

# A Community-Based Cross-Sectional Study about the Quality of Life in Postmenopausal Women in Rural Puducherry

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## Abstract

**Background:** The aim of this study was to assess the quality of life (QOL) of postmenopausal women, in the rural areas of Puducherry and to find the associated factors. **Materials and Methods:** A cross-sectional study was done in the rural field practicing area of SLIMS, Puducherry. The sample size was 172 based on the previous study, and simple random sampling technique was used. The women who were receiving hormonal treatment, having chronic illness and those who refused to participate were excluded from the study. The sociodemographic information and menopause-specific QOL questionnaire were used, and data were analyzed using the SPSS 21. **Results:** In this study, mean age of the postmenopausal women was  $61 \pm 7.5$  years, 42.4% belonged to socioeconomic status (SES) Class IV. The prevalence of one or more symptoms of vasomotor, psychological, and sexual domains were 23.8%, 87%, and 68%, respectively. We found an association between SES and both vasomotor and psychological symptoms. Furthermore, age and psychological symptoms were associated. **Conclusion:** The menopause-related symptoms had a negative effect on the QOL of postmenopausal women. The study can help in creating awareness and also in helping in educating women for early identification of the frequent menopausal symptoms.

**Keywords:** Menopause, menopause-specific quality of life, postmenopausal women

## INTRODUCTION

Menopause is defined as the cessation of ovarian function, which results in permanent amenorrhea. The WHO defines menopause as women with amenorrhea for 12 consecutive months.<sup>[1]</sup> In 1990, about 25 million women worldwide had attained menopause this figure is expected to increase twice by the late 2020s.<sup>[2]</sup> With modern medicine, the general life expectancy is increased, which ensures that many women will be living for more than two decades after menopause with an estrogen-deficient state.<sup>[3]</sup> However, in some women, the accompanying signs and effects which occur in menopause transition years can significantly decrease their daily activities and decline their perceptions of well-being.<sup>[4]</sup>

Quality of life (QOL) has been explained by the WHO as “the individual perception of their position in life in the context of the sociocultural value systems, in which they dwell and in relation to their expectation, desire, purpose standards, and concerns.”<sup>[5]</sup>

The aim of this study was to assess the QOL in postmenopausal women, in the rural area of Puducherry and to find the association between postmenopausal symptoms with selected demographic variables.

## MATERIALS AND METHODS

### Study design

This was a community-based cross-sectional study.

### Study setting and study period

The study was conducted from November 2018 to February 2019 in the Kumarapalayam, rural field practicing area of SLIMS, Puducherry.

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### Sample size calculation

Based on the previous publication by Borker *et al.*,<sup>[6]</sup> the prevalence of menopausal symptoms was 80% with 8% relative error (d) and using the formula, sample size ( $n$ ) =  $4pq/d^2$  and adding 10% nonresponse rate. The calculated sample size was 172.

### Sampling technique

The sample was selected using simple random sampling method using computer-generated random number.

### Inclusion criteria

(1) Postmenopausal women (12 or more months of amenorrhea); (2) not using any kind of medication or hormonal replacement therapy 6 months before the study (herbal/chemical); (3) those who gave informed consent.

### Exclusion criteria

(1) Women with physical, mental, or chronic illness. (2) Women with uncontrolled medical conditions such as hypertension, diabetes, heart disease, and musculoskeletal conditions, who were undergoing treatment for cancer, or were in remission. (3) Posthysterectomy women. (4) The women those who refused to participate were excluded from the study.

### Software used

The collected data were entered into a Microsoft Excel 2013 (Office 365, Microsoft Company Ltd., USA) and were analyzed using the statistical software SPSS version 21 (IBM SPSS software, Chicago, IL, USA).

### Statistical methods used

Mean and proportions were used for descriptive data. Chi-square test was used to find the association between sociodemographic variables and postmenopausal domains.

### Study tool and data collection instruments

We have collected the data using a two-part questionnaire. In Part I, sociodemographic information were collected by face-to-face interview method using a structured questionnaire, and in Part II, the postmenopausal symptoms were collected by a standard validated menopause-specific QOL (MENQOL) questionnaire.<sup>[7,8]</sup> MENQOL questionnaire consists of 29 items related to postmenopausal symptoms with a 6-point Likert scale format, and it consists of four domains. The prevalence of one or more symptoms in each domain is calculated and computed. The family monthly income was listed and classified by Modified Prasad's socioeconomic status (SES) scale, updated by Pandey *et al.*<sup>[9]</sup>

### Ethical considerations

Scientific and ethical approval was taken from the Institutional Ethics Committee, of SLIMS, Puducherry, India, before conducting the present study. We explained about our study and its importance to the participants in the vernacular language, Tamil and English. Anonymity and confidentiality were ensured throughout the study.

## RESULTS

The study group consisted of 172 postmenopausal women. The data were collected through a face-to-face interview with all the participants used by the standard MENQOL questionnaire. The mean age of the postmenopausal women in our study group was  $61 \pm 7.5$  years. The mean age of menarche was 14.68 years, and the mean age of menopause in our study group was 45.38 years. In our study group, 63% of the postmenopausal women were 60–74 years followed by 37% of them were in the age group of 45–59 years. Among 172 women, 70% of the postmenopausal women were illiterates and the remaining 30% were literates (primary to high school education). Of 172 women, 42.4% of them belonged to BG Prasad's<sup>[9]</sup> SES Class IV and 27.3% belonged to Class V. The occupational status of the study group were 51% are home maker, 16% were agricultural workers and 33% were other laborers like construction, etc., About 45% of the postmenopausal women were widow, and hence, sexual domain is skipped in them due to culturosocial factors.

The prevalence of each menopausal symptom in the study group is shown in Table 1. The prevalence of one or more symptoms of the vasomotor domain was 23.8%, psychological domain was 87%, and the sexual domain was 68%, but almost everyone had one or more physical domain symptoms.

Table 2 shows a comparison of the postmenopausal symptoms in <60 years and  $\geq 60$  years age groups. Age is associated with the psychological domain and statistically significant as  $P$  value is 0.021. However, other domains show no association. Among the educational status of the study population, the illiterates have more positive symptoms to all the four domains.

Table 3 shows the association between postmenopausal symptoms and SES among the study population. About 13.3% were positive for vasomotor symptoms were belonged to Class IV and V. Similarly, 10.4% were positive for vasomotor symptoms, and they fall under socioeconomic Class I, II, and III. It has been found that the association between the SES and vasomotor symptoms is found to be statistically significant were  $P < 0.05$ . Similarly, 65.6% were positive for psychological symptoms were belonged to Class IV and V, and 22.6% were positive for psychological symptoms who belonged to Class I, II, and III. It shows association between SES and psychological symptoms and also highly significant ( $P = 0.000$ ).

## DISCUSSION

Menopausal is a biological process of every woman's life. Many postmenopausal women responded differently to menopausal symptoms. In our study, from Table 1, the prevalence of vasomotor symptoms such as hot flushes was 16.8%, night sweat 9.9%, and sweating was 11%, and the prevalence of at least one vasomotor symptoms was 23.8% similarly a study done by Shukla *et al.*<sup>[10]</sup> in a rural area of Gujarat showed the prevalence of at least one vasomotor symptoms was 21.3%.

Furthermore, Chowta *et al.*<sup>[11]</sup> reported in their study done in Mangalore as the prevalence of vasomotor symptoms in their study population was 16%.

The prevalence of symptoms pertaining to the psychological domain showed feeling anxious or nervous was 38.4%, feeling depressed was 40.7%, being impatient was 16%, and feelings

of wanting to be alone were 24.4% in our study. Similarly, a study done by Duta *et al.*<sup>[12]</sup> in the rural area of Thiruvallur district, Tamil Nadu showed the prevalence of feeling anxious was 35.4, feeling depressed was 24.7%, and being impatient to people was 9.1%, likewise a study reported by Bener and Falah<sup>[13]</sup> in the Qatar population showed dissatisfaction with personal life was 18.5%, feeling anxious was 47.2%, feeling depressed was 26.7%, being impatient was 27.2%, and feeling of wanting to be alone was 20%. This variation may be due to difference in cultural and geographical area.

At least one of the symptoms pertaining to the physical domain was seen in our study population, feeling lack of energy 84.5%, decreased stamina 84.8%, decrease strength 82.5, low backache 78.5%, aching in muscles and joint 71.5%, lowest symptoms was increased facial hair 5.3%. Similarly, a study done in Kochi by Senthilvel *et al.*<sup>[5]</sup> showed feeling lack of energy 84%, decreased stamina 82.7%, low backache 80%, aching in the muscle and joint 90.7%. Karmakar *et al.*<sup>[14]</sup> conducted a study in Dearah village of West Bengal reported physical symptoms were similar to our study.

The symptoms involving sexual domain were change sex desire was 57.4%, vaginal dryness during intercourse 6.3% and avoiding intimacy was 44.6%, and overall sexual domain symptoms prevalence of one or more symptoms was 68%. Whereas Singh and Pradhan<sup>[11]</sup> reported that decreased sexual desire was 33.7% and vaginal dryness 20.2%. This variation may be due to difference in cultural and geographical area.

Table 2 in our study shows that there is an association between age of the population and the psychological domain of the postmenopausal symptoms, similarly a study which was done by Sharma and Mahajan<sup>[15]</sup> showed that the mean number of postmenopausal symptoms were significantly higher in >50 years age group indicating that not only the menopausal symptoms but also aging and social deprivation may have negative impact on QOL of postmenopausal women but a study done by Poomalar and Arounassalame<sup>[4]</sup> in the rural population of Puducherry does not show an association between the age of the population and the psychological symptoms. There was no association between education status and the postmenopausal symptoms in our study population. Table 3 shows an association between SES and both vasomotor and psychological domain symptoms in the postmenopausal women. However, a study done by Senthilvel *et al.*<sup>[5]</sup> showed

**Table 1: Prevalence of postmenopausal symptoms in the study population**

Symptoms	Prevalence (n=172), n (%)
<b>Vasomotor</b>	
Hot flushes	29 (16.8)
Night sweat	17 (9.9)
Sweating	19 (11)
<b>Psychological</b>	
Dissatisfaction with personal life	48 (27.8)
Feeling anxious or nervous	66 (38.4)
Poor memory	99 (57.5)
Accomplished less than I used to	85 (49.4)
Feeling depressed, down or blue	70 (40.7)
Being impatient with other people	28 (16.2)
Feelings of wanting to be alone	42 (24.4)
<b>Physical</b>	
Flatulence/gas pain	12 (7)
Aching in muscles and joints	123 (71.5)
Feeling tired or worn out	126 (73.3)
Difficulty in sleeping	85 (49.4)
Aches in back of neck or head	139 (80.8)
Decrease in physical strength	142 (82.5)
Decreased stamina	146 (84.8)
Feeling lack of energy	147 (85.4)
Dry skin	88 (51.1)
Weight gain	19 (11)
Increased facial hair	9 (5.3)
Change in appearances, texture, or skin tone	6 (3.5)
Feeling bloated	5 (2.9)
Low backache	135 (78.5)
Frequent urination	74 (43.1)
Involuntary urination while laughing or coughing	53 (30.8)
<b>Sexual (n=94)</b>	
Change in sex desire	54 (57.4)
Vaginal dryness during intercourse	6 (6.3)
Avoiding intimacy	42 (44.6)

**Table 2: Association of post-menopausal symptoms in relation to age of the study population**

Age of study population (years)	Vasomotor (n=172)		Psychological (n=172)		Physical* (n=172)		Sexual (n=94)	
	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)
<60	14 (8.1)	49 (28.5)	51 (29.6)	12 (6.9)	61 (35.4)	2 (1.1)	36 (38.2)	13 (13.8)
≥60	27 (15.7)	82 (47.6)	101 (58.7)	8 (4.6)	109 (63.3)	0	29 (30.8)	16 (17)
$\chi^2$ (P)	0.142 (0.705)		5.326 (0.021)		3.501 (0.061)		0.8956 (0.343)	

\*Almost everyone had one or more physical symptoms

**Table 3: Association between postmenopausal symptom and socioeconomic status among the study population**

SES	Vasomotor (n=172)		Psychological (n=172)		Physical* (n=172)		Sexual (n=94)	
	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)	Present, n (%)	Absent, n (%)
Below class III (lower)**	23 (13.3)	97 (56.3)	113 (65.6)	7 (4)	118 (68.6)	2 (1.1)	37 (39.3)	18 (19.1)
Above and equal to Class III (upper)***	18 (10.4)	34 (19.7)	39 (22.6)	13 (7.5)	52 (30.2)	0	28 (29.7)	11 (11.7)
$\chi^2$ (P)	4.769 (0.029)		12.970 (0.0003)		0.026 (0.871)		0.219 (0.640)	

\*Almost everyone had one or more physical symptoms, \*\*Below Class III (lower)=Class IV and V, \*\*\*Above and equal to Class III (upper)=Class I, II, and III. SES: Socioeconomic status

association between educational status, SES to the QOL among the postmenopausal women of their study population.

## CONCLUSION

The presence of these psychological and physical related postmenopausal symptoms may decrease the health-related QOL in every woman, because a majority of them ignore their complaints and avoid taking any treatment for these symptoms. Advice regarding healthy lifestyle changes must be ensured. Family support an important factor to reduce psychological symptoms should be guaranteed by creating awareness in the rural population as a whole. The use of appropriate therapy should be motivated whenever required.

## Limitations

Almost everyone in the study population had one or more physical symptoms. The questions regarding the sexual domain in our questionnaire were omitted among the widow participants due to social taboo.

## Financial support and sponsorship

Own funding.

## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

- Singh A, Pradhan SK. Menopausal symptoms of postmenopausal women in a rural community of Delhi, India: A cross-sectional study. *J Midlife Health* 2014;5:62-7.
- World Health Organization. Research on the Menopause in the 1990s: report of a WHO Scientific Group. Geneva: World Health Organization; 1996. Available from: <http://www.who.int/iris/handle/10665/41841>. [Last accessed on 2019 Oct 09].
- Nisar N, Sohoo NA. Frequency of menopausal symptoms and their impact on the quality of life of women: A hospital based survey. *J Pak Med Assoc* 2009;59:752-6.
- Poomalar GK, Arounassalame B. The quality of life during and after menopause among rural women. *J Clin Diagn Res* 2013;7:135-9.
- Senthilvel S, Vasudevan S, Anju PS, Sukumaran A, Sureshbabu J. Assessment of symptoms and quality of life among postmenopausal women in a tertiary care hospital in Kochi, South India: A hospital-based descriptive study. *J Midlife Health* 2018;9:185-90.
- Borker SA, Venugopalan PP, Bhat SN. Study of menopausal symptoms, and perceptions about menopause among women at a rural community in Kerala. *J Midlife Health* 2013;4:182-7.
- Hilditch JR, Lewis J, Peter A, van Maris B, Ross A, Franssen E, et al. A menopause-specific quality of life questionnaire: Development and psychometric properties. *Maturitas* 1996;24:161-75.
- Lewis JE, Hilditch JR, Wong CJ. Further psychometric property development of the menopause-specific quality of life questionnaire and development of a modified version, MENQOL-intervention questionnaire. *Maturitas* 2005;50:209-21.
- Pandey VK, Aggarwal P, Kakkar R. Modified BG Prasad's socio-economic classification-2018: The need of an update in the present scenario. *Indian J Community Health* 2018;30:82-4.
- Shukla R, Ganjivale J, Patel R. Prevalence of postmenopausal symptoms, its effect on quality of life and coping in rural couple. *J Midlife Health* 2018;9:14-20.
- Chowta NK, Sebastian J, Chowta MN. Comparative study of menopausal symptoms in postmenopausal and perimenopausal women. *J Clin Diagn Res* 2008;2:959-62. Available from: [http://www.jcdr.net/back\\_issues.asp?issn=0973-709x&year=2008&month=August&volume=2&issue=4&page=959-962&id=241](http://www.jcdr.net/back_issues.asp?issn=0973-709x&year=2008&month=August&volume=2&issue=4&page=959-962&id=241). [Last accessed on 2008 Aug 14].
- Duta R, Deruze L, Anuradha R, Rao S, Rashmi MR. A Population Based Study on the Menopausal Symptoms in a Rural Area of Tamil Nadu. Available from: [https://www.jcdr.net/article\\_fulltext.asp?issn=0973-709x&year=2012&volume=6&issue=4&page=597&issn=0973-709x&id=2107](https://www.jcdr.net/article_fulltext.asp?issn=0973-709x&year=2012&volume=6&issue=4&page=597&issn=0973-709x&id=2107). [Last accessed on 2019 Oct 05].
- Bener A, Falah A. A measurement-specific quality-of-life satisfaction during premenopause, perimenopause and postmenopause in Arabian Qatari women. *J Midlife Health* 2014;5:126-34.
- Karmakar N, Majumdar S, Dasgupta A, Das S. Quality of life among menopausal women: A community-based study in a rural area of West Bengal. *J Midlife Health* 2017;8:21-7.
- Sharma S, Mahajan N. Menopausal symptoms and its effect on quality of life in urban versus rural women: A cross-sectional study. *J Midlife Health* 2015;6:16-20.