

## Original Research Article

# Quality of life among menopausal women in an urban area of Siliguri, West Bengal, India

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## ABSTRACT

**Background:** Women who lay the foundation of the whole society are most neglected in our society, especially in their mid-life. Physical and psychosocial symptoms among post-menopausal women had a positive relation with the quality of life.

**Methods:** A total of 110 women of an urban area of North Bengal region of West Bengal, India were interviewed with help of schedule to obtain information regarding the personal characteristics and MENQOL tool to assess four domains means on the basis of 29 symptoms.

**Results:** The mean menopausal age was  $44.58 \pm 3.11$  years. The means and standard deviation found in different domains are, vasomotor domain ( $5.35 \pm 2.94$ ), physical domain ( $27.95 \pm 10.25$ ), psychosocial domain ( $13.81 \pm 4.70$ ) and sexual domain ( $1.99 \pm 2.91$ ). In the vasomotor domain, muscles ache, joint ache and low back ache were the common symptoms. In psycho-social domain, 99% of the women suffered from poor memory and 97.2% of them felt depressed or down/blue. In sexual domain, 33.6% were bothered by changes in their sexual desires and avoided intimacy. In physical domain, age category, financial and decision autonomy had significant association. In the sexual domain, age category, literacy status, money and sexuality had a significant difference.

**Conclusions:** Post-menopausal women are vulnerable group for whom appropriate and practical measures should be provided in their post-menopausal age in order to have a contented and pleasant life till they die.

**Keywords:** Domain, Menopausal quality of life, Post-menopausal, Women

## INTRODUCTION

Quality of life is a wide, multidimensional idea which is difficult to define in medical literature. According to the World Health Organization, quality of life is 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, outlooks, principles, and concerns.<sup>1,2</sup>

Quality of life is an important aftermath of health care, and considering the influence of menopause on quality of life is a critically important part of the care of symptomatic postmenopausal women.<sup>3</sup>

Women spend almost one-third of their lifetime after menopause. Menopause is a normal physiological process and is also an adaptation process during which women go through a new biological and psychological changes.<sup>4</sup>

Menopause is characterized by the permanent cessation of menses in women as a result of reduced ovarian hormone secretion usually between the ages of 45 and 55 years. During this period, women can experience many symptoms including hot flashes, night sweats, sleep and mood disorders, impaired memory, lack of concentration, nervousness, depression, insomnia, bone and joint complaints, and reduction of muscle mass. The duration, severity, and impact of these symptoms vary extremely from person to person, and population to population.<sup>5</sup>

Some women have severe symptoms that greatly affect their personal and social functioning quality of life. Vasomotor symptoms are common physical conditions experienced by midlife women in the transition through menopause and early post menopause. Menopausal women are often found to be suffering from various mental illnesses some of the most common are depression and anxiety disorders.

Lack of social support, unemployment, surgical menopause, poor overall health status, abuse or physical torture or domestic violence, low educational status, low socio-economic status, the feeling of worthlessness could be contributing factors that lead to peri-menopausal depression. A study conducted by Ray et al to assess quality of life of post-menopausal women in a rural area of West Bengal, showed 77% had poor quality of life.<sup>5</sup>

During menopausal transition, as done in a community-based study of rural West Bengal by Karmakar et al there is a lot of fluctuation in the hormone levels, and thus women may experience many symptoms and conditions<sup>6</sup>. In another study conducted in Puducherry by G.K. Poomalarin 2012 claimed that women spend almost one-third of their lifetime after menopause.<sup>7</sup>

In this perspective, the present study has been conducted with the aim of generation information regarding Quality of Life among menopausal women in an urban area in North Bengal, West Bengal, India. The study was conducted with the following objectives, to assess the quality of life among menopausal women in an urban area of Siliguri Municipal Corporation area, West Bengal and, to find out the factors related with the quality of life among the menopausal women.

## METHODS

A community based descriptive study with cross-sectional design was done during August to September 2018 among menopausal women residing in two urban wards of Siliguri municipal corporation (SMC) area which serves as the field practice area of North Bengal Medical College, West Bengal, India. Women belonging to age 40-60 years and who had menopause at least one year ago were included as the study population.

## Sampling

The prevalence of poor quality of life varies from 20% to 90% in different regions of India, so prevalence of 50% is chosen to get the maximum sample size. Considering, the proportion of poor quality of life as 50%, taking  $Z_{(1-\alpha/2)} = 1.96$  at 95% confidence interval and absolute precision 10,  $P=50$ , sample size determination is computed by using the formula,

$$n = z_{(1-\alpha/2)}^2 P(1-P) / d^2$$

Applying the formula, the sample size comes out to be 96. Assuming 10% nonresponse rate, which comes to be 9.6, final sample size is 96+9.6 which is rounded to 110. Only one adult eligible subject was chosen randomly from each household.

## Tools and technique

Pre-designed, pretested questionnaire, having two parts - one which is adapted from MENQOL and the other about the background profile was used. The original MENQOL questionnaire consists of 29 questions developed by Hilditch<sup>9</sup>. Each item assesses the impact of one of four domains of menopausal symptoms as experienced by the women in last one month. Vasomotor (item 1-3), psychosocial (item 4-10), physical (item 11-26) and sexual (Item 27-29). Means are computed for each subscale by dividing the sum of the domain's items by the number of items within that domain. It was translated in the local language (Bengali) which was then back translated to verify content and used on the menopausal women of 40-60 years after obtaining informed consent from them.

According to the scoring system of original version of MENQOL, each question should have been scored by 8 points. However, a 4 point-Likert scale elicited better, clearer in this urban area after conducting a pilot study. The content validity of the modified questionnaire and four-point scoring system was approved. A pilot study with the modified questionnaire among 20 menopausal women was done before the study proper.

In these 4 point-Likert scoring methods, each question was scored by (0 point: subject had no problem, 1 point: subject had a problem causing mild distress, 2 points: subject had a problem resulting into moderate distress, 3 points: subject had a problem that causes relatively severe distress). Hereby, scores for vasomotor aspect ranged from 0 to 9, for psychosocial aspect from 0 to 21, for physical aspect from 0 to 48 and for sexual aspects from 0 to 9. The total score of quality-of-life for each participant could be from 0 (the lowest level) to 87 (the highest level) points. Lower the score better was the quality of life.

Interview was done at their household by using the schedule and adapted MENQOL questionnaire.

### Study variables

The background characteristics included were education, occupation, marital status, type of family, per capita income, no. of children, male child present or not, monetary support from children, monetary autonomy, decision making in family, history of abortion, hysterectomy done or not etc.

To assess the quality of life four domains- vasomotor domain, physical domain, sexual domain and psychosocial domain were considered as per MENQOL.

After necessary approval from authorities, data was collected at the households of selected participants with prior informed consent maintaining privacy, confidentiality and anonymity.

### Data analysis

After collecting the data, it was entered in Microsoft Excel datasheet 2007. Data analysis was done using the principles of descriptive statistics. Analysis of the data was done by using IBM statistical package for social sciences version 20 (SPSS 20).

### RESULTS

About 110 women aged 40-60 years were interviewed from 2 urban wards from SMC. The mean age of participating women was  $52.06 \pm 4.92$  years. The mean menopausal age was  $44.58 \pm 3.11$  years.

*The results of this study are presented under the following three headings:*

- Socio-demographic characteristics of the women
- Symptoms as per MENQOL Domains, and
- Quality of life scores among menopausal women.

It is revealed from Table 1 that among 110 study women, 35.5% were in the age group of less than 50 years, 54.5% were in the age group of 50-60 years, 10% were above 60 years. In our study group, 40.0% women were illiterate while the rest received some education. In this study, 60.0% of these women were homemakers while the rest were working women, who either worked as maids, or hospital workers or shopkeeper or bidi workers. Out of these women, 72.7% were married, while rests of them were widowed.

**Table 1: Socio-demographic profile of the post-menopausal women.**

Factors	Number	Percent (%)	Factors	Number	Percent (%)
<b>Age(in years)</b>			<b>No. of children</b>		
Less than 50	39	35.5	One or two	65	59.1
50-60	60	54.5	More than two	45	40.9
$\geq 60$	11	10.0	<b>Male child</b>		
			Yes	53	48.2
<b>Literacy status</b>			No	57	51.8
Up to primary	9	8.2	<b>Monetary autonomy</b>		
Middle school	37	33.6	Yes	42	38.2
High school	20	18.2	No	68	61.8
Illiterate	44	40.0	<b>Decision making</b>		
<b>Occupational status</b>			Yes	46	41.8
Homemaker	66	60.0	No	64	58.2
Working	44	40.0	<b>Time since menopause</b>		
			Within 5 years	31	28.2
<b>Marital status</b>			5 to 10 years	41	37.3
Married	80	72.7	10 years or more	38	34.5
Widow	30	27.3	<b>No of abortion</b>		
<b>Type of family</b>			Nil	66	60.0
Joint	48	43.6	1 or more	44	40.0
Nuclear	62	56.4	<b>Hysterectomy</b>		
			Done	25	22.7
<b>Per capita income (Rs)</b>			Not done	85	77.3
<2500	79	71.8	<b>Sexually active</b>		
$\geq 2500$	31	28.2	Yes	36	32.7
			No	74	67.3
<b>Total</b>	<b>110</b>	<b>100.0</b>	<b>Total</b>	<b>110</b>	<b>100.0</b>

In this study, 59.1% of the women had just one child and 51.8% did not have any male child.

About 61.8 % of the women did not have monetary autonomy in their family and 58.2% did not have any say in decision making in the family. 60% of the women never had abortion. 77.3% did not have hysterectomy and 67.3% were not sexually active. 28.2% of the women had attained menopause within five years and 34.5% of them had their menopause more than ten years ago.

**Table 2: Post-menopausal symptoms as per MENQOL domains.**

Symptoms	Number (%)
<b>Vasomotor domain</b>	
Hot flushes	60 (75.9)
Night sweats	64 (81.0)
Sweating	89 (80.9)
<b>Physical domain</b>	
Flatulence	100 (90.9)
Aching in muscles and joints	105 (95.4)
Tiredness	107 (97.2)
Sleeping difficulty	87 (79.0)
Aches in head and neck	95 (86.3)
Decrease in strength	107 (97.2)
Decrease in stamina	107 (97.2)
Lack of energy	105 (95.4)
Drying skin	43 (39.0)
Weight gain	38 (34.5)
Increased facial hair	20 (18.1)
Change in appearance	45 (40.9)
Bloated	90 (81.8)
Low backache	104 (94.5)
Frequent urination	80 (72.7)
Involuntary urination	85 (77.2)
<b>Psychosocial domain</b>	
Dissatisfied with personal life	105 (95.4)
Feeling anxious	101 (91.8)
Poor memory	109 (99.0)
Accomplishes less than used to	104 (94.5)
Depressed down blue	107 (97.2)
Impatient	77 (70.0)
Wanting to be alone	90 (81.8)
<b>Sexual domain</b>	
Change in sexual desire	37 (33.6)
Vaginal dryness	25 (22.7)
Avoiding intimacy	37 (33.6)

### Symptoms as per MENQOL domains

The means and standard deviation found in different domains are, vasomotor domain (5.35±2.94), physical domain (27.95±10.25), psychosocial domain (13.81±4.70) and sexual domain (1.99±2.91).

The participants were asked about the menopausal symptoms and a score was given. Score 0 was considered to be not bothered by the symptom at all, while any score above 0, i.e. 1, 2 or 3 were considered to be a symptom bothering the participant. In this case, the intensity of botheration was not taken into consideration. In this basis the prevalence of different symptoms was shown on Table 2.

In the vasomotor domain, 80.9% of the women were bothered by sweating while in the physical domain, 95.4% of these women were bothered by aching in muscles and joints, 90.9% were bothered by flatulence, and 97.2% were affected by tiredness and also decrease in strength and stamina. 94.5% suffered from low backache while 77.2% faced involuntary urination during coughing, sneezing or laughing.

In psycho-social domain, 99% of the women suffered from poor memory and 97.2% of them felt depressed or down/blue. About 95.4% women were dissatisfied with their personal life at various levels and 94.5% of them felt that they accomplished less than used to. In sexual domain, 33.6% were bothered by changes in their sexual desires and avoided intimacy.

### Quality of life scores among menopausal women

From Table 3, the relationship between different socio-demographic variables and post-menopausal symptoms of the women in this study is shown.

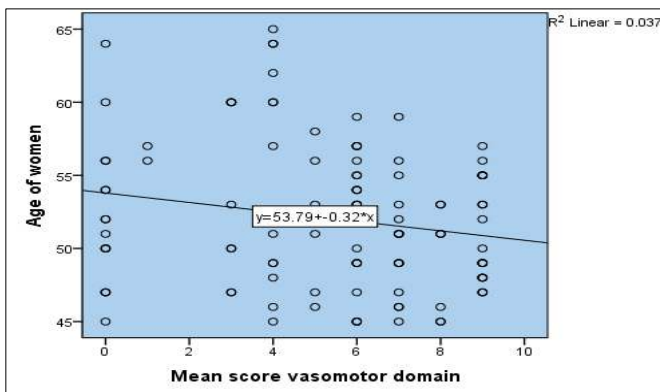
Different variables like, age, literacy, working status, per capita income, number of children, monetary autonomy, decision making and sexual activity were compared with the prevalence of symptoms as per the four domains of MENQOL, - vasomotor, physical, psycho-social and sexual. Among these, it was found in this study that there was a significant difference of mean between Literacy Status of being literate/educated or being illiterate and the prevalence of Sexual symptoms among the menopausal women.

It was also seen that all the symptoms from all three domains, vasomotor, physical and sexual domains as per MENQOL were significantly affected among those who were above 50 years or were below the age of 50 years. There was a significant difference in mean among those who had less than two children or had more than two and the prevalence of symptoms in vasomotor domain.

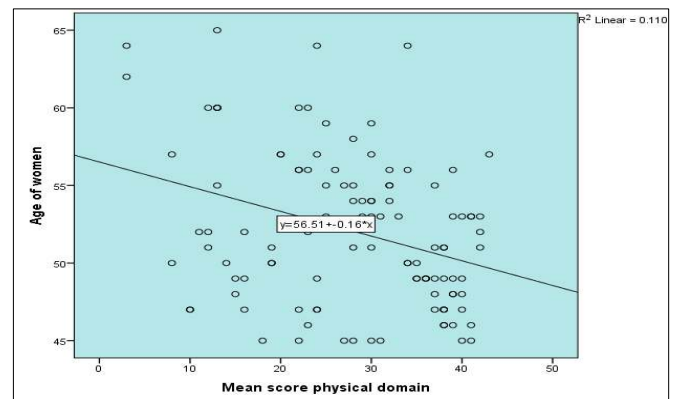
An analysis on the relationship between symptoms as per MENQOL domains and monetary autonomy of menopausal women in family was also done, and there was a significant difference of mean between those who had monetary autonomy in their family and those who did not have any monetary autonomy in the family, with respect to the prevalence of Physical symptoms among them.

**Table 3: Association of socio-demographic factors with different domains of study population.**

Socio-demographic factors	Number	Vasomotor domain	Physical domain	Psychosocial domain	Sexual domain
<b>Age category in years</b>		<b>Mean (SD)</b>	<b>Mean (SD)</b>	<b>Mean (SD)</b>	<b>Mean (SD)</b>
Less than 50	41	6.10 (2.74)	30.98 (9.61)	14.73 (4.13)	3.63 (3.50)
50 or more	69	4.90 (2.98)	26.14 (10.26)	13.26 (4.96)	1.01 (1.95)
P value		0.038	0.016	0.113	0.000
<b>Literacy status</b>					
Literate	66	5.47 (1.07)	28.89 (0.57)	13.55 (0.71)	2.56 (0.86)
Illiterate	44	5.16 (0.94)	26.52 (0.69)	14.20 (0.63)	1.14 (0.82)
P value		0.590	0.237	0.474	0.012
<b>Working status</b>					
Homemaker	66	4.92 (3.04)	27.76 (10.26)	14.52 (4.53)	2.00 (2.80)
Working	44	5.98 (2.69)	28.23 (10.36)	12.75 (4.80)	1.98 (3.11)
P value		0.066	0.815	0.053	0.968
<b>Per capita income</b>					
Less than Rs. 2500	79	5.48 (3.01)	27.76 (10.44)	14.30 (4.74)	1.96 (2.89)
Rs. 2500 or more	31	5.00 (2.78)	28.42 (9.92)	12.55 (4.44)	2.06 (3.03)
P value		0.443	0.763	0.078	0.869
<b>Number of children</b>					
One or two	65	5.86 (2.48)	28.55 (9.83)	13.91 (4.34)	2.06 (2.94)
More than two	45	4.60 (3.40)	27.07 (10.88)	13.67 (5.22)	1.89 (2.90)
P value		0.026	0.457	0.793	0.762
<b>Monetary autonomy</b>					
Yes	42	4.86 (3.17)	24.31 (9.82)	13.43 (4.42)	1.67 (2.54)
No	68	5.65 (2.77)	30.19 (9.93)	14.04 (4.88)	2.19 (3.13)
P value		0.173	0.003	0.508	0.362
<b>Decision making</b>					
Yes	46	5.22 (2.85)	25.26 (9.92)	13.24 (4.85)	1.09 (2.26)
No	64	5.44 (3.02)	29.88 (10.13)	14.22 (4.58)	2.64 (3.16)
P value		0.701	0.019	0.253	0.005
<b>Sexually active</b>					
Yes	36	4.64 (3.58)	27.89 (9.95)	14.33 (4.04)	4.94 (2.89)
No	74	5.69 (2.53)	27.97 (10.47)	13.55 (5.00)	0.55 (1.51)
P value		0.079	0.968	0.418	0.000

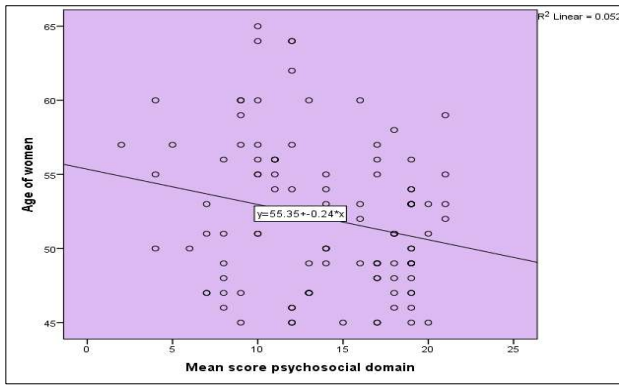


**Figure 1: Scatter plot diagram showing vasomotor domain mean score with the age.**

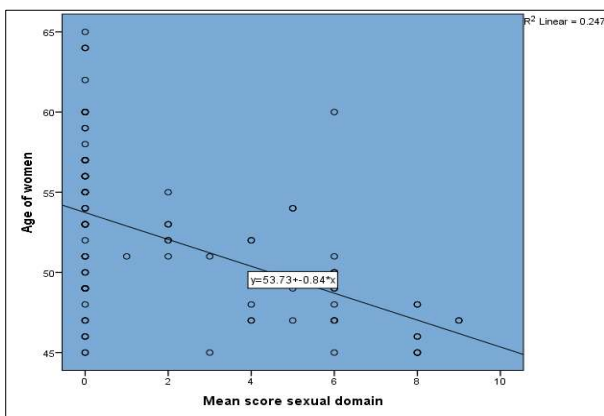


**Figure 2: Scatter plot diagram showing physical domain mean score with the age.**





**Figure 3: Scatter plot diagram showing psychosocial domain mean score with the age.**



**Figure 4: Scatter plot diagram showing sexual domain mean score with the age.**

There was also a significant difference in mean among those who did or did not take decisions in their families and the prevalence of symptoms in all Physical and Sexual domains.

The relationship between the age of the women and four domains of the MENQOL tool- vasomotor, physical, psychosocial and sexual domain is shown in scatter plot graphs with their correlation equation in Figure 1-4.

## DISCUSSION

Menopause is a transitional period that every woman goes through. The physical as well as mental response to menopause and other associated hormonal changes varies considerably due to genetic, cultural, lifestyle, socioeconomic, education, and dietary factors, and varies in every individual. Certain pre-disposing factors always influence the outcome of menopause thus, consequently affects quality of life after menopause.

Maintaining good or fair quality of life is a now a priority issue for women. In this study, assessment of the quality of life of woman was done, with respect to menopausal symptoms using MENQOL questionnaire. It was developed in 1996, consisting of four domains:

vasomotor, psychological, physical and sexual. The menopause-specific quality of life questionnaire (MENQOL) was introduced as a tool to assess health-related quality of life in the post-menopausal period. An assumption of the MENQOL is that disease states and conditions like menopause, which produce symptoms, may disrupt emotional, physical, and social aspects of an individual's life, which must be considered concomitantly with treatment decisions.<sup>9</sup>

In this present study, 35.5% were in the age group of less than 50 years. This result is similar to the study done by Ray et al and Dasgupta et al on QOL among post-menopausal women where 34.3% were in the same age group<sup>5</sup>. This is in accordance with the result of a study done by Mohammed HAE et al, on quality of life among menopausal women where 62.0% of the women's age ranged from less than 50 years.<sup>8</sup>

The ranges of menopausal age falls lie between when compared with the previous researches. The mean age and standard deviation of participating women was 52.06±4.92 years. The mean menopausal age was 44.76±3.68 years. A review article which was written by Palacios et al<sup>10</sup> showed that the median age at menopause in Europe ranged from 50.1 to 52.8 years, that in North America, it ranged from 50.5 to 51.4 years, which in Latin America ranged from 43.8 to 53 years, but in Asia, it ranged from 42.1 to 49.5 years.

A significant difference of mean was observed between literacy status of being literate or being illiterate with the prevalence of sexual symptoms among the menopausal women. In other studies, literacy has been found to have an important role to play in determining QOL of the women. In several studies, they concluded those women who had more than a high school educational level had experienced less disturbing and fewer symptoms during menopause. In two studies, it was shown that educational level had a significant association on all QOL domains where higher education rendered a better quality of life, in contrary to the current study findings, where literacy came out to be a significant predictor of poor QOL in sexual domain.

In the present study group, 40.0% women were illiterate while 60.0% received some education. In relation to the educational level, it was found that, more than half of the women did not have any formal education; this may reflect women's cooperation during conduction of the study. In addition, about more than one half of the women were housewives (60%). This result is supported by the result of the study carried out in a rural area by El Sabagh and Abd Allah who reported that 58.3% of women were housewives.<sup>11</sup>

As regards to the severity level of menopausal symptoms, the most severe symptoms of vasomotor, psychosocial, physical and sexual domains were, sweating, flatulence, muscle/joint pain, tiredness, experiencing poor memory,

feeling depressed/down or blue, being dissatisfied with their personal life, low backache, lack of strength and stamina and, while the mild symptoms in these domains were hot flushes, feeling anxious or nervous, aches in back of neck or head, increased facial hair involuntary urination on laughing/coughing and change in their sexual desire and avoiding intimacy. This may correlate with fluctuating levels of estrogen in the blood from premenopausal to postmenopausal period. These results are in accordance with the results of many studies reported that "hot flushes" and "sweating" were the most common and severe symptoms in menopausal women.

Vasomotor symptoms are usually related to hormonal changes during menopause periods so this difference may have been due to genetic or socio-cultural diversity and also differences in diet, especially the consumption of phyto-estrogen foods.<sup>12</sup>

In addition, a study by Jahanfar et al, contradicted the results of the present study as they reported that the most common and severe symptoms were found to be joint and muscle discomfort (84.3%), followed by anxiety (71.4%), physical and mental discomfort (67.2%), hot flushes and sweating (67.1%).<sup>13</sup> These differences in frequencies of symptoms may be associated to differences of race, life style, culture, genetics and diet. In a study conducted by Waidyasekera et al, they reported that the joint and muscle discomfort, physical and mental exhaustion and hot flashes were the most prevalent menopausal symptoms.<sup>14</sup> The results of current study are similar with the study conducted by Gharaibeh et al, who found that vasomotor symptoms were reported to have the highest scores as hot flushes and night sweating.<sup>15</sup>

A study by Ray et al in Kolkata found 77% of the women having poor quality of life.<sup>5</sup> Multivariate analysis revealed that poor QOL was more among those who did not live with their own children, were monetarily dependent on their children, not living under one roof with children and had attained menopause more than 5 years. This was in accordance with the present study, where the relationship between symptoms as per MENQOL domains and monetary autonomy of menopausal women in family showed a significant difference of mean between those who had monetary autonomy in their family and those who did not have any monetary autonomy in the family, with respect to the prevalence of Physical symptoms among them. This is in accordance with most studies. Monetary autonomy is pivotal in shaping the basic quality of life enjoyed by a woman. However, in most parts of our country this practice is usually rare due to social norms.

There was also a significant difference in mean among those who did or did not take decisions in their families and the prevalence of symptoms in physical and sexual domains. This was a significant finding that showed how having a major decisive role in the family can affect the quality of life of a woman.

It was also seen that all the symptoms from all four domains as per MENQOL were significantly affected among those who had more than two children or had number of children less than two. Monetary autonomy of menopausal women in family, decision making, Sexual activity all of these factors influenced QOL among menopausal women as per our study. Decision making is more necessary in case of HRT among post-menopausal women.<sup>16</sup>

It is generally believed that menopause is welcomed as a favorable event among rural women in India unlike in the West. This is attributed to the many perceived benefits of menopause such as freedom from cultural restrictions imposed on younger women and the burden of childbirth as well as the discomforts associated with menstruation. Postmenopausal women in India are said to enjoy a higher social status assigned to ageing women.<sup>17</sup> Similar study was also done in US showing related findings.<sup>18</sup>

With appropriate counseling, health information and an understanding of the menopause and its dimensions, menopause can become a time of beginning, rather than an end.<sup>19,20</sup> Employment and number of children decreased the risk of having psychosocial scores above the median among post-menopausal women in Iran.<sup>21</sup> Caring for menopause entails more than providing medication. Successful strategies for coping with menopause across cultures are self-care practices, role models and education, privileges and rewards, having an accepting and positive attitude toward life transitions, and medication including herbs. It is the responsibility of the nurses to organize, give care and teach the clients the importance of acceptance in promoting and improving the quality of life of menopausal women.

## CONCLUSION

It can be concluded that the most severe symptoms of vasomotor, psychosocial, physical and sexual domains were, hot flushes, poor memory, and dissatisfaction with personal life, low backache, and change in sexual desire.

Lack of social support, unemployment, surgical menopause, poor overall health status, abuse or physical torture or domestic violence, low educational status, low socio-economic status, the feeling of worthlessness - could be contributing factors that lead to peri-menopausal depression.

Depression during menopausal period, has not been extensively researched and consequently awareness regarding this deficit among a majority of population.

## Recommendations

There should be frequent IEC activities and health education on healthy lifestyle for promoting positive attitudes towards coping up with the stress of the post-menopausal phase. Various social factors like support

from children, living apart from children, degradation of relationship with husband after menopause have to be investigated more.

Depression arising out of post-menopausal symptoms should be dealt with utmost care. Approaches building on the self-care measures of menopausal women and supporting constructive practices is essential in order to help them handle with menopausal symptoms.

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