Original Research

Analysis of Subjective Well-being of Menopausal Women in a Rural Area of Tamil Nadu; Let Menopause be a period of Hope

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Abstract

Introduction: The Third National Revised Consensus Guidelines of the Indian Menopause Society have projected that by the year 2026, the menopausal population will be 103 million. Women should be well educated about this phase of life, and prior counseling should also be given to those in menopause transition. This study was done to assess the quality of life among menopausal women so that their menopause journey is a sustainable one.

Materials and methods: A cross-sectional study was conducted for one year in the Rural field practice area of Kanchipuram district among 300 post-menopausal women with a history of 12 months of Amenorrhoea. Data was collected using a PPS Cluster sampling method, and the study tool employed was the MENQOL Questionnaire.

Statistical analysis: Analysis was done using IBM SPSS.

Results: The mean age at menopause in this survey was 46.9 years ± 5.50. 91 (30.3%) were illiterate, the majority of them were currently married 204 (68%) and 238 (79.3%) were unemployed. The total MENQOL domain score was calculated by adding all four domains of MENQOL which was 79 (56 - 102). On Chi-square analysis, a significant association was observed between total MENQOL score and factors such as religion, educational status, and age at menopause

Conclusion: As per this study aged over 46 years, employed, currently married, living in a nuclear family, and attained menopause at an early age had poor QOL.

Keywords: Menopause, Quality of life

Introduction

Menopause is defined as the time of cessation of ovarian function resulting in permanent amenorrhea, age of menopause onset may differ in individuals.[1] The Age at menopause in India is 46.2 ± 4.9 years and the period following menopause is generally termed

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as post-menopausal period.[2] Based on the Third National Revised Consensus Guidelines of the Indian Menopause Society, the projected figure in 2026 has estimated that population in India will be 1.4 billion, among them people over 60 years will be 173 million, and the menopausal population will be 103 million.[3] Menopause is a phase of life where health status is often ignored and a significant factor for individual health is maintaining good Quality of life.[4] As part of aging in post-menopausal women, an additional burden is imposed due to certain health problems and social factors. Women are given different roles as mother and wife and as a result, most of the menopausal symptoms are often ignored resulting in poor quality of life.[5] QOLis a sense of welfare caused by satisfaction and dissatisfaction in life.[6,7] An increase in life expectancy has left post-menopausal women to suffer extra years of compromised quality of life. Quality of life can be assessed by using several domains related to physical, social and emotional wellbeing.[8]

1.5 million females experience menopause transition every year globally, during this transition physical changes occur that predispose a woman to physical functional limitation over 60 years of age compared to men.[9] Menopause comprises of manifestation like hot flushes, night sweats, mood swings, changes in sexual desire, vaginal dryness, insomnia, psychosocial symptoms, joint pain and fatigue.[10] Health outcome of menopausal women can be improved with better knowledge about management of these risk factors, menopausal symptoms and their clinical presentation.[10] Early recognition of these symptoms may also help in reduction of discomfort and fear among women.[11]

According to the results of the Women Health Initiative, the preferred treatment of menopausal symptom is Hormone replacement therapy.[12] Health care utilization in menopausal women plays a pivotal role.[13] There is paucity of literature on quality of life among post-menopausal women, especially in southern parts of India.[9,14,15] Very few had included women who had undergone surgical menopause through hysterectomy but has not given in-depth knowledge. The duration of menopause plays a crucial role in determining the quality of life. Henceforth it becomes essential to assess the extent and severity of health problems associated with menopause.[16] This study was done to determine the factors influencing Quality of life of Post-menopausal women residing in Rural area of Tamilnadu.

Materials and Methods

A cross-sectional study was done in Rural field practice area of Kanchipuram district for 1 year among post-menopausal women with history of 12 months of Amenorrhoea. Post-menopausal women with psychiatric problems, critical illness like cancer, and women in transition period ie., perimenopause and pre-menopause were automatically excluded from the study.

Sample size estimation:

80% was the prevalence of vasomotor symptoms from previous study,[17] By using the formula $N = (4pq \times DE) / L^2$, the sample size (N) calculated was 261; 10% non-response rate was added to this value which made it 287 and this was rounded off to the nearest value of 300.

Sampling method:

In this study, A PPS Cluster sampling method was used. Clusters were formed by selecting the villages near rural field practice areas. According to Indian National Family Health Survey about 18% of women had attained menopause,[18] hence 18% of menopausal women were considered from total female population in each cluster. The total population of 3449 was divided by number of clusters 9 and the sampling interval was calculated as 383.A random number of 72 (Random Start RS) was selected from 1 to 383 and the cluster where the number 72 falls was selected as first cluster. Subsequent clusters were selected by adding 383 cumulatively. Likewise, nine clusters were selected and from each cluster study participants were selected at random by using lottery method until sample size of 300 was achieved.

Study Tool:

Standardized structured Questionnaire which consists of two parts was used. 1st part was socio

demographic characteristics and 2nd part was MENQOL Questionnaire.[19]

MENQOL comprises of 29 questions with four domains; Vasomotor (1-3), Psychological (4-10), Physical (11-26) and Sexual (27-29). The questions in each domain were scored separately. Each item in MENQOL was assessed as faced over the last month. Each item was rated as either present or absent. If present it was graded using a scale from 0 to 6. Mean values were calculated by taking the average of each domain. In simple terms, If the study participant responded as if she had not experienced the symptom then it was marked as 'No' and scored as 1 and if she had experienced the symptom it was graded by using the 7-point Likert scale and given a score from 2-8; The MENQOL questionnaire was translated in local language to avoid errors and a face-to-face interview was conducted to collect data from study participants. A pilot study was done with 10% of the sample size before starting the present study.

Statistical analysis

Data collected was analyzed using IBM SPSS. QOL will be expressed as Mean and Standard deviation. The prevalence of each item in domains was expressed in percentage and the relationship between QOL and sociodemographic factors was examined by chi-square analysis. The odds ratio was derived for risk assessment.

Ethical Consideration:

An informed consent was obtained from the study participants before initiating the study. IHEC approval was obtained for this study at Chettinad Academy of Research and Education, Proposal no: 486/IHEC/3-19 dated 19/04/2019.

Results and Analysis

In this study, MENQOL questionnaire was used to identify the prevalence of menopausal symptoms under 4 domains and to estimate the overall domain score quality of life in the study participants. It was ascertained that the mean age at menopause in this survey was 46.9±5.5 yrs. Other sociodemographic parameters are depicted in Table 1.

Table 1: Sociodemographic factors

Sociodemographic factors	Frequency n (%)
Age	
35-45 years	41 (13.7%)
>46 years	259 (86.3%)
Religion	
Hindu	242 (80.7%)
Muslim	25 (8.3%)
Christian	33 (11%)
Marital status	
Single	7 (2.3%)
Currently married	204 (68%))
Separated	20 (6.7%)
Widowed	69 (23%)
Type of family	
Nuclear family	155 (51.7%)
Joint family	145 (48.3%)
Educational status	
Illiterate	91 (30.3%)
Primary school	70 (23.3%)
Middle school	62 (20.7%)
Secondary	34 (11.3%)
Higher secondary	23 (7.7%)
Graduate	20 (6.7%)
Occupational group	
Unemployed (Home maker)	238 (79.3%)
Employed	62 (20.7%)

Prevalence of Menopausal symptoms as recorded by MENQOL suggested that occurrence of vasomotor symptoms in the study population was 208 (69.3%) and the most prevalent symptom under this domain was generalised sweating 164 (54.7%). Symptoms under psychological domain was present in 278 (92.7%), among them most prevalent was poor memory 199 (66.3%). The most common physical symptom complained by the study participants was

pain in the muscles and joints 257 (85.7%). The most prevalent sexual symptoms were variations in sexual desire and vaginal dryness during 53 (17.7%). The data gathered by using MENQOL questionnaire did not follow a normal distribution hence Median and interquartile range was estimated for each domain, accordingly vasomotor domain was 6 (3 - 11), psychological was 18 (12 - 24), physical was 50 (32 - 65), sexual was 3 (3 - 4). The total MENQOL domain score was calculated by adding all four domains of MENQOL and the median score of this was 79 (56 - 102). If the study participants MENQOL score was below the median value she had good QOL and if it is above the median value then she is said to have a poor QOL.

Chi square analysis was done between total MENQOL score and sociodemographic variable like age religion, education, occupation, marital status, age at menopause and type of family. A significant association was observed between total MENQOL score and factors such as religion, educational status and age at menopause as depicted in Table 2.

Table 2: Chi square analysis showing association between MENQOL score and Sociodemographic factors.

Variables	Total MENQOL score Median (79)		Chi square value	P value
	Median < 79 (Good QOL)	Median > 79 (Poor QOL)		
Age				
35-45 years	22	19	0.47	0.5
>46 years	124	135		
Religion				
Hindu	108	134	13.5	0.001*
Muslim	12	13		
Christian	26	7		
Educational status				
Illiterate	30	61	15.01	0.01*
Primary school	42	28		
Middle school	36	26		
Secondary	17	17		
Higher secondary	12	11		
Graduate	9	11		
Occupational status				
Unemployed	122	116	3.1	0.08
Employed	24	38		
Marital status				
Single / Separated / widowed	53	93	2.4	0.1
Currently married	43	111		
Type of family				
Nuclear family	72	83	0.6	0.4
Joint family	74	71		
Age at menopause				
35-45 years	46	72	7.3	0.01*
>46 years	100	82		

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Socioeconomic status				
Upper class	30	25	1.3	0.8
Upper middle class	31	31		
Middle class	24	29		
Lower middle class	35	37		
Lower class	26	32		

Logistic regression analysis is depicted in Table 3, It was done between each of the sociodemographic factors, co-morbidities, and MENQOL domains. It was found that menopausal women aged more than 46 years had 70% less chance of poor sexual QOL compared to those aged 35 to 45 years. In this study compared to unmarried/separated and widowed menopausal women those who are currently married are 3.12 odds [OR, 3.12; 95% CI, 1.6–6.1] of poor sexual domain.

Employed women had 2.1 odds [OR, 2.1; 95% CI, 1.1-3.8] of poor vasomotor QOL, 1.8 odds [OR, 1.8; 95% CI, 1.03-3.3] of poor psychological QOL and 2.5 odds [OR, 2.5; 95% CI, 1.4-4.6] of poor sexual QOL when compared to unemployed menopausal women. On considering type of family and QOL, menopausal women residing in nuclear family had 1.8 odds [OR, 1.8; 95% CI, 1.13–2.8] of poor vasomotor QOL and 1.9 odds [OR, 1.9; 95% CI, 1.1-3.3] of poor sexual QOL when compared to those women residing in joint family.

Income plays a vital role with regards to QOL, middle class had 70% less chance of poor sexual QOL, and lower class had 70% less chance of poor vasomotor QOL compared to upper class.

Table 3: Logistic regression analysis showing influence of associated factors on quality of life

Variables	**Vasomotor domain (Score > 6)**	**Psychological domain (Score >18)**	**Physical domain (Score > 50)**	**Sexual domain (Score > 3)**
	OR (95%CI)	**OR (95%CI)**	**OR (95%CI)**	**OR (95%CI)**
Age group				
>46 years	1.02(0.5-1.9)	1.5(0.8-3.04)	1.2(0.6-2.3)	0.3(0.1-0.5)
35-45 years	1	1	1	1
Religion				
Muslim	1.8 (0.8-3.7)	1.5(0.6-3.6)	0.7(0.3-1.5)	0.1(0.01-0.8)
Christian	1.4(0.5-4.06)	0.2(0.09-0.5)	0.3(0.1-0.6)	0.5(0.2-1.4)
Hindu	1	1	1	1
Marital status				
Currently married	1.2 (0.8 - 2.02)	1.01(0.6 - 1.6)	1.2 (0.7 - 2.06)	3.12 (1.6 - 6.1)
Unmarried / separated / widowed	1	1	1	1
Educational status				
Illiterate	0.3 (0.08-1.08)	1.5 (0.5-4.07)	1.5 (0.6-4.02)	0.2 (0.07-0.5)
Primary school	0.1 (0.03-0.5)	0.5 (0.2-1.4)	0.6 (0.2-1.5)	0.3(0.1-0.9)
Middle school	0.1 (0.02- 0.3)	0.3 (0.09-0.7)	0.7 (0.3-1.9)	0.2(0.05-0.5)
Secondary	0.2 (0.05-0.8)	0.7 (0.2-2.3)	0.9 (0.3-2.7)	0.7(0.2-2.1)
High school	0.2(0.04- 0.8)	0.6(0.2-2.05)	1.06 (0.3-3.5)	0.8 (1.2 -2.5)
Graduates	1	1	1	1

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Occupation				
Employed	2.12 (1.1-3.8)	1.8 (1.03- 3.3)	1.5 (0.8-2.7)	2.5(1.4-4.6)
Unemployed	1	1	1	1
Living with children				
No	1.4 (0.8-2.3)	1.2(0.8-2.08)	1.3 (0.8-2.2)	1(0.6 -1.7)
Yes	1	1	1	1
Type of family				
Nuclear family	1.8 (1.13- 2.8)	1.3 (0.8 - 2.05)	1.1 (0.7 -1.7)	1.9 (1.1- 3.3)
Joint family	1	1	1	1
Socioeconomic class				
Upper middle class	1.06 (0.5 -2.2)	1.1 (0.5-2.3)	0.9 (0.5-1.9)	1.2(0.6-2.7)
Middle class	0.8 (0.4-1.7)	1.3 (0.6-2.9)	1.3 (0.6-2.9)	0.3(0.1-0.9)
Lower middle class	0.8 (0.4-1.7)	1.4 (0.7-2.8)	0.9 (0.4-1.8)	0.5(0.2-1.2)
Lower class	0.3 (0.2-0.7)	0.9 (0.5-2.03)	1.4 (0.6-2.8)	0.4(0.2-1.03)
Upper class	1	1	1	1
Menopause age				
35-45years	1.4 (0.8 -2.2)	1.6 (1.03 -2.6)	1.6 (1.01 -2.5)	1.4(0.8 -2.4)
>46 years	1	1	1	1
Medical comorbidity				
Present	0.8(0.5-1.3)	1.5(0.9-2.5)	2.09 (1.3 - 3.3)	0.6(0.3-0.9)
Absent	1	1	1	1

As mentioned earlier in the study health care utilization plays a pivotal role in combatting the menopausal symptoms, 162 (54%) of had visited health care facility and 138 (46%) had not visited the facility in the last 1 month. Among those who visited the facility, a maximum number of participants 92 (30.7%) had consultation at a private hospital for easier accessibility. Menopausal women visited government PHC for affordability.

Discussion

Nabarun Karmakar et al[20] studied Quality of life in peri and post-menopausal women in West Bengal. The mean age at menopause from this study was 49.55% + 4.69 years, minimum age was 40 and maximum age was 60 years. According to this study, menopausal symptom feeling of anxiety and nervousness was more 94%, decrease in physical strength and lack of energy was 93%, hot flushes was 47% and avoiding intimacy was 49%. In the present study mean age was 54.7+ 7.9 years and mean age at menopause was 46.9 +5.5 years. The most prevalent menopausal symptoms under each of the domain in the study was generalized sweating 54.7%, poor memory 66.3%, pain in the muscle and joints 85.7% and changes in sexual desire and vaginal dryness during intimacy 17.7%.

In a study done by Nirmala Rathnayake et al[21] monthly income of post-menopausal women showed association with QOL, higher parity and low monthly income was associated with low QOL, this was in contrast to present study where domain scores of MENQOL suggested that lower class had lesser chance of poor vasomotor and physical QOL which may be related to familial support. However early detection of symptoms and adequate treatment is required to further improve the quality of life in all socioeconomic classes. Sarkar A et al[22] did a cross sectional study among 300 post-menopausal in Gujarat. From this study occurrence of joint pain was high 64.66% and this was like present study where prevalence of joint pain was 257 (85.7%), and this is because most of the study participants were involved in manual work.

Poomalar et al[16] study showed highest prevalence for Psychosocial symptoms (93.2%),

physical symptoms (99%). Physical domain score was more and associated with late postmenopausal age. In the present study also physical and psychological domain had highest prevalence rates and both these domains were significantly associated with age at menopause. The reason behind this is that early menopause has a potential to reduce the reproductive period in these women which may have a direct toll on mental health. Thilagavathy Ganapathy et al[7]study suggested that menopausal women with higher secondary and university education had lower QOL scores and better QOL as compared to those with the lower level of education in all the domains. This finding was compared with present study, illiterates had 70% less chance of poor vasomotor QOL and 80% less chance of poor sexual QOL compared to graduates. This could be related to the fact that illiterates and those with lower level of education had better tolerability compared to those with higher level of education. Nisar N et al[23] in a study on frequency of menopausal symptom and its impact on quality of life, concluded that menopausal symptoms on the whole had negative impact on QOL whereas majority of participants in the present study had poor QOL in all domains of MENQOL except for the sexual domain. This may be related to the ignorance and prevailing inequality in gender for consent towards sexual behaviour, rural women tend to give priority to her husband and would not resist his intentions towards sexual act because of foster beliefs of perceived male superiority.[24]

Conclusion

The health status of an individual is the responsibility of the self and it is possible by regular follow-up and counseling in the health care facility for any specific ailment related to menopause. The community should provide a safe place for elderly women to cope with their physical and emotional needs. Menopausal women living away from their family members should be acquainted with vocational rehabilitation and they must not be ignored for their age and health condition.

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