Menopause related quality of life among females of rural field practice area of a tertiary care centre in Jaipur

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Abstract

Background: The various types of post-menopausal symptoms progressively worsen the well-being of women and affect, consequently, their quality of life (QOL) on a daily basis.
Objectives
1. To determine the prevalence of poor quality of life among post-menopausal women of rural area.
2. To assess the factors responsible for the poor quality of life among post-menopausal women of rural area.
Methods: A community based cross sectional observational study was carried out among 100 postmenopausal females aged between 40-60 yrs of age. The standardized Menopause-Specific Quality of Life Questionnaire (MENQOL) and the International Physical Activity Questionnaire (IPAQ) were used.
Results: Among the study participants, the most common symptoms in the physical domain were "decrease in physical strength" (88%), "decrease in stamina" (81%) and "feeling tired and worn out" (81%). Urinary incontinence was seen in 26% of women. In the psychosocial domain, "the feeling of having the ability to accomplish less than previously" was the predominant one (78%). Among the symptoms of sexual domain, "decrease in sexual desire" was the most common complaint (67%). Among vasomotor symptoms, hot flashes were present in only 35% of participants. Those having low physical activity were exposed to more postmenopausal symptoms as compared to those having moderate and severe physical activity.
Conclusion: Menopause is associated with decrease in QOL. Awareness regarding menopausal symptoms will lead to improvement in QOL by early recognition.

Keywords: Menopause, menopausal symptoms, postmenopausal females, physical activity, quality of life

Introduction

One of the goals of health service for all the people in 21st century is to improve quality of life. Almost all women at the time of menopause irrespective of their cultural background and health conditions, begin to experience physical, psychological and emotional disturbances. Those turmoils coincide with a progressive decline of female hormones, estrogen and progesterone, culminating to a total shut down from the ovaries.

The World Health Organization has defined menopause as twelve months of amenorrhea after the last menstrual period. This process is the result of complete or partial absence of oestrogen release from ovaries as well as depletion of ovarian follicles [1]. During this period, women present difficulties in accurately describing physical, psychosocial or sexual disturbances and report mainly hot flashes, nervousness, depression, insomnia, and general fatigue [2].

These various types of symptoms progressively worsen the well-being of women and affect, consequently, their quality of life (QOL) on a daily basis. The World Health Organization defines quality of life (QOL) as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [3]" With the increase in the life expectancy, a woman spends almost a third of her life in menopause [4]. Therefore, the QOL of postmenopausal women is of great public-health interest [5].

By taking appropriate preventive measures this can be emeliorated and further deterioration can be checked to boost the quality of their lives. The present study was undertaken with a service approach to give health care advice to the women in rural area.

Aims and Objectives

To determine the prevalence of poor quality of life among post-menopausal women of rural area.
To assess the factors responsible for the poor quality of life among post-menopausal women of rural area.

Materials and Methods
Study design and study setting

A community based cross sectional observational study was carried out among postmenopausal females aged between 40-60 yrs of age, residing as permanent residents in rural field practice area of Department of Community Medicine, MGMCH and Jaipur. Field work was conducted by house to house survey between Jan 2022 and Feb 2022. The data was collected using a pretested questionnaire. The questionnaire was tested for appropriateness by conducting a pilot study. Before collection of data consent was obtained from all study subjects after explaining the importance of the study in detail.

Study subjects
Operational definition: Natural menopause was defined as the natural cessation of the menstrual period for 12 months or longer.

Inclusion criteria

Women between the age of 40-60 yrs in rural field practice area of MGMCH who have attained natural menopause and consented for the study.

Exclusion criteria

▪ Women who experienced an induced menopause, due to several medical conditions such as

Hysterectomy, Oophorectomy radiation or chemotherapy and to only target those entering menopause naturally.

- Women with chronic medical conditions such as DM, HTN etc.
- Those females who do not consented for the study.

We have also ruled out any recent mishap/ trauma in the woman's life after ascribing these symptoms to menopause. The selection bias was minimized by following the inclusion and exclusion criteria strictly. The ladies with severe symptoms were given reference slips to meet the gynecologists and the ladies with mild symptoms were given advice at primary care level.

Sample size

Sample size was calculated by doing a pilot study on 20 post-menopausal women and prevalence of symptoms was found to be 80%. Furthermore the same was found by the literature search [6].
According to the formula, sample size N is calculated as-
$N = 4pq/l^2$
p=80 (crude prevalence)
q= 100-p=20
l= 10% of p (allowable error) =8
The required sample size was found to be 100.
The sampling frame was obtained from family survey records of rural field practice area of department of Community Medicine MGMC, Jaipur. Total houses which lodged the postmenopausal women were included in the sampling frame.
Simple random sampling was done from the list of houses that lodged the post-menopausal woman.

Sampling method

Data was collected by interview method to enquire regarding socio-demographic variables, menstrual history and physical activity. Menopausal status was taken according to the World Health Organization's definition of menopause i.e. the natural cessation of the menstrual period for 12 months or longer.

Data collection tools

The standardized Menopause-Specific Quality of Life Questionnaire (MENQOL) was used to assess menopause related symptoms consisting of physical, vasomotor, psychosocial and sexual domains.
The International Physical Activity Questionnaire (IPAQ), was used to evaluate the physical activity level of participants.
Overall, around 120 questionnaires were distributed among the research team to approach eligible candidates. Statistical analysis were performed on the total number of complete collected material (N = 100).
Among the various questionnaires world widely published on the QOL of women during menopause, and after a thorough literature review, the research team decided to use an internationally validated questionnaire, the MENQOL. Before proceeding, permission was solicited from the research team that applied this self-administered tool in its Hindi version. It consists of a total of 29 items, divided into four domains: vasomotor (items 1-3), psychosocial (items 4-10), physical (items 11-26) and sexual (items 27-29). Answers, provided in a Likert-scale format, were displayed as "no" or "yes", with the latter spread from zero to six, respectively indicating the presence of the symptom and its degree, from being not bothersome to extremely bothersome. Calculations of each domain are computed separately and then summed up to reach the final score of MENQOL [7].
PA level of each participant was defined via the International Physical Activity Questionnaire (IPAQ),

in its short form, where subjects mention how much exercise they did in a typical week. This self-Administered questionnaire, used worldwide, assesses the overall PA over the last seven days, to categorize it as low, moderate or high [8]. The study material was tested on a sample of 20 women in a pilot study, prior to its official launch. The first section of the questionnaire, concerning socio-demographic and medical data was filled by the research team, during face-to-face interviews. The last sections (MENQOL and IPAQ) were filled by the participant herself.

Ethical considerations

After obtaining institutional ethical committee clearance, the significance of the study was explained to all the participants, and written informed consent was taken.

Statistical analysis

Data entry was done in Microsoft Excel and analysed. Descriptive statistics such as frequency and percentage were calculated. The mean scores of four domains among menopausal women were depicted. Association of variables were analysed using chi-square test and $P<0.05$ was taken as statistically significant.

Results
Socio demographic characteristics of study participants

The study population included 100 women above the age of 40 years. The mean age of postmenopausal women included in this study was found to be 47±4.7 yrs. Majority of women were married (78%), homemakers (78%) and were educated till middle school (40%). Socioeconomic status as per modified BG Prasad's classification [9] is detailed in Table 1. Most of the study participants belonged to Class III (37%) followed by Class IV (23%).The mean duration since menopause was found to be 10.44 (7.21) yrs.

Table 1: Socio-demographic characteristics of study participants (N=100)

S. No.	Socio-Demographic Variables	N (%)
1.	**Age Group**	
	41-50 yrs.	42 (42)
	51-60 yrs.	58 (58)
2.	**Occupation**	
	Semi-professional	(0) (0)
	Clerical/shop owner/farmer	3 (3)
	Skilled	1(1)
	Semi-skilled	4(4)
	Unskilled	14 (14)
	Unemployed/housewife	78 (78)
3.	**Education**	
	No formal education	23 (23)
	Primary school	16 (16)
	Middle school	32 (32)
	High school	11 (11)
	Intermediate	10 (10)
	Graduate	4 (4)
	Post-graduate	1 (1)
4.	**Marital Status**	
	Married	78 (78)

	Unmarried	0 (0)
	Widow	22 (22)
	Separated	0 (0)
	Socio-economic status as per modified BG Prasad's classification	
5.	Class I	8 (8)
	Class II	13 (13)
	Class III	19 (19)
	Class IV	37 (37)
	Class V	23 (23)

Table 2: Distribution of prevalence of major menopausal symptoms and their respective average scores in the study population

Symptom	Frequency N (%)	Average score of symptom
Hot flashes	35 (35)	5
Night sweats	21 (21)	5
Sweating	28 (28)	4
Dissatisfaction with my personal life	30 (30)	4
Feeling anxious or nervous	51 (51)	5
Poor memory	57 (57)	4
Accomplishing less than I used to	78 (78)	5
Feeling depressed down or blue	39 (39)	5
Being impatient with other people	35 (35)	5
Aching in muscles and joints	70 (70)	5
Feeling tired or worn out	81 (81)	5
Difficulty sleeping	27 (27)	5
Pain in back of the neck or head	37 (37)	5
Decrease in physical strength	88 (88)	4
Decrease in stamina	81 (81)	4
Lack of energy	62 (62)	4
Weight gain	23 (23)	5
Low back ache	55 (55)	5
Frequent urination	28 (28)	5
Involuntary urination when laughing or coughing	26 (26)	4
*Decrease in my sexual desire (N=78)	67 (67)	5
*Vaginal dryness (N=78)	27 (27)	4
*Avoiding intimacy (N=78)	60 (60)	4
Leg pain or cramps	50 (50)	5

*Widowed, unmarried and separated women were excluded in calculation of sexual symptoms.

The distribution of prevalence of the major menopausal symptoms among study participants and their Respective average scores are summarized in Table 2. Among the study participants at least one symptom in the physical domain was experienced by all the participants (n=100), the most common being "decrease in physical strength" (88%), "decrease in stamina" (81%), and "feeling tired and worn out" (81%). Urinary incontinence was seen in 26% of women. In the psychosocial domain, all women experienced at least one symptom, "the feeling of having the ability to accomplish less than previously" being the predominant one (78%). Among the symptoms of sexual domain, "decrease in sexual desire" was the most common complaint (67%).Vasomotor symptoms were comparatively less among the study group. Hot flashes were present in only 35% of participants.

Table 3: Prevalence of post-menopausal symptoms in relation to age in study population

Age of study population	Vasomotor symptoms (N=100)		Psychosocial symptoms (N=100)		Physical symptoms (N=100)		*Sexual symptoms (N=78)	
	Present	Absent	Present	Absent	Present	Absent	Present	Absent
41-50 years (n=42)	34	8	35	7	38	4	31	5
51-60 years (n=58)	34	24	32	26	34	24	27	15
X^2value (p-value)	5.5829 (0.018)		8.737 (0.003)		10.1547 (0.001)		4.843 (0.0277)	

X^2-chi square.

Table 3 shows that there was a significant difference between the age groups and the prevalence of post-menopausal symptoms. Prevalence of post-menopausal symptoms was more among women of age group 41-50 yrs as compared to those of 51-60 yrs age.

Table 4: Prevalence of post-menopausal symptoms in relation to physical activity in study population

S. No.	Categories of physical activity	N (%)
1.	Low	42(42)
2.	Moderate	51(51)
3.	Severe	7(7)

All the study participants were divided into three categories according to their level of physical activity. Table 4 shows that most of the study participants i.e. 51 (51%) fall in the category of moderate physical activity. Those study participants which were involved in low physical activity were 42 (42%) and only 7 (7%) were having severe physical activity.

Table 5: Prevalence of post-menopausal symptoms in relation to physical activity in study population

Categories of Physical Activity	Vasomotor symptoms (N=100)		Psychosocial symptoms (N=100)		Physical symptoms (N=100)		*Sexual Symptoms (N=78)	
	Present	Absent	Present	Absent	Present	Absent	Present	Absent
Low	33	9	30	12	36	6	35	7
Moderate	31	20	27	24	24	27	20	10
Severe	2	5	1	6	1	6	1	5
X^2value (p-value)	7.9462 0.018		8.9501 0.011		21.3708 0.00		12.1538 0.0022	

*Widowed, unmarried and separated women were excluded in calculation of sexual symptoms.

Prevalence of post-menopausal symptoms in relation to physical activity in study population is shown in table 5. Those having low physical activity were exposed to more postmenopausal symptoms as compared to those having moderate and severe physical activity.

Discussion

According to current study, the mean age of menopause attainment was 47±4.7 yrs. Mean age at menopause in Indian women ranges from 44.58±4.26 yrs and in the western world from 48 to 51 yrs.[10] This might be due to regional differences, environmental factors and genetic factors. Similar age at menopause was observed in other studies [11, 12].

In the present study, the most common symptom was that of the physical domain, followed by sexual, psychological and sexual domains. In the physical domain, the symptoms of "decrease in physical

strength" (88%), "decrease in stamina" (81%) and "feeling tired and wornout" (81%) were the most common. The psychosocial symptom of "being able to accomplish less than previously" (78%) and the sexual symptom of "decrease in sexual desire" (67%) were the predominant complaints. Vasomotor symptoms were comparatively less among the study participants with hot flushes seen in (35%) of the study participants. These results are consistent with findings of Poomalar and Arounassalame, Nayak *et al.* and Goyal *et al.*, but not with that of Sharma and Mahajan [13, 14, 15, 16].

Mahajan *et al.* [17] did a study in North India regarding health issues of menopausal women in which they have mentioned about a report by WHO, which states that hot flushes are prevalent more in European and North American population as compared to Asians. In the current study hot flushes were present only in 35% of postmenopausal females.

These diversities in various menopausal symptoms probably exist because women experience a reduction in oestrogen levels in a wide variety of ways, with great inter individual variations.

A study which was done by Sudhaa *et al.*, showed that the mean number of postmenopausal symptoms were significantly higher in >50 years age group as compared to those in <50years age group [18]. Whereas in our study, there was a significant difference between the age groups. 41-50 years age group showed higher prevalence of post-menopausal symptoms as compared to 51-60 years age group.

According to present study, moderate and severe physical activity was found to be protective against development of post-menopausal symptoms. Those study participants doing low physical activity were more exposed to development of menopausal symptoms as compared to those involved in moderate and severe physical activity. Similar results were shown in a study by Steriani Elavsky *et al.* [19] suggesting that being physically active may reduce perceived severity of menopausal symptoms and enhance psychological well-being.

Conclusion

- Menopause is associated with decrease in QOL.
- Certain socio-demographic variables may aggravate menopausal symptoms.
- Awareness regarding menopausal symptoms will lead to improvement in QOL by early recognition.

Thus Government could concentrate on providing health services to women in post-menopausal age group also besides women in reproductive age. So in National Health programs component related to specific health needs of post-menopausal women should be incorporated.

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