Original Research Article

Climacteric syndrome: symptom prevalence and quality of life assessment, a proxy of health care services

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ABSTRACT

Background: Climacteric, is that particular phase in ageing women, which marks the transition from the reproductive phase to non-reproductive state and is often associated with symptomatology, referring to as climacteric syndrome. The health services rendered in this regard, makes a great impact on the women's quality of life. The paucity of publication in this regard, insisted the need of recognizing these symptoms and hence a study to know the symptom prevalence and to assess the quality of life among peri-menopausal women.

Methods: A cross-sectional study among 100 women in the age group of 45-60 years, employed in various educational institutes were carried out using the MENQOL questionnaire, on 4 domains, involving the vasomotor, psychosocial, physical and sexual aspects. The responses were graded on Likert scale and analyzed by Kruskal wallis H and Mann Whitney U tests.

Results: 53% of the women in the study were in the age group of 45-50 years, 50% of them were over-weight, and 75% had muscle and joint pains, followed by headache and backache in 60% of women. Higher literates and upper-middle class had better quality of life with less psychosocial symptoms (p<0.01), and less vasomotor, physical and sexual symptoms (p<0.05). Symptom were more under psychological and physical domain in Muslim women, compared to Hindus (p<0.05). Vasomotor symptoms were more in the women aged 45-50 years (p<0.05). There was no significant difference in the level of quality of life between type of family, marital status of women and different BMI values (p>0.05).

Conclusions: There is paucity of studies in regards to quality of life among peri-menopausal women. Initiatives programs by the government for post-menopausal women ought to be initiated owing to their special needs.

Keywords: Climacteric, Quality of life, MENQOL, Health services

INTRODUCTION

Women are among the most important part of any society and family, and community health provision is dependent on the fulfillment of their different health needs.[1] They have a key role in family health and are the main model of education and promotion of healthy lifestyle to the next generation. Although men and women have common health problems, women, due to their physiological conditions, are facing special issues.[2]

Climacteric is that particular phase in ageing women, which marks the transition from the reproductive phase to non-reproductive state and is often associated with symptomatology, referring to as climacteric syndrome.

Dorres and Siegal medically divided menopause into three time periods- premenopausal, peri-menopausal and post-menopausal. 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 peri-menopausal period.[3-5]

The World Health Organization (WHO) defined quality of life as "an individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns." Since one of the goals of Health-for-All Policy for the twenty-first century is improving the quality of life, the use of a model as a framework to identify the factors that lowered the quality of life in postmenopausal women and weakened their health status, and also designing educational programs to improve the quality of life of postmenopausal women appears to be essential.[2,3]

In 1990, about 25 million women worldwide reached menopause, this number is expected to double by the late 2020. According to Indian Menopause Society, there were about 65 million Indian women over the age of 45 years in the year 2006. About 130 million Indian women are expected to live beyond menopause by 2015. With advent of modern medicine there is a general increase in life expectancy. Therefore many women are likely to live for more than two decades beyond menopause. With increase in life expectancy women spend one third of their life in this phase.

Menopausal symptoms though well tolerated by some women may be particularly troublesome in others. Severe symptoms compromise overall quality of life 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. Commonly reported symptoms include hot flushes, night sweats, muscles and joint pains, sleep disturbances, urinary frequency, vaginal dryness, poor memory, anxiety and depression.[6]

Menopausal symptoms have been widely studied in women from western societies, but less information is available for women living in Indian set up. The quality of life indirectly reflects the health care services and the need to address this particular phase of women with sufficient health initiatives by the government in this regards. Hence, this study was taken up to know the symptom prevalence and to assess the quality of life among menopausal women in Hubli city.

METHODS

A cross-sectional study was done in the month of June and July 2014. The study was conducted over a period of 1 month from June to July 2014. Sample size was considered after conducting a pilot study, where in the prevalence of symptoms found was to be 80%. According to the formula, $Z=4pq/l^2$, the sample size was calculated to 100. (p=80%, q=100-p and allowable error of 10% of p). Participants were from 1 educational institute, chosen

randomly and from Karnataka Institute of Medical Sciences, Hubballi. On first visit, the eligible women for the study were listed out. Consecutively, the listed out women were tried to reach on subsequent visits. And those present at the time of our visit were enrolled.

Women falling in the peri-menopausal, (including those with pre-menopause, still having menstrual cycles or with slight change in the length of the cycle) and post-menopausal women, those with last menstrual cycle being before 12 months or later were enrolled into the study. However, all the women with surgical induced menopause, those on hormone replacement therapy and those on Women on anti-depressants and anxiolytics were excluded from the study. All the participants were asked for informed written consent before the start of the study.

A pre-tested and semi-structured questionnaire formed on the lines of MENQOL (menopause specific quality of life) and Green climacteric scale was used.[7] The questionnaire consisted of questions on socio-demographic details, questions dealing with symptoms and quality of life. The symptoms and quality of life were assessed based on 4 domains, consisting of Vasomotor, Psychosocial, Physical and Sexual aspects. 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, then she was asked to indicate how bothered she had been by the symptoms responses were graded on Likert's scale. 0 for "no symptoms", 1 for "present but not bothering", 2 for "little bothering", 3 for "moderately bothering", 4 for "severe bothering".

A pilot study was done and the reliability of the questionnaire was assessed by Cronbach's alpha (α =0.84), following which, the questionnaire remained the same. The data was entered in MS Excel 2013 and analyzed using SPSS version 20. Demographic features and symptoms are presented as Percentages, Ratios/ Proportions. Non parametric tests like Kruskal Wallis H and Mann Whitney U were employed to assess the quality of life between different demographic groups and those with p <0.05 were taken as statistically significant

RESULTS

Majority of the women, were in the age group of 45-50 years, followed by 32% in 50-55 years. Most of them belonged to Hindu by religion, 78%, while 17% were Muslim by religion. By education, 36% were illiterates, while 34% were graduates. 40% were in upper-middle class of socio-economic status by Kuppuswamy classification (Table 1).

90% of the women were married, while 8% were divorced/ separated/ widowed. Majority had 2 children, 43% and 39% had more than 2 children (Table 2).

On assessment of symptom prevalence among the interviewed women, 75% had muscle and joint pain, 60% complained of headache, 60% had low backache and 40% complained of constant weakness or lack of energy (Table 3).

The subscales analysis of various domains showed good internal reliability by Cronbach's alpha with vasomotor domain having a mean score of 2.43±2.3, psychosocial component of 5.84±4.9, physical component of 12.02±7.4 and Sexual component with a mean of 1.19±1.3 (Table 4).

Table 1: Showing distribution according to socio-demographic parameters.

Socio-demographic details		Number/Percent
Age group (in years)	45-50	53
	50-55	32
	55-60	15
Religion	Hindu	78
	Muslim	17
	Christian	5
Literacy status	Illiterate	36
	Primary	9
	High school	24
	Graduate	34
	Post-graduate	4
Socio-economic status	Upper	8
	Upper-middle	40
	Middle	7
	Upper-lower	35
	Lower	10

Table 2: Showing distribution according to marital history.

Variable		Number/Percent
Marital status	Married	90
	Divorced/ Separated/ Widowed	8
	Unmarried	2
Number of children borne	>2	39
	2	43
	1	14
	O (none)	4

Table 3: Showing distribution according to the prevalence of symptoms among the study subjects.

Symptoms	Frequency
Muscle and joint pain	75
Headache	60
Low backache	60
Weakness/ Lack of energy	40
Aches in the back of neck	59

Table 4: Showing distribution according to different subscales and its mean with its reliability score by Cronbach's.

Domain	No. of questions	Mean score±SD	Cronbach's alpha
Vasomotor	3	2.43±2.3	0.68
Psychosocial	7	5.84±4.9	0.73
Physical	16	12.02±7.4	0.74
Sexual	3	1.19±1.3	0.78

Table 5: Showing distribution n according to variables and quality of life scores.

Variable	Groups	Vasomotor	Psychosocial	Physical	Sexual
Age (years)	45-50	5	9	7	1
	50-55	2	4.5	6.5	0
	55-60	4	4	9	2
Kruskal Wallis H		7.16	2.57	4.09	3.24
P-value		0.028*	0.275	0.129	0.198
Religion	Hindu	3	6	7	1
	Muslim	6	10	11	2
	Christian	5	4	7	2
Kruskal Wallis H		3.33	1.87	7.6	2.97
P-value		0.18	0.02*	0.02*	0.22
SES	1	2.5	4	3	1.5
	2	2.5	4	6.5	0
	3	3	7	10	1
	4	6	11	3	2
	5	4.5	3	8	2
Kruskal Wallis H		10.73	21.65	12.35	11.25
P-value		0.03*	0.001*	0.015*	0.024*
Literacy status	Illiterate	5	11	9	1.5
	Literate	3	4	7	1
Kruskal Wallis H		4.51	17.84	5.27	2.98
P-value		0.034*	0.00*	0.022*	0.084

Indicates p<0.05, and hence statistically Significant association.

Quality of life assessment by MENQOL questionnaire with different variables revealed the following, amongst the four domains involved in the assessment, the different age groups were significantly (p<0.05) associated with vasomotor symptoms by Kruskal wallis H, it was further confirmed by Mann Whitney U test, that the symptoms were more prevalent in the age group of 45-50 years and Quality of life was better in the age group of 50 to 55. There was an association between psychological and physical symptoms (p<0.05) and religion and it was further confirmed by Mann Whitney U test the symptoms were more prevalent in Muslims. Quality of life was better among Hindus.

However, there was no association between bmi groups and quality of life in our study sample (p>0.05). There was an association between all the socio-economic status (p<0.05), and further confirmed by Mann Whitney U test that the symptoms were more prevalent in upper middle and upper lower. Quality of life was better in women with higher socioeconomic status. Prevalence of symptoms across the domains of vasomotor, psychosocial, physical was significant among illiterates (p<0.05) and the quality of life was better amongst literates. Mann Whitney U test was applied for assessment with literacy status (Table 5).

DISCUSSION

In our study, majority of the women, were in the age group of 45-50 years, with the mean age of study group being 50.9 years and with a SD of 4.35 years. Most of them belonged to Hindu by religion, 78%, and majority,

36% were illiterates, while, 40% of the study participants were in upper-middle class of socio-economic status by Kuppuswamy classification (Table 1).

This is in accord with the study done by Nayak in coastal areas of Karnataka on peri-menopausal women, which showed a mean age of 48.3 years and a standard deviation of 5.3 years.[6] And also a study by Singh in New Delhi on post-menopausal women symptoms also had a majority distribution of Hindus by religion in study sample i.e., 99% and illiterates comprising of 54% and 54.4% comprising middle class of socio-economic status classification.[8]

On assessment of symptom prevalence among the interviewed women, 75% had muscle and joint pain, 60% complained of headache, 60% had low backache and 40% complained of constant weakness or lack of energy (Table 3).

Similarly, in study by Singh, out of 225 study participants, (89.3%) of women experienced at least one or more menopausal symptom(s).[8] The most common complaints of postmenopausal women were sleep disturbances (62.7%), muscle or joint pain (59.1%), hot flushes (46.4%) and night sweats (45.6%). A total of 32.1% (n=81) postmenopausal women suffered from depression and 21.0% (n=53) postmenopausal women suffered from anxiety.

Also, the study by Nayak in coastal areas of Karnataka on peri-menopausal women, reported a high symptom prevalence rate among the study subjects.[6]

The subscales analysis of various domains showed good internal reliability by Cronbach's alpha with vasomotor domain having a mean score of 2.43±2.3, psychosocial component of 5.84±4.9, physical component of 12.02± 7.4 and sexual component with a mean of 1.19±1.3 (Table 4).

The internal reliability of the MENQOL scale in the present study showed good reliability by Cronbach's alpha and all the domains were above 0.6 indicating good consistency. The mean scores were higher for physical component, owing to the more number of questions and easy reporting of symptoms, in that particular domain of the questionnaire. However, other studies also concluded higher internal reliability by cronbach's, including a study by Ghazanfarpour on cultural factors influencing menopause among Persian women, who stated high internal reliability of 0.8, 0.7 and 0.8 for vasomotor, psychosocial and physical domains and a value of 0.3 for sexual domain by Cronbach's.[9] These differences in the reliability could be due to various perceptions and different interpretations of individual women in response to these questions.

In our study, different age groups were significantly associated with vasomotor symptoms by Kruskal wallis H, it was further confirmed by Mann Whitney U test, that the symptoms were more prevalent in the age group of 45-50 years and Quality of life was better in the age group of 50 to 55. There was an association between psychological and physical symptoms and religion and it was further was confirmed by Mann Whitney U test the symptoms were more prevalent in Muslims. Quality of life was better among Hindus.

The better quality of life with respect to vasomotor symptoms among 50-55 years could be due to woman's body getting accustomed to this particular nature's phenomenon later on in life. The association showed between religion and quality of life, with symptoms being more prevalent amongst Muslims and better quality of life among Hindus, could be because, majority of the women interviewed were Hindus. Hence, the real assessment couldn't be commented upon.

We found an association between all the socio-economic status, and further confirmed by Mann Whitney U test that the symptoms were more prevalent in upper middle and upper lower and quality of life was better in women with higher socioeconomic status. The association of symptoms across the domains of vasomotor, psychosocial, physical was found significant among illiterates and the quality of life was better amongst literates (Table 5).

Similarly, a study by Nisar, a hospital based survey among women in Pakistan, reported higher physical domain scores in post menopause and significant psychological domain symptoms in menopausal transition women.[10] And also, a study by Nayak, in coastal areas of Karnataka on peri-menopausal women, suggested several other factors that 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.[6] Moreover, understanding, belief, values, attitudes, education, cultural factors seems to indirectly influence the symptom profile.

Thus, in our study, all the 4 domains were significantly (p<0.001) affected w.r.t socio-economic status and QOL being better in high socio-economic status, this may be because of better health care services being affordable to them.

CONCLUSION

The physical and psychosocial symptoms were more troublesome to women to deal with than vasomotor and sexual. The betterment of socio-economic status of the individuals lead to less sufferings and better quality of life owing to their affordability of better and early health care facilities.

Limitations

Study was limited to women in educational institutions and hence, generalisability is difficult. The hesitancy and reluctance showed by some women in providing details, particularly psychosocial and sexual component could have underestimated the prevailing problem.

Recommendations

This assessment to be carried out in the community level at a greater extent, targeting peri-menopausal women can solve the problems which a women face in the post-menopausal period. Hence, specific components of the women in this particular phase of their life to be incorporated in the national health programs.

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