



Gravity of menopausal problems and its effect on quality of life among rural women

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Abstract

Background: Due to changes in epidemiology and demography, life expectancy among middle-aged women has increased. However, this has led to a greater incidence of menopausal symptom-related health issues, which negatively impact the quality of life (QOL) in elderly women.

Aim: The study aimed to assess how menopausal symptoms affect the quality of life (QOL) in middle-aged women living in rural areas.

Methods: A community-based cross-sectional study was conducted involving 500 women aged 40 to 60 years. Data on menstrual history and demographic details were collected using a validated questionnaire. The severity of menopausal symptoms and QOL was evaluated using the standardized Menopausal Rating Scale (MRS) and the World Health Organization Quality of Life (WHOQOL) assessment.

Results: The mean age and standard deviation of menopause was 44.42 ±4.1 years. Around 96% of the postmenopausal women had joint and muscular discomfort, followed by 84% with sleep problems, 64% dryness of vagina during menopause. Majority of subjects reported mild-to-moderate symptoms. The most common symptom of menopause like hot flushes, joint pain, and sleeplessness were reported. The quality of life among the participants was negative 245 (49%) and moderate 255 (51%) respectively. To find the association of QOL on menopausal symptoms Chi-square test was performed. There was significant [p-value = 0.036 which is less than 0.05] association found between severity of menopausal symptoms and QOL among the selected menopausal women.

Conclusion: In order to manage their symptoms and improve their quality of life, menopausal women should be taught how to treat these symptoms using a range of modalities, such as healthy diet, physical activity, and psychological wellbeing.

Keywords: Gravity, rating scale, middle aged women, quality of life, menopausal symptoms

Introduction

Menstruation completely stops for a year as a result of total absence of ovarian follicular activity. Since women spend a large portion of their lifespan during the menopausal period, menopause is really a distinct stage of the female reproductive cycle. In the present circumstances, women's life expectancy is known to be increased by the better availability of health services (Ilankoon IMPS *et al.*, 2021) [1].

Even though menopause is a normal natural transition, most women are not aware of some of its effects. Sometimes the menopausal symptoms are too severe to impede their routine day to day activities. Depletion of estrogen levels is prevalent among women as they approaches menopausal phase and even in perimenopausal stage, which is the primary reason for the severity of symptoms. Globally it was estimated that around 40-65 years is the mean age of menopause. Women experiences vasomotor, urogenital, psychosomatic, psychological and sexual dysfunction during the transition to menopause phase (Geetha R and Parida L., 2015) [2].

According to a PAN India survey conducted by the Indian Menopause Society (IMS), Indian women experience menopause on average at 46.2 years, which is much younger than that of their Western counterparts, who experience menopause at 51 years in both rural and urban areas. Age at menopause was correlated with marital status, parity status, and social and economic position (Ahuja M., 2016) [3].

In a research published in 2020, Kalhan *et al.* found that

87.7% of patients had menopausal symptoms. Anxiety was indicated by 80% of research participants, followed by heart problems (54%), joint and muscle pain (56%), sleep problems (61.2%), physical and mental tiredness (71.5%), and irritability (60.7%). The most prevalent menopausal symptom, hot flashes, was experienced by 36.7% of women. It was found that the average age at menopause was 47.53 ± 4.5 years. The mean score of several symptoms, which differ significantly between the peri- and post-menopausal groups, including hot flashes (P < 0.003), sweating (P < 0.004), and joint and muscle soreness (P < 0.014). In 70.2% of research participants, the QOL was affected and 70.8% of the low QOL was a result of psychological problems (Kalhan M *et al.*, 2020) [4].

Menopausal symptoms and their severity vary from person to person due to confounding factors such as lifestyle, social status, body composition, and psychological state (Kothiyal P. and Sharma M., 2017) [5]. According to Ibrahim *et al.* (2015) [6], women who experience menopausal symptoms, especially vasomotor and sexual symptoms, tend to have a lower quality of life. Quality of life encompasses the overall well-being of an individual or community, including factors like satisfaction, happiness, health, and fulfillment. It is a multidimensional concept that involves physical health, mental and emotional well-being, social relationships, economic status, environment, and personal fulfillment. Therefore, it is crucial in modern healthcare to understand how menopause impacts the quality of life for middle-aged women (Ibrahim Z. M. *et al.*, 2015) [6].

The World Health Organization (WHO) defines quality of life (QOL) as "an individual's assessments of their life's position in relation to their goals, expectations, standards, and concerns in the context of the societal and value systems where they live" (WHOQOL-BREF., 1996). Quality of life (QOL) is a broad concept that takes into account various aspects of an individual's life, including physical and mental health, independence, social relationships, religious beliefs, and interactions with key environmental factors. This definition highlights that QOL is a subjective measure, shaped by cultural, social, and environmental contexts. QOL serves as a central goal in healthcare, an essential element of personal health, and a key tool for program planning and evaluation (Kalarhudi M. A. *et al.*, 2011) [7].

Conde *et al.* (2006) [8] carried out an investigation to evaluate the quality of life (QOL) and identify behaviours linked to it in postmenopausal women. A study with 81 postmenopausal women used a cross-sectional design. The medical outcomes research employed the 36-item Short Form Health Survey (SF-36) to assess quality of life (QOL). Hot flushes and sweating (51%) and nervousness (67%) were the most prevalent symptoms. Sweating, palpitations, nervousness, dizziness, anxiety, depression, sleeplessness, and dyspareunia were all linked to lower QOL. They found that postmenopausal women's physical and mental aspects of quality of life were adversely impacted by menopausal symptoms (Conde D M *et al.*, 2006) [8].

Menopausal symptoms are well recognized to have an effect on women's quality of life. Regrettably, the most of these women are unaware of the changes that the menopause brings about. Although a woman goes through menopause naturally, some of its symptoms might be so severe as to negatively impact her health. Although there is evidence relating nutrition to menopausal symptoms, dietary patterns have received less attention. Menopause symptoms can be lessened by include dairy products, good fats, whole grains, fruits, vegetables, foods strong in phytoestrogens, and high-quality protein sources in a daily diet. Therefore, the purpose of this study was to evaluate the severity of menopausal symptoms and their impact on middle-aged rural women's quality of life (QOL).

Materials and Methods

The cross-sectional study was a part of original research work and got an ethical approval by IHEC-PSG IMS&R, Coimbatore. Women who lived in and near Vedapatti, Coimbatore, and who attended the PSG rural Training and Health Centre in Vedapatti, sample size 500 were interviewed. The study's inclusion criteria comprised women who were between 40 to 60 years old and provided their agreement to participate. Women who were pregnant, nursing, had severe medical issues like diabetes mellitus, heart disease, hypertension, or receiving any cancer treatment were not included in the research. And also women who had a history of drug or alcohol addiction, under hormone replacement therapy were excluded.

Study tools and data collection

Questionnaires were divided into four modules as demographic profile, menopausal status with menopause rating scale and QOL. First module pertained to demographic data of the selected subjects such as age,

marital status, educational level, occupation and average household income.

The purpose of the second module was to collect data on menopausal status and the Menopause Rating Scale (MRS), a self-administered instrument that has been widely used, validated, and used in many clinical and epidemiological studies as well as research on the aetiology of menopausal symptoms in order to assess the severity of menopausal symptoms (Heinemann LAJ *et al.*, 2003) [9]. The eleven-item MRS was split into three subscales: (1) somatic—hot flushes, heart palpitations, irregular heartbeat, difficulty sleeping, and problems with muscles and joints; (2) psychological—depressive mood, irritability, anxiety, and physical and mental exhaustion; and (3) urogenital—sexual issues, bladder issues, and vaginal dryness. There was a grading system for each of the eleven symptoms, ranging from "0" (no complaints) to "4" (very severe symptoms). A pilot study was conducted on 50 women to validate the translated MRS questionnaires. The questionnaire was first prepared in Tamil by a group of skilled health workers and language experts, and then it was translated back into English to confirm that the original meaning of the questionnaire was maintained in the translation. Following up on the findings of the pilot research, a face-to-face interview was undertaken to alleviate the women's difficulty in self-administering the scale. The women were questioned whether they experienced the 11 menopausal symptoms shown in the scale over the previous 30 days. Thus, the severity of the symptoms was determined by this investigation.

The third module focused on evaluating menopausal women's quality of life. For the study, the Tamil version of the WHO QOL-BREF questionnaire was used without any changes. The 26 items comprise scale was used in the assessment, which is divided into 4 domains: environment, social, psychological, and physical. There were 26 items in total, in which 23 items had positive scores, while 3 items (3, 4, and 26) received negative scores. The first two items were examined independently since item 1 inquired about a people's general opinion of quality of life, while item 2 asked about the general opinion of menopausal women's health. The domains also contained another 24 items. Domain scores are scaled in a positive direction as higher scores denote higher QOL. The domain score is calculated using the average score of the items in each domain. The formula is used to convert mean scores to domain scores, which are then multiplied by 4 and scaled from 0 to 100. Data were interpreted on a domain wise basis using statistical techniques (Jayabharathi B., 2016) [10].

All the selected subjects were interviewed in Tamil language. Training health professionals conducted face-to-face interviews because it was crucial to ensure that the women provided accurate answers and that they could get clarifications if they had any issues. Only participants who met the eligibility requirements were asked to register for this research. After receiving clarifications, they were requested to sign an informed consent form.

Statistical analysis

The software used for the analysis was Version 20.0 of the Statistical Package for the Social Sciences (SPSS, Chicago, IL). The data were presented using percentages, mean, and standard deviation. Chi square analysis was employed to

evaluate the relationship between menopausal symptom severity and quality of life. A significance level of $p < 0.05$ was deemed statistically significant.

Results and discussion

1. Demographic status of the selected rural women

A study by Samtani *et al.*, (2020)^[11] concluded that the age at menopause and related demographic factors had to be taken into consideration as crucial instruments for assessing

elder women's reproductive health. In their analysis, 425 women were found to have high rates of illiteracy (74.6%), employment in agriculture (85.2%), and vegetarian (94.4%). Menarche and menopause occurred at 14.04 ± 1.12 and 47.97 ± 3.4 years, respectively, as the mean age. Fatigue (70.4%), backache (69.4%), breathing issues (52.2%), and stomach pain (43.1%) were the most common symptoms (Samtani R *et al.*, 2020)^[11]. The demographic status of the rural women in present study was given below.

Table 1: Demographic status of the selected rural women

S. No	Characteristics	Sub category	No. of subjects (n= 500)	
			No	(%)
1.	Age Criteria	40-45 Years	18	3.6%
		46-50 Years	86	17.2%
		51-55 Years	190	38%
		55-60 Years	206	41.2%
		Total	500	100
2.	Civil status	Married women	408	81.6%
		Unmarried women	4	0.8%
		Widow	80	16%
		Separated	8	1.6%
		Total	500	100
3.	Educational qualification	Uneducated	246	49.2%
		Primary	112	22.4%
		Secondary	128	25.6%
		Higher secondary	11	2.2%
		Graduates	3	0.6%
		Total	500	100
4.	Occupational status	Unemployed	430	86%
		Employed	70	14%
		Total	500	100
5.	Monthly family income (Rs.)	<6,000	6	1.2%
		6,001-9,000	74	14.8%
		9,001-12,000	142	28.4%
		12,001-15,000	158	31.6%
		15,001-18,000	98	19.6%
		>18,000	22	4.4%
Total	500	100		

The above table-1 conferred the demographic profile of the selected rural women. The mean age of respondents in this study was 51.84 ± 5.05 (SD) years, the most of the women (41.2%) were between 55 to 60 years of age and 81.6% of the subjects were married. Majority 246 (49.2%) of the selected subjects were uneducated and most of the participants 430 (86%) were unemployees. Maximum 154 (31.6%) participants had a monthly household income between Rs.12000-15000.

2. Menopause status

Upon interpretation of the menstrual history of the selected rural menopausal women, the data revealed that huge some of the selected population only 27 (5.4%) had irregular menstruation. The subjects reported their length of bleeding

less than 5 days of bleeding 409 (81.8%) and 91 (18.2%) had menstruation more than 5 days. Nearly 194 (38.8%) reported they had problems during menstruation which includes stomach pain, heavy discharge, scanty flow, dysphagia, fatigue etc.

3. Severity of menopausal symptoms among selected women

Menopause symptoms can be seen in the skeletal, cardiovascular, psychological, and female genital tracts. Women will probably experience protracted menopausal phases, which will make up roughly one-third of their age, as life expectancy increases. The table 2 depicts the prevalence and severity of menopausal symptoms among selected women.

Table 2: Prevalence and severity of menopausal symptoms among selected women

Menopausal Symptoms	Prevalence and severity of menopausal symptoms among selected women (n=500)				
	Never No (%)	Mild No (%)	Moderate No (%)	Severe No (%)	Extremely severe No (%)
Hot flushes, sweating	275 (55)	137 (27.4)	36 (7.2)	24 (4.8)	28 (5.6)
Heart discomfort	212 (42.4)	153 (30.6)	107 (21.4)	12 (2.4)	16 (3.2)
Sleeping problems	78 (15.6)	118 (23.6)	176 (35.2)	85 (17)	43 (8.6)
Depressive mood	240 (48)	126 (25.2)	111 (22.2)	7 (1.4)	16 (3.2)
Irritability	310 (62)	105 (21)	69 (13.8)	8 (1.6)	8 (1.6)
Anxiety	335 (67)	74 (14.8)	75 (15)	12 (2.4)	4 (0.8)

Physical and mental exhaustion	423 (84.6)	33 (6.6)	12 (2.4)	24 (4.8)	8 (1.6)
Sexual problems	446 (89.2)	46 (9.2)	8 (1.6)	0 (0)	0 (0)
Bladder problems	431 (86.2)	57 (11.4)	12 (2.4)	0 (0)	0 (0)
Dryness of vagina	181 (36.2)	89 (17.8)	110 (22)	77 (15.4)	43 (8.6)
Joint and muscular discomfort	19 (3.8)	156 (31.2)	193 (38.6)	88 (17.6)	44 (8.8)

In the present study around 96% of the postmenopausal women had joint and muscular discomfort, followed by 84% with sleep problems, 64% dryness of vagina during postmenopausal stage. Majority of subjects reported mild-to-moderate symptoms. A similar study by Sushmitha and Shettian (2021) [12] found that heart discomfort (60%) and physical and mental exhaustion (60%) followed by hot flushes (52.2%), sleep issues (50%), irritability (46.1%), anxiety (42.2%), bladder issues (30%), dry vagina (26.1%), and sexual issues (21.9%). Also, joint and muscular pains

were the most common cause of these symptoms (Sushmitha V and Shettian N., 2021) [12].

4. Quality of life and satisfaction regarding health status among selected subjects

The period around menopause is distressing for many women. In addition to its negative effects on health, stress also has an adverse effect on relationships, productivity at work, overall well-being, and quality of life (QOL). The quality of life and contentment with their health among a selected group of individuals is displayed in the table below:

Table 3: Quality of life and satisfaction regarding health status of selected women (QOL, item no.: 1 and 2)

QOL of postmenopausal women		No of responses (n=500) n (%)
QOL (Item no.1)	Very poor	86 (17.2)
	Poor	345 (69)
	Neither poor nor good	62 (12.4)
	Good	7 (1.4)
	Very good	0 (0)
Satisfaction regarding health status (Item no.2)	Very dissatisfied	97 (19.4)
	Dissatisfied	215 (43)
	Neither satisfied nor dissatisfied	188 (37.6)
	Satisfied	0 (0)
	Very satisfied	0 (0)

It is inferred from Table 3 that maximum of selected menopausal women 345 (69%) had poor QOL, followed by 86 (17.2%) had very poor QOL, 62 (12.4%) of them had neither poor nor good QOL and 7 (1.4%) experienced good QOL in item-1. Regarding the satisfaction and the health status, maximum of selected menopausal women 215 (43%) were dissatisfied about their health, 188 (37.6%) were neither satisfied nor dissatisfied and 97 (19.4%) were very dissatisfied and 11 (2.2%) about their health in QOL item-2. The study findings were consistent with the study conducted by Jayabharathi (2016) [10] and Chen *et al.*, (2008) [13] conducted a study to assess the impact of menopause,

age, and other factors on QOL (Jayabharathi B., 2016 [10]; Chen Y., 2008) [13].

5. Domain wise QOL of selected menopausal women

The below table 4 depicted the domain-wise QOL of postmenopausal women. The results revealed that the mean scores in physical domain was (14.39 ± 2.35), psychological

domain (13.73 ± 2.8), social domain (3.07 ± 0.34), and environment domain (17.33 ± 3.25) among postmenopausal women. The overall scores were 52.68 ± 6.81.

Table 4: Domain wise QOL of selected menopausal women

Domains of quality of life	Mean ± SD of scores
Physical domain	14.39 ± 2.35
Psychological domain	13.73 ± 2.8
Social domain	3.07 ± 0.34
Environment domain	17.33 ± 3.25
Overall	52.68 ± 6.81

6. Association between severity of menopausal symptoms and QOL in selected women

QOL after menopause is influenced by social and personal variables as well as the intensity of menopausal symptoms.

Any effort to raise postmenopausal women's quality of life (QOL) must consider these variables. The correlation between severity of menopausal symptoms and QOL in women was given below:

Table 5: Association between severity of menopausal symptoms and QOL in selected women

Chi- square between menopausal symptoms and QOL					
		Quality of life (QOL)		Total	P value
		Negative	Moderate		
Postmenopausal symptoms	No symptoms	6	7	13	0.036*
	Mild	172	182	354	
	Moderate	59	66	125	
	Severe	8	0	8	
Total		245	255	500	

The current study showed that the majority of women (95.8%) were with mild to moderate level of severity in menopausal symptoms, 2% were with severe menopausal symptoms. The quality of life among the participants was negative 245 (49%) and moderate 255 (51%) respectively. Chi-square calculated value between symptoms and QOL p-value was 0.036 which is less than 0.05. It demonstrates that the chosen menopausal women had a low quality of life (QOL) among the women with severe menopausal symptoms. The research's results were in agreement with those of studies by Nazarpour *et al.* (2020) [14], found a negative correlation between the length of menopause and QOL overall scores, and Kalhan *et al.* (2020) [4], reported that 70.2% of study participants had poor QOL. According to Kalhan M *et al.* (2020) [4] and Nazarpour S. (2020) [14], psychological problems were responsible for 70.8% of the poor QOL.

Conclusion

The quality of life, which is influenced by a variety of social and personal circumstances for women going through menopause, is often affected by menopause and its symptoms. The quality of life is adversely affected by several factors. Menopausal women experienced significantly higher rates of symptoms such as hot flashes, sleeping disorder, dryness of vagina, bone and muscular disorder. Menopausal women and healthcare professionals need to be more informed about menopausal symptoms and the wide range of remedies available, from pharmacological interventions like hormonal and non-hormonal drugs to lifestyle changes and complementary therapies. In order to provide the greatest care for these women, healthcare professionals should use evidence-based management and nutrition care procedures. Rather than allowing women to suffer in silence, everyone should support the vision of them facing menopause graciously. A primary healthcare provider has to educate menopausal women on how to manage their symptoms holistically by instructing them on various approaches such as exercises, maintaining a nutritious diet, increased physical activity, and meditation. Hence health policies need to be generated to sensitize and increase awareness among menopausal women. Menopause is a natural biological process, thus no special medical attention is required.

References

1. Ilankoon IM, Samarasinghe K, Elgán C. Menopause is a natural stage of aging: a qualitative study. *BMC Womens Health*,2021;21:47.
2. Geetha R, Parida L. Prevalence of menopausal problems and the strategies adopted by women. Maharashtra (India). *IJSR*,2015;4:1-6.
3. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. *J Midlife Health*,2016;7(3):126-31.
4. Kalhan M, Singhania K, Choudhary P, Verma S, Kaushal P, Singh T. Prevalence of menopausal symptoms and its effect on quality of life among rural middle-aged women (40-60 Years) of Haryana, India. *Int J Appl Basic Med Res*,2020;10(3):183-8.
5. Kothiyal P, Sharma M. Postmenopausal quality of life and associated factors—a review. *Am J Pharm Res*,2017;3(9):7175-83.
6. Ibrahim ZM, Sayed Ahmed WA, El-Hamid SA. Prevalence of menopausal-related symptoms and their impact on quality of life among Egyptian women. *Clin Exp Obstet Gynecol*,2015;42(2):161-7.
7. Kalarhoudi MA, Taebi M, Sadat Z, Saberi F. Assessment of quality of life in menopausal periods: A population study in Kashan, Iran. *Iran Red Crescent Med J*,2011;13(11):811-7.
8. Conde DM, Pinto-Neto AM, Santos-Sá D, Costa-Paiva L, Martinez EZ. Factors associated with quality of life in a cohort of postmenopausal women. *Gynecol Endocrinol*,2006;22(8):441-6.
9. Heinemann LA, Potthoff P, Schneider HP. International version of the menopause rating scale (MRS). *Health Qual Life Outcomes*,2003;1:28. doi:10.1186/1477-7525-1-28.
10. Jayabharathi B. Evaluation of stress and its influence on quality of life in postmenopausal women. *Asian J Pharm Clin Res*,2016;9(Suppl,2):199-201.
11. Samtani R, Garg D, Sharma N, Deb R. Sociodemographic pattern of postmenopausal women and health issues: A study in rural Bathinda, Punjab. *J Midlife Health*,2020;11(3):168-70.
12. Sushmitha V, Shettian N. A study on the modified menopause rating scale as a tool in the assessment of prevalence of menopausal symptoms in women of Dakshina Kannada district: A cross-sectional study. *Int J Reprod Contracept Obstet Gynecol*,2021;10(1):138-44.
13. Chen Y, Lin SQ, Wei Y, Gao HL, Wang SH, Wu ZL. Impact of menopause on quality of life in community-based women in China. *Menopause*,2008;15(1):144-9.
14. Nazarpour S, Simbar M, Ramezani Tehrani F, *et al.* Factors associated with quality of life of postmenopausal women living in Iran. *BMC Womens Health*,2020;20:104.
15. World Health Organization. WHOQOL-BREF: Introduction, Administration, Scoring. Geneva: World Health Organization, 1996. Available from: https://www.who.int/mental_health/media/en/76.pdf.