

A study of quality of life among perimenopausal women in selected coastal areas of Karnataka, India

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ABSTRACT

Background: To study the menopause related symptoms affecting the quality of life (QOL) of perimenopausal women in order to understand the prevalence and plan for the interventions.

Materials and Methods: Two hundred and nine women were evaluated for perimenopausal symptoms using a 29 item MENQOL questionnaire.

Results: The physical and psychosocial symptoms were found to be more prevalent than the vasomotor and sexual symptoms.

Conclusion: Perimenopausal symptoms widely vary in women populations, accurate recording and understanding of which is essential to plan effective interventions to improve the QOL.

Key Words: Awareness, Karnataka, MENQOL questionnaire, perimenopausal symptoms, QOL

INTRODUCTION

Menopause is the permanent cessation of menstruation which is retrospectively determined following twelve months of amenorrhea during midlife period and the most identifiable event of the perimenopausal period. The year immediately preceding and the decade afterwards, however, are of far greater clinical significance. The perimenopausal period encompasses the time before; during and after menopause.^[1] Symptoms that begin with the menopausal transition usually continue making a compensatory decrease in the postmenopause.^[2] The immediate symptoms of menopause are the effects of hormonal changes on many organ system, most extensively the cardiovascular and musculoskeletal system affecting their quality of life.^[3] Commonly reported symptoms include hot flushes, night sweats, muscles and joint pains, sleep disturbances, urinary frequency, vaginal dryness, poor memory, anxiety and depression.^[4,5] Menopausal symptoms have been widely studied in women from western societies, but less information is available for women of non-western ethnic groups. There is evidence of differences in the prevalence of symptoms in Asian versus Western women.^[6-10] Further, wide variations have been observed in the sub population

studies,^[11] including studies in Indian women from selected regions.^[12-15]

There were no studies from this region of subcontinent regarding the quality of life of perimenopausal women. This study evaluates the menopausal symptom of women aged between 40 to 60 years which is important to understand the prevalence and plan for the remedial measures and also to create awareness.

MATERIALS AND METHODS

This cross sectional study was carried out in 209 women (aged 40 to 60 years) who were from the local community belonging to various women organizations, self-help groups in this area. They were included in this study based on their menstrual history (to assess menopausal status) and the experience menopausal symptoms by using the questionnaires. The self-administered questionnaire included socio-demographic factors with menstrual history. Women with surgical menopause, receiving any

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Access this article online

Quick Response Code:



Website:
www.jmidlifehealth.org

DOI:
10.4103/0976-7800.104456

kind of hormone therapy, presence of medical conditions like diabetes, hypertension and cardiac diseases were excluded. The self-administered questionnaire included socio-demographic information with menstrual history and the Menopausal Specific Quality of Life (MENQOL) questionnaire^[6] to document the menopausal symptoms to assess their quality of life. Women with perimenopausal symptoms included in this group were 'premenopausal' who reported still having menstrual cycles or with slight change in the length of cycle and 'postmenopausal' women whose last menstrual period occurred 12 months or later. The MENQOL questionnaire is a self-administered 29-item survey questionnaire, designed to describe quality of life in menopausal women and which measures the extent to which an individual is affected by menopausal symptoms. All items in the Menqol questionnaire followed the same format. It comprised of menopausal symptoms in four domains: Vasomotor, Psychosocial, Physical and Sexual. Each women was asked whether she experienced the symptoms in the previous six months if answer was no she was asked next item and if answer was yes she was asked to indicate how bothered she had been by the symptoms on a seven point scale ranging from 0 = not at all bothered to 6 extremely bothered. For analysis score becomes 1 for 'No', 2 for 'Yes' through to 8 for "Yes (Extremely bothered)". The questionnaire was in English and translated to local language Kannada. The questionnaire was given after obtaining written informed consent. This study has been approved by the institutional ethics committee.

All data gathered was analyzed by using Statistical Package for Social Science (SPSS) Ver. 15. QOL score for each domain are presented as median with quartiles. Demographic features and symptoms are reported as frequency with percentages. Mann-Whitney U test was used to compare QOL score among premenopausal and postmenopausal group. A *P* value less than 0.05 were considered as statistically significant.

RESULTS

Characteristics of the study population

The mean age of the group was 48.30 ± 5.30 of years. Among 209 women, 33 (15.8%) were obese (BMI ≥ 30), 77 (36.8%) were overweight (BMI 25-30), 88 (42.1%) were normal (BMI 18.5-24.99) and 11 (5.3%) were of below normal weight (BMI ≤ 18.5). Out of 209, 200 (95.7%) were married and 8 (3.8%) were separated. In all, 9 (4.3%) have no children, 37 (17.7%) have one, 122 (58.4%) have two, 41 (19.6%) have more than two children. All of them were educated with 74 (35.4%) graduate/post graduate, 102 (48.8%) intermediate/high school education and 33 (15.8%) middle/primary school education. 87 (41.6%) of the women were employed and

122 (58.4%) were house wives with domestic duties. With regard to the perimenopause status 129 (61.7%) women were premenopausal, and 80 (38.3%) postmenopausal within 40-55 years and 45-57 years age groups respectively.

Physical and psychosocial symptoms were more commonly reported among the women [Table 1]. Feeling tired or worn out 141 (67.5%), decrease in physical strength and stamina 134 (64.1%), muscles and joint pain 115 (55.0%),

Table 1: Menopausal specific quality of life questionnaire

Symptoms	No (%) (n=209)	95% CI
Vaso motor		
Hot flashes or flushes	67 (32.1)	26, 38
Night sweats	52 (24.9)	19, 31
Sweating	90 (43.1)	36, 50
Psychosocial		
Being dissatisfied with my personal life	63 (30.1)	24, 36
Feeling anxious or nervous	84 (40.2)	33, 47
Experiencing poor memory	154 (73.7)	68, 80
Accomplishing less than I used to	99 (47.4)	41, 54
Feeling depressed down or blue	73 (34.9)	28, 41
Being impatient with other people	63 (30.1)	24, 36
Feeling wanting to be alone	64 (30.6)	24, 37
Physical domain		
Flatulence (wind) or gas pain	106 (50.7)	44, 58
Aching in muscles and joints	115 (55.0)	48, 62
Feeling tired or worn out	141 (67.5)	61, 74
Difficulty sleeping	92 (44.0)	37, 51
Aches in back of neck or head	114 (54.5)	48, 61
Decrease in physical strength	133 (63.6)	57, 70
Decrease in stamina	134 (64.1)	58, 71
Feeling of lack of energy	100 (47.8)	41, 55
Drying skin	72 (34.4)	28, 41
Weight gain	91 (43.5)	37, 50
Increased facial hair	23 (11.0)	7, 15
Changes in skin texture or tone	44 (21.1)	15, 27
Feeling bloated	81 (38.8)	32, 45
Low back ache	108 (51.7)	45, 59
Frequent urination	65 (31.1)	25, 37
Involuntary urination while laugh/coughing	81 (38.8)	32, 45
Sexual		
Changes in sexual desire	56 (26.8)	21, 33
Vaginal dryness	48 (23.0)	17, 29
Avoiding intimacy	55 (26.3)	20, 32

Table 2: Quality of life

Domains	Over all (n=209) Median (IQR)	^a Pre M (n=129) Median (IQR)	^b Post M (n=80) Median (IQR)	P value
Vasomotor	1.67 (0, 3)	0 (0, 2.33)	2.33 (0, 4.59)	0.001*
Psychosocial	2.43 (1.71, 3.64)	2.14 (1.57, 3.36)	2.71 (2, 4)	0.016*
Physical	2.56 (2, 3.60)	2.44 (2, 3.26)	3.1 (2.09, 4.36)	0.009*
Sexual	0 (0, 2.59)	0 (0, 2.45)	0 (0, 2.67)	0.232 NS

^aPremenopause, ^bPostmenopause, NS: Not significant, *Significant

aches in the back of neck or head 114 (54.5%), flatulence or gas pain 106 (50.7%), low back ache 108 (51.7%), lack of energy 100 (47.8%), difficulty in sleeping 92 (44%), feeling bloated 81 (38.8%), involuntary urination while laughing, coughing 81 (38.8%) were reported by over a half of the women in physical domain. The major symptoms in psychosocial domain were poor memory 154 (73.7%), accomplishing less than they used to 99 (47.4%), feeling anxious or nervous 87 (40.2%). Experiences of vasomotor symptoms were relatively less with 67 (32.1%) reporting hot flushes and 57 (24.9%) night sweats.

Quality of life

The median of the each domain of MENQOL was used as the overall subscale score. Table 2 lists the scores of four domains by menopausal status. The overall median score of QOL with respect to the physical and psychosocial domains were higher than the vasomotor and sexual domains. Comparatively the scores of vasomotor domain were statistically significantly different in postmenopausal women group $P < 0.001$ than the premenopausal women group and physical and psychological domain scores were also statistically significantly different in postmenopausal women group with $P < 0.02$ and $P < 0.01$ respectively.

DISCUSSION

The present study records the menopausal symptom profile in women from coastal Karnataka, India. Compared to similar studies conducted in India and outside India indicates wide variation in perimenopausal symptoms [Table 3]. The women from the present study reported higher physical and psychosocial symptoms with a high frequency of physical symptoms such as feeling tired, decrease in physical strength and stamina, poor memory, muscles and joint pains, low back ache, and flatulence. Although the overall symptom profile is consistent with other Indian women from Jammu,^[12] Mumbai,^[13] Chandigarh^[14] and Amritsar,^[15] the actual percentage, the intensity and the frequency of individual symptom varied in these Indian sub populations. Similarly, some symptoms in women from other countries were comparable with the present study (physical and psychosocial), while others differed (vasomotor and sexual).

Table 3: Predominant perimenopausal symptom profiles in various studies conducted in India and outside India

Symptoms	India				Outside India				
	A	B	C	D	E	F	G	H	I
Vasomotor									
Hot flushes	32	54	19	55	45	67	66	36	65
Night sweats	25	54	-	55	53	-	47	36	56
Psychosocial									
Poor memory	74	34	-	-	77	-	48	-	44
Anxious/Nervous	40	29	21	11	40	71	54	34	-
Depressed	35	30	-	8	51	63	55	37	49
Physical									
Feeling tired	68	73	36	42	79	67	63	93	-
Decreased strength/Stamina	64	-	-	-	-	-	66	61	-
Aching muscles and joints	55	48	37	38	71	84	82	76	-
Flatulence	51	-	-	-	-	-	46	-	-
Aches in neck/head	55	56	14	38	50	-	73	88	-
Difficulty sleeping	44	37	21	53	45	64	59	54	45
Sexual									
Changes in sexual desire	27	-	-	-	-	21	49	31	-
Vaginal dryness	23	-	-	-	46	43	16	36	-

A: Present study, B: Jammu^[12], C: Mumbai^[13], D: Amritsar^[15], E: Kelantan, Malaysia^[6], F: Ipoh, Malaysia^[58], G: Pakistan^[59], H: Bangladesh^[20], I: North Carolina (USA)^[23]. All figures in percentage

In the present study, 79 (36.6%) reported of hot flushes which were lower as compared to women from Jammu^[12] and Mumbai.^[13] This kind of national variations was also observed in Malaysian studies. While one study^[17] reported (45%) of hot flushes which was lower compared to other Malaysian study,^[18] where the subjects were mostly disturbed by joint and muscular discomfort (84%) followed by anxiety (71%) and hot flushes (67%). The variations in symptoms were also observed in menopausal women from Pakistan^[19] and Bangladesh.^[20] Neslihan from Turkey also reported higher rate of musculoskeletal symptoms compared with vasomotor.^[22] Indian women seem to be less affected by hot flushes unlike the Caucasians.^[23] In countries such as India, Malaysia and Thailand hot and humid weather may mask similar symptoms associated with the climacteric. Obermeyer^[11] has suggested that dietary factors in Asians would contribute to lower frequency of hot flushes, as phytoestrogens have a role in reducing vasomotor symptoms. However, this does not seem to explain the difference of hot flush incidence observed in our study

compared to those from North India.^[12-15] Fu *et al.*,^[24] also compared estrogen levels and found higher levels in Taiwanese women than in Australians and suggested that there might be a relationship between cultural life style factors and the estrogen level. Asian women living in Birmingham had menopausal symptoms similar to that of their Caucasian counterparts^[25] suggesting attribution of symptoms varying in women of the same ethnic origin depending on their country of residence. Thus estrogen levels, environmental and socio-cultural factors such as diet, exercise and other life style modifications seems to be determine the menopausal symptom profile.

The prevalence of sexual symptoms showed variations in various women population. Reporting of sexual symptoms was low in the present study as compared to the women of Caucasian origin.^[20,21,26] The reporting of sexual symptom was also related to the socioeconomic status, with upper and middle socioeconomic classes reporting higher incidences than the lower socioeconomic class (51 vs. 40%).^[27] The sexual symptom seems to be best explained by reduced estrogen levels in perimenopause.^[28]

In this study the postmenopausal women had significantly higher scores in vasomotor, psychological and physical domains than the premenopausal group. These findings differ from other earlier studies. A study from Thailand showed hot flushes, upset stomach, insomnia and urinary symptoms to be predominant in menopausal transition while night sweats and joint aches and pains were significantly associated with post menopause.^[29] Another study from Pakistan reported higher physical domain scores in post menopause and significant psychological domain symptoms in menopausal transition women.^[19]

Other studies reported that vasomotor complaints were more prevalent in menopausal transition whereas psychological complaints were more in post menopause.^[30]

However the specific features and rates varied probably because of the individual methodologies used. Moreover, several other factors also seem to influence the physical and psychosocial development of symptoms such as progressive aging, growing family responsibilities, possible mid-life crisis and other non-menopausal factors during this phase of their lives. Moreover, understanding, belief, values, attitudes, education, cultural factors seems to indirectly influence the symptom profile.

These kind of community surveys helps to serve several purposes. First and most importantly, they educate the participating women and create awareness that the perimenopausal symptoms are natural consequences of progressive life events. Many women mistake these

symptoms as a part of serious systemic disease and waste lots of time, energy, effort and money on pursuing ineffective medical remedies. Understanding the physiology of perimenopause and its symptoms helps to cope more effectively. Identifying the predominant symptoms in a local community also helps to plan suitable intervention to reduce the symptom burden and thereby improve the quality of life. For populations with high incidence of vasomotor and sexual symptoms hormonal therapy may be more beneficial while for predominant physical and psychosocial symptoms other alternative therapies may work better. For instance, in our women population, as a preliminary study we implemented 12 weeks yoga therapy protocol which included selective asana-s (postures), pranayama (breathing exercise) and meditation. The initial results were very encouraging with highly significant improvement in perimenopausal symptoms.

Thus, as noted above a large number of women all over the world suffer from perimenopausal symptoms and the problem cannot be ignored. Education, creating awareness and providing suitable intervention to improve the quality of life are important social and medical issues which are to be addressed.

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How to cite this article: Nayak G, Kamath A, Kumar P, Rao A. A study of quality of life among perimenopausal women in selected coastal areas of Karnataka, India. *J Mid-life Health* 2012;3:71-5.

Source of Support: Nil, **Conflict of Interest:** None declared.