiencing poor memory	77	31.4	5	2.0	55	22.4	108	44.1
7-	Accomplishing less than used to	33	13.5	10	4.1	62	25.3	140	57.1
8-	Feeling depressed down or blue	122	49.8	31	12.7	54	22.0	38	15.5
9-	Being impatient with other people	56	22.9	22	9.0	27	11.0	140	57.1
10-	Feelings of wanting to be alone	190	77.6	9	3.7	17	7.0	29	11.8
11-	Flatulence	113	46.1	13	5.3	21	8.6	98	40.0
12-	Aching in muscles & joints	52	21.2	16	6.5	29	11.8	148	60.4
13-	Feeling tired or worn out	39	15.9	13	5.3	44	18.1	149	60.8
14-	Difficulty sleeping	154	62.9	19	7.8	29	11.8	43	17.6
15-	Aches in back of neck or head	80	32.7	8	3.3	54	22.0	103	42.0
16-	Decrease in physical strength	40	16.3	18	7.3	69	28.2	118	48.2
17-	Decrease in stamina	130	53.1	23	9.4	30	12.3	62	25.3
18-	Lack of energy	42	17.1	13	5.3	51	20.8	139	56.7
19-	Dry skin	215	87.8	10	4.1	12	4.9	8	3.3
20-	Weight gain	213	86.9	2	0.8	23	9.3	7	2.8
21-	Increased facial hair	241	98.4	0	0.0	2	0.8	2	0.8
22-	Changes in appearance, texture or tone of skin	230	93.9	5	2.0	6	2.4	4	1.6
23-	Feeling bloated	168	68.6	9	3.7	31	12.6	37	15.1
24-	Low backache	61	24.9	11	4.5	37	15.1	136	55.5
25-	Frequent urination	117	47.8	12	4.9	25	10.2	91	37.1
26-	Involuntary urination when laughing/coughing	170	69.4	3	1.2	14	5.7	58	23.7
27-	Decrease in sexual desire	42	17.1	5	2.0	8	3.2	190	77.6
28-	Vaginal Dryness	76	31.0	0	0.0	6	2.4	163	66.5
29-	Avoiding intimacy	45	18.3	3	1.2	11	4.5	186	75.9

Table 4 : Association of Overall QoL with Demographic/Social Profile

SN	Characteristics	Quart1 (n=56)		Quart2 (n=66)		Quart3 (n=57)		Quart4 (n=66)		Statistical signific.	
1-	Age Group	N	%	N	%	N	%	N	%	χ^2	'p'
	40-44 yrs	4	66.7	0	0.0	0	0.0	2	33.3	15.06	0.238
	45-49 yrs	11	20.0	15	27.3	9	16.4	20	36.4		
	50-54 yrs	23	24.0	24	25.0	24	25.0	25	26.0		
	55-59 yrs	6	18.8	8	25.0	10	31.3	8	25.0		
	60 & above	12	21.4	19	33.9	14	25.0	11	19.6		
2-	Religion										
	Hindu	44	25.4	40	23.1	41	23.7	48	27.7	5.084	0.166
	Muslim	12	16.7	26	36.1	16	22.2	18	25.0		
3-	Marital Status										
	Married	49	23.3	56	26.7	49	23.3	56	26.7	0.230	0.973
	Widow	7	20.0	10	28.6	8	22.9	10	28.6		
4-	Educational Status										
	Illiterate	39	22.7	45	26.2	44	25.6	44	25.6	15.93	0.387
	Primary	2	8.3	9	37.5	4	16.7	9	37.5		
	Middle	5	33.3	2	13.3	3	20.0	5	33.3		
	High School	3	27.3	2	18.2	4	36.4	2	18.2		
	Intermediate	5	50.0	3	30.0	0	0.0	2	20.0		
	Graduate & above	2	15.4	5	38.5	2	15.4	4	30.8		
5-	Occupation										
	Housewife	34	18.8	53	29.3	43	23.8	51	28.2	39.04	<0.001
	Agriculture/Farmer/ Daily wage labour	10	29.4	6	17.6	10	29.4	8	23.5		
	Job holder	9	81.8	2	18.2	0	0.0	0	0.0		
	Self employed	0	0.0	0	0.0	4	66.7	2	33.3		
	Service class	3	23.1	5	38.5	0	0.0	5	38.5		
6-	Type of family										
	Joint	36	18.5	52	26.7	53	27.2	54	27.7	14.60	0.002
	Nuclear	20	40.0	14	28.0	4	8.0	12	24.0		
7-	Socio-economic status										
	Low	40	22.2	45	25.0	42	23.3	53	29.4	17.36	0.043
	Lower middle	6	20.7	7	24.1	9	31.0	7	24.1		
	Middle	10	32.3	9	29.0	6	19.4	6	19.4		
	Upper middle	0	0.0	5	100	0	0.0	0	0.0		
8-	Residential status										
	Rural	40	22.6	42	23.7	41	23.2	54	30.5	5.477	0.140
	Urban	16	23.5	24	35.3	16	23.5	12	17.6		
9-	Dietary Habit										
	Vegetarian	40	22.2	51	28.3	40	22.2	49	27.2	0.947	0.814
	Non-veg/Mixed	16	24.6	15	23.1	17	26.2	17	26.2		

Table 5: Association of Overall QoL with Clinical Profile

SN	Characteristics	Quart1 (n=56)		Quart2 (n=66)		Quart3 (n=57)		Quart4 (n=66)		Statistical signific.	
		N	%	N	%	N	%	N	%	χ^2	'p'
1-	BMI										
	<18.5 kg/m²	2	20.0	6	60.0	2	20.0	0	0.0	21.09	0.012
	18.5-24.9 kg/m²	32	22.7	39	27.7	34	24.1	36	25.5		
	25-29.9 kg/m²	18	24.7	16	21.9	21	28.8	18	24.7		
	≥30 kg/m²	4	19.0	5	23.8	0	0.0	12	57.1		
2-	Parity										
	Nullipara (P0)	1	100	0	0.0	0	0.0	0	0.0	9.266	0.413
	Primipara (P1)	4	40.0	2	20.0	0	0.0	4	40.0		

	P2	6	31.6	5	26.3	4	21.1	4	21.1		
	P3 and above	45	20.9	59	27.4	53	24.7	58	27.0		
3-	Age at menopause										
	<45 years	22	25.3	25	28.7	16	18.4	24	27.6	9.374	0..403
	45-50 years	25	20.7	30	24.8	37	30.6	29	24.0		
	51-55 years	7	29.2	7	29.2	2	8.3	8	33.3		
	>55 years	2	15.4	4	30.8	2	15.4	5	38.5		
4-	No Chronic illness	42	21.5	51	26.2	45	23.1	57	29.2	2.823	0.420
	Chronic illness	14	28.0	15	30.0	12	24.0	9	18.0		
5.1	No Hypertension	47	21.1	59	26.5	55	24.7	62	27.8	6.435	0.092
	Hypertension	9	40.9	7	31.8	2	9.1	4	18.2		
5.2	No T2DM	51	23.1	57	25.8	51	23.1	62	28.1	2.226	0.527
	Type 2 DM	5	20.8	9	37.5	6	25.0	4	16.7		
5.3	No Hypothyroidism	52	22.0	64	27.1	55	23.3	65	27.5	2.855	0.414
	Hypothyroidism	4	44.4	2	22.2	2	22.2	1	11.1		
5.4	No heart disease	56	23.1	66	27.3	55	22.7	65	26.9	4.018	0.260
	Heart disease	0	0.0	0	0.0	2	66.7	1	33.3		
5.5	No Chr. Const.	56	23.0	65	26.6	57	23.4	66	27.0	2.723	0.436
	Chronic constipation	0	0.0	1	100	0	0.0	0	0.0		
6-	Addiction										
	No Addiction	44	22.4	50	25.5	43	21.9	59	30.1	18.96	0.089
	Betel	0	0.0	2	22.2	4	44.4	3	33.3		
	Beedi smoking	0	0.0	0	0.0	2	100	0	0.0		
	Tobacco	10	31.3	12	37.5	6	18.8	4	12.5		
	Betel+Tobacco	2	33.3	2	33.3	2	33.3	0	0.0		
7-	Mean Duration of Menopause ±SD	5.82± 3.26		6.62± 3.67		6.84± 3.09		4.55± 3.10		F=6.316; p<0.001 (ANOVA)	

Table 6: Association of QoL Score with Demographic/Social & Clinical Profile

SN	Variable	N	Mean	SD	Statistical significance (p value)
1-	Age Group				
	40-44 yrs	6	65.83	38.39	p=0.660
	45-49 yrs	55	83.45	32.51	
	50-54 yrs	96	81.49	30.40	
	55-59 yrs	32	84.22	25.56	
	60 & above	56	79.23	29.00	
2-	Religion				
	Hindu	173	80.95	31.01	‘p=0.727
	Muslim	72	82.43	27.95	
3-	Marital Status				
	Married	210	80.79	30.34	‘p’=0.444
	Widow	35	85.00	28.71	
4-	Educational Status				
	Illiterate	172	81.94	31.29	‘p’=0.636
	Primary	24	87.38	23.78	
	Middle	15	77.47	33.96	
	High School	11	77.36	28.23	
	Intermediate	10	68.00	25.43	
	Graduate & above	13	81.23	24.98	
5-	Occupation				
	Housewife	181	83.85	28.67	‘p’<0.001
	Agriculture/Farmer/Daily wage labour	34	78.62	34.99	

SN	Variable	N	Mean	SD	Statistical significance (p value)
	Job holder	11	41.18	21.04	
	Self employed	6	101.33	11.50	
	Service class	13	79.23	22.24	
6-	Type of family				
	Joint	195	84.42	28.27	'p'=0.002
	Nuclear	50	69.58	34.16	
7-	Socio-economic status				
	Low	180	82.75	30.52	'p'=0.385
	Lower middle	29	82.97	31.50	
	Middle	31	73.48	28.09	
	Upper middle	5	72.20	3.35	
8-	Residential status				
	Rural	177	82.69	31.32	'p'=0.274
	Urban	68	77.99	26.53	
9-	Dietary Habit				
	Vegetarian	180	81.86	29.33	'p'=0.686
	Non-vegetarian/Mixed	65	80.09	32.32	
10-	BMI				
	<18.5 kg/m²	10	72.30	22.44	'p'=0.467
	18.5-24.9 kg/m²	141	80.55	29.93	
	25-29.9 kg/m²	73	81.92	30.94	
	≥30 kg/m²	21	89.48	31.45	
11-	Parity				
	Nullipara (P0)	1	11.00		'p'=0.078
	Primipara (P1)	10	78.70	34.98	
	P2	19	74.58	24.21	
	P3 and above	215	82.44	30.05	
12-	Age at menopause				
	<45 years	87	80.43	32.26	'p'=0.740
	45-50 years	121	83.00	28.56	
	51-55 years	24	75.92	30.99	
	>55 years	13	82.92	29.39	
13-	No chronic illness	195	82.10	30.07	'p'=0.467
	Chronic illness	50	78.62	30.34	
14-	No Hypertension	223	82.54	29.85	'p'=0.057
	Hypertension	22	69.73	30.77	
15-	No T2DM	221	81.74	30.30	'p'=0.582
	Type 2 DM	24	78.17	28.45	
16-	No hypothyroidism	236	81.62	29.94	'p'=0.532
	Hypothyroidism	9	75.22	35.15	
17-	No heart dis.	242	81.07	30.13	'p'=0.144
	Heart disease	3	106.67	9.81	
18-	No Chr. Const.	244	81.40	30.15	'p'=0.910
	Chronic constipation	1	78.00	0.00	
19-	Addiction				
	No Addiction	196	82.92	29.37	'p'=0.028
	Betel	9	97.56	13.30	
	Beedi smoking	2	97.00	0.00	
	Tobacco	32	70.28	34.48	
	Betel+Tobacco	6	61.00	30.76	