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Quality of Life of the Post-Menopausal Women: A Study among the Bengalee Middle Class Women in Kolkata, West Bengal, India

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Short running title: *Quality of life among the Bengalee post-menopausal women from Kolkata.*

Abstract: ***Introduction: Menopause brings about the transition in a woman's life leading to changes in both the physical and psychological aspects affecting the quality of life (QOL). The average age of attainment of menopause is around 48 years. In India, women attain menopause at an average age of 45 to 50 years. Hence menopausal health demands attention in India. Aim: This study aims to study the QOL of menopausal women in Kolkata. Materials: The present study was conducted among 285 women residing in Middle Income Group of Kalindi Housing Estate, Kolkata. A quantitative approach was adapted with cross-sectional survey design. Data was collected by interview using demographic questionnaire specific on QOL during menopause.QOL was assessed in four domains of Vasomotor Psychosocial Physical and Sexual. Cervantes Scale (BEN/CS) was assessed adapting the Bengali version. Pearson's correlation was used for evaluation of BEN/CS with WHQ and WHOQoL-bref. Results: The mean age of women in this study was 46.7 ± 0.46 years. CS was observed to be >0.7. Presence of vasomotor symptoms and lack of physical activity were associated with lower QOL. Sexuality and couple relationship however did not show any association to QOL. Discussion: There is paucity of works on QOL in menopausal women from India. Addressing the issues of menopausal women in India is the need of time. There is ample scope to improve the QOL in Indian menopausal women through health education on the symptoms of menopause, its treatment by modifications in their present lifestyle, asking them to avoid sedentary lifestyle and encouraging them for mild exercises and the like. Conclusion: Health care professionals have a great role in addressing these issues to prepare women to face the challenges of reproductive health in India.***

Keywords: Quality of life (QOL), Postmenopause women, West Bengal, India.

1. Introduction

The well–being of individual and societies defining the negative and positive features of life is considered to be the Quality of Life (QOL). This includes everything from physical health, employment, safety, security, state of mind and also the environment. Menopause brings about impairment of quality of life in women (Rymer et al 2000). It could be a consequence of the physiological changes and socio-cultural factors. Menstrual irregularities, hot flashes, sweating, palpitations, sleep disturbance, irritability, lethargy, depressed mood, forgetfulness, decreased libido, vulvovaginal dryness, dyspareunia, and urinary symptoms are considered to be associated with the Climacteric syndrome (Grady et al 2006). In addition, during this period, gradual changes that occur during this period are mainly seen in bone metabolism, resulting in increased risk for osteoporotic fractures. Incidence of cardiovascular disease also increases significantly after menopause (Rymer et al 2000; Randolph et al 2005).The last two decades have seen the importance of QOL as a health parameter has grown consistently, and a range of scales has been proposed to evaluate specific population groups (Filho et al 2005; Utian et al 2002; Ciconelli et al 1999). Cervantes Scale (CS) was one such significant scale which was developed and validated in a representative sample of Spanish pre-, peri-, and menopausal women (Palacios et al 2002; Castelo-branc et al 2008). This is a self-administered questionnaire which evaluates four aspects like , health and menopause, sexuality, couple relationship, and psychological aspects. Quality of life after menopause from person to person, and population to population depending on the duration, severity, and impact of these symptoms. Some women have severe symptoms as compared to others which greatly affect their personal and social functioning quality of life (Williams et al 2009). The common physical conditions experienced by midlife women through menopause and early post menopause are the vasomotor symptoms (Lewis et al 2009; Thurston et al 2011). With the increase in life expectancy and life span, women spend almost one-third of their lifetime after menopause (Mckinney et al 2012; Speroff et al 2005). Many studies (Shetty et al 2009; Nisar et al 2009; Thurston et al 2011 and Mohamed et al 2014) have shown that Hormone Replacement Therapy helps in improving the QOL in menopausal women. In his study, Teoman 2004 concluded that regular and controlled exercises can bring about the fitness level and thus improve the QOL in postmenopausal women. It is often seen that postmenopausal women develop a low self- esteem and lose the ability to confront issues (Brown 2001).Indian women are much ignorant about the changes taking place due to the onset of menopause (Dasgupta et al 2013). There is lack of awareness among the Indian postmenopausal women regarding the cause, effects and management of the issue of this phase in their lives (Singh et al 2014; Parsa et al 2017). There is a growing concern to counsel and train these women to help them reduce their issues and improve the QOL in menopause period. Medical literature lacks a precise definition on Quality of life. WHO defines, 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, expectations, standards, and concerns (Catherine et al 2012). We need to determine the role , symptoms that are commonly associated with the onset or transition of menopause and whether early menopause have any significant role to play in determining the QOL of the menopausal women (Avis et al 2004; Ham et al 2011). In other words understanding the impact of menopause on QOL is critically important (Col et al 2009). Studies on quality of life of postmenopausal women were mostly conducted in developed countries. These studies show the influence of different socio-cultural realities on the perception of quality of life and also the experience of menopausal symptoms. There is a lacuna in the study off QOL on postmenopausal women in developing countries (Nisar et al 2009).

2. Significance of the study

The transition through menopause is a life event that can profoundly affect quality of life. More than 80% of women report physical and psychological symptoms that commonly accompany menopause, with varying degrees of severity and life disruption.1 Few empirical studies, however, have examined the interrelated nature of symptoms associated with the menopausal transition and early postmenopausal and the effects of those symptom groups on quality of life (Avis et al 2004). Maintaining good physical functioning with age is a vital component of independence in later life (Cooper et al 2010; Cooper et al 2011; Studenski et al 2011). Identifying characteristics associated with poor physical functioning could contribute to prevention and management strategies that help older women to maintain their independence and also therefore their quality of life. Health-care providers play a more visible and instrumental role in continuously assessing menopausal women's needs as well as to implement appropriate health educational programs and to develop a new way to meet their demands (Nisar et al 2009).

Aim and Objectives

This study aims to study the QOL of menopausal women in Kolkata. The women selected for the study are Bengalee and belong to the Middle Income Group strata of the society residing in Kolkata. The objectives of this study are:

- To find out the socio-demographic and behavioral features of the studied population
- To assess the QOL of the study population by Menopause-Specific Quality of Life Questionnaire (MENQoL)
- To establish the relation between menopausal symptoms and the behavioral characteristics of the participants of the study.
- To find out the association if any between the menopausal symptoms and the socio-demographic parameters

3. Materials and Methods

A quantitative approach was adapted with cross-sectional survey design. The study population was formed by Bengalee speaking Hindu caste postmenopausal women. Only women who attained menopause naturally were selected for the study. Women with surgical menopause, receiving any hormonal therapy or undergoing treatments for hypertension, diabetics or any sort of cardiac diseases were not considered in the present study. A total of 285 women residing in Middle Income group of Kalindi Housing Estate, Kolkata, participated in the study. The participants were aged between 40 and 60 years, and had attained natural menopause at least one year prior to the date of study.

Questionnaire

The questionnaire was prepared in two parts: Sociodemographic characteristics on Quality of Life (QOL) and Menopausal symptoms were categorized into four domains: Vasomotor, Psychosocial, Physical, Sexual. The responses were recorded on a 2 point scale consisting of Yes and No. these again had a 6 point severity score pattern. Questionnaire on QoL in particular to Menopause (MENQoL): It was introduced in 1996to assess the health related issues in the menopausal women. It is based on the assumptions that menopause brings about disruptions in several aspects of the life of women. Emotional, physical and social aspects of life undergo changes with menopause. The MENQoL is thus a self administered questionnaire consisting of 29 items. Each item assesses the impact of one of the four domains of the menopausal symptoms as experienced by the women over the last month. The items pertaining are rated on whether they are present or not, the severity of the symptoms on a point scale. Means were then computed. The Bengali version of the Cervantes Scale (BEN/CS) was assessed. It was validated through statistical analysis of its psychometric characteristics and was based on the comparison of the CS with the women' Health Questionnaire (WHQ) (da Silva Filho et al, 2005) and the World Health Organisation's Quality of Life Questionnaire (WHOQoL-bref, Hunter, 1992) The translation was followed according to the recommendations by WHO (Fleck et al,1999). In all the questions, cultural equivalence was established, whether all questions were understood. SPSS 15.0 for windows was used for statistical analysis. Pearson's correlation was used for evaluation of BEN/CS with WHQ and WHOQoL-bref.

4. Results

Table 1 brings about the severity of the menopausal symptoms among the studied women. It was observed that, the most severe symptoms of vasomotor, psychosocial, physical and sexual domains were as; dissatisfaction with personal life (52.1%), experiencing poor memory (47.2%),change in sexual desire (35.5%), aching muscles and joints (30.0%) and hot flushes (26.9%). The mild symptoms in these domains were seen in flatulence (67.4%), difficulty in sleep (66.8%), sweating (57.0%), night sweats (53.3%) and feeling of anxiety and nervousness(52.7%). The association of demographic variables is reflected in ***Table 2*** with quality of life of menopausal women. It is prominently shown here that, education, occupation and age at menopause of the women have significant association with quality of life ($p<0.05$). It is found here as revealed by ***tables 3 and 4*** that, the specific qualities of life considered here in and as vasomotor, psycho-social, sexual and physical categories show highly significant relations in their score. The mean per cent score show that menopausal women suffer mostly in physical (67.2%) conditions followed by

sexual (51.3%) and vasomotor (43.6%).It is clear from the above table that among the vasomotor symptoms in the postmenopausal women, highest score is of hot flushes with a mean per cent of 67.3 while sweating and night sweats follow with 57.9% and 48.95 respectively. ***Table 5*** indicates the highest prevalence of symptoms in vasomotor, psychosocial , physical and sexual domains which are hot flushes (65.6%), depression (71.1%), feeling anxious or nervous (63.1%). The domain of Physical health show much higher frequencies like, less physical strength (93.2%), feeling tired or exhausted (91.4%), low back pain (90.7%), gain in body weight (89.5%), muscle and joint ache (89.0%), flatulence or bloating (80.3%) and involuntary passage of urine (71.1%). The domain of sexuality shoe most changes in sexual desire (31.2%). The correlation between BP/CS scales and subscales with the WHQ and WHOQoL-bref is depicted in ***Table 6.*** Discrimination validity was observed for vasomotor symptoms and frequency of physical activity. ***Table 7*** brings about the comparison of quality score between the physically active and sedentary life style of the participant women in this study. There was a significant difference in menopausal QOL in all four domains. Menopausal women who were physically active show a lower quality score among the four domains of physical, psychosocial, vasomotor and sexual as compared to those who led a sedentary lifestyle. The MENQOL score in physical health-related QOL was 21.93± 1.03 vs 30.11 ± 0.08; psychosocial health –related QOL was 9.17 ± 0.13 vs12.81± 0.22; vasomotor health-related QOL was 2.98± 1.03 vs 5.21± 0.78 and sexual health-related QOL was 2.71± 0.93 vs. 6.01± 0.58.The correlation between global CS score and the domain and subdomain score is shown in ***Table 8.*** The correlations for the different domains was menopause and health r=0.87 (p<0.001); psychosocial r=0.76 (p<0.001); sexual r=0.27; and couple relationship r=0.22. The subdomains show correlations as vasomotor symptoms r=0.47; health r=0.87(p<0.001) ; and aging r=0.89 (p<0.001).

Table 1: Distribution of the women according to the severity of menopausal symptoms

Symptoms	Mild		Moderate		Severe	
Vasomotor	No.	%	No.	%	No.	%
Hot flushes	68	41.7	51	31.2	44	26.9
Night Sweats	87	53.3	47	28.8	29	17.7
Sweating	93	57.0	49	30.0	21	12.8
Psychological						
Dissatisfied with personal life	66	40.4	21	12.8	85	52.1
Anxious/Nervous	86	52.7	17	10.4	60	36.8
Poor Memory	66	40.4	20	12.2	77	47.2
Feeling of less accomplishment	69	42.3	38	23.3	56	34.3
Depression	74	45.3	34	20.8	55	33.7
Impatience	71	43.5	31	19.0	61	37.4
Wish to stay alone	68	41.7	27	16.5	68	41.7
Physical						
Flatulence	110	67.4	11	6.7	42	25.7
Aching muscles and joints	96	58.8	18	11.0	49	30.0
Tired	91	55.8	19	11.6	53	32.5
Sleep disturbance	109	66.8	12	7.3	42	25.7
Headache	101	61.9	18	11.0	44	26.9
Less Physical Strength	74	45.3	31	19.0	58	35.5
Less energy	76	46.6	34	20.8	53	32.5
Drying skin	97	59.5	33	20.2	33	20.2
Gain in body weight	66	40.4	35	21.4	62	38.0
Change in appearance	84	51.5	51	31.2	28	17.1
Feeling bloated	53	32.5	74	45.3	36	22.0
Frequent urination	58	35.5	63	38.6	42	25.7
Involuntary urination while coughing and laughing	64	39.2	58	35.5	41	25.1
Sexual						
Change in desire	98	60.1	07	4.2	58	35.5
Dryness during intercourse	899	54.6	46	28.2	28	17.1
Wish to avoid intimacy	97	59.5	24	14.7	42	25.7

Table 2: Demographic variables and association of quality of life of post-menopausal women

Selected variables	Post-menopausal women		
	x^2	df	p value
Age (in years)			
<55	1	3.14	p>0.05
>55			
Marital Status			
Married	4	2.89	p>0.05
Unmarried			
Widowed			
Divorced			
Education			
Secondary	4	3.79	P<0.05*
Higher Secondary			
Graduate			
Post graduate			
Others			
Occupation			
House wife	1	4.13	P<0.05*
Salaried			
Husband's occupation			
Salaried	4	3.73	p>0.05
Self-employed			
Religion			
Hindu	4	2.4	p>0.05
Muslim			
Christian			
Others			
Type of family			
Nuclear	1	1.94	p>0.05
Joint			
Family income (per Month)			
10,000 -25,000	1	0.05	p>0.05
25,000-45,000			
>45,000			
Addiction			
None	1	3.54	p>0.05
Smoking			
Tobacco			
Alcohol			
Age at menopause			
>45 years	0	0.6	P<0.05*
<45 years			

Table 3: Assessment of quality of life by specific questionnaire on certain aspects of life, in the postmenopausal women

Menopause specific quality of life	Mean ± SD	Mean%	T test
Vasomotor	15.7 ±	43.6	4 p<0.05
Psychosocial	67.6 ±	28.1	3 p<0.05
Sexual	13.7 ±	51.3	2.9 p<0.05
Physical	28.2 ±	67.2	2.3 p<0.05

Table 4: Presence of vasomotor symptoms among the post-menopausal women

Vasomotor symptoms	Mean ± SD	Mean%
Hot flushes	4.8 ± 1.3	67.3
Night sweats	3.7 ± 1.7	57.9
Sweating	3.4 ± 1.4	48.9

Table 5: The prevalence of menopausal symptoms

Sl. No.	Menopausal symptoms	Frequency (%)
Vasomotor symptoms		
1.	Hot flushes	107 (65.6)
2.	Night sweats	98 (60.1)
3.	Sweating	94 (57.6)
Psychological symptoms		
4.	Dissatisfaction with life	74 (45.3)
5.	Feeling anxious and nervous	103 (63.1)
6.	Gradual loss of memory	79 (48.4)
7.	Lesser accomplishment	43 (26.3)
8.	Depression	116 (71.1)
9.	Impatience	29 (17.8)
10.	Wish to be alone	15 (9.2)
Physical symptoms		
11.	Flatulence or Bloated feeling	131 (80.3)
12.	Muscle and joint ache	145 (89.0)
13.	Feeling tired and exhausted	149 (91.4)
14.	Sleep issues	141 (86.5)
15.	Low back pain	148 (90.7)
16.	Less physical strength	152 (93.2)
17.	Less stamina	129 (79.1)
18.	Lacking energy	139 (85.2)
19.	Drying scale/ itching skin	92 (56.4)
20.	Growth in facial hair	67 (41.1)
21.	Gain in body weight	146 (89.5)
22.	Changes in skin texture	126 (77.3)
23.	Frequent urination	67 (41.1)
24.	Involuntary passage of urine while coughing/laughing/Sneezing	116 (71.1)
Sexual problems		
25.	Changes in sexual desire	51(31.2)
26.	Dryness in vagina	48(29.4)
27.	Wish to avoid intimacy	31(19.0)

Table 6: Correlation between the parameters of quality of life, Women's Health Questionnaire and WHOQol-bref

Parameters	Women's Health Questionnaire	WHOQol-bref.
Vasomotor symptoms	0.73	-0.57
Health	0.44	-0.31
Aging	0.63	-0.47
Psychosocial	0.67	-0.57
Sexuality	0.49	-0.62
Couple Relationship	0.27	-0.49
Total	0.71	0.60

P<0.001 for all correlations. The values express the correlation coefficient.

Table 7: Domains mean scores of menopausal women according to socio-demographic characteristics

Variables	Vasomotor	Psychological	Physical	Sexual
Age				
≤50	2.87±1.15	10.93±9.07	22.98±0.17	2.41±0.83
>50	4.98±0.68	13.59±0.07	29.98±0.17	5.17±0.19
P*	0.033	0.003	0.001	0.017
Education				
Post graduation	2.67±0.09	10.13±1.03	21.93±1.31	1.97±0.33
Graduation	5.43±0.08	12.57+0.02	30.40±0.47	5.28±0.44
P*	0.038	0.033	0.007	0.021
Lifestyle				
Active	2.98±1.03	9.17±0.13	21.93±1.03	2.71±0.93
Sedentary	5.21±0.78	12.81±0.22	30.11±0.08	6.01±0.58
P*	0.018	0.014	0.004	0.033

* significant at P<0.05

Table 8: Correlation between the parameters of quality of life among the menopausal women

	A		B		C	D		E		F		G	H	
Parameters	r	P	r	P	r	P	r	P	r	P	r	P	r	P
Vasomotor symptoms (A)	1													
Health (B)	0.87	<0.001	1											
Aging (C)	0.89	<0.001	0.49	<0.001	1									
Psychosocial (D)	0.76	<0.001	0.41	<0.001	0.61	<0.001	1							
Sexual (E)	0.27	<0.002	0.06	<0.421	0.09	<0.276	0.37	<0.001	1					
Couple relationship (F)	0.22	<0.213	0.04	<0.423	0.04	<0.314	0.17	<0.040	0.60	<0.001	1			
Global Score (G)	0.83	<0.001	0.59	<0.001	0.73	<0.001	0.86	<0.001	0.83	<0.001	0.47	<0.001	1	

5. Discussion

Every woman living beyond the age of 52 years of age experience the transition phase of Menopause. Genetic, cultural, education, lifestyle, socio-economic and dietary factors are some of the main reasons bringing about individual response to the onset of menopause and the deficiency of estrogen .Today, menopause has emerged as an important issue in considering women's health. Priority is being given to maintaining good Quality of Life (QOL) in the menopausal women. This is to help these women negotiate their issues or sufferings to the health professionals. The present study focused on the quality of life of women with menopausal symptoms on MenQoL. This method was developed in 1996 bearing four domains of assessment: 1.Vasomotor 2. Psychosocial 3. Physical and 4. Sexual (Kim et al 2015; Ceylan et al 2015). This study aimed to assess the symptoms related to menopause and their impact on the quality of life of the women and the results show that menopause do have an important impact on the quality of life of women. Regarding the socio-demographic characteristics, less than two thirds of the women in this study ranged between 45-55 years old. A study on Saudi women (Elsabagh et al 2012) show similar result. Gehad et al 2010 in his study on women from Egypt show the mean age of women to be 46.35± 4.8 years. In addition, a study by El Sabagh et al 2012 indicated that women's age ranged between 40-70 years. Results were congruent with a study from Sri Lanka where the subjects were in the age group of 51 to 60 years (Orley et al 1994), while Iranian women ranged above 55 years of age (Shirvani et al 2016). Comparing our findings with these previous

studies, it can be said that this study falls under the normal ranges of menopausal age of women. In a study on women from Pondicherry (Waidyasekera et al 2009) the mean age was found to be 45.93 (±8.37) years and median age was 43 years which similar to some previous studies by Sagdeo et al 2011 in Nagpur, Poomala et al 2013 in Puducherry, Sarkar et al 2014 in Jamnagar, Bansal et al 2015 in Punjab. But Nisar et al 2009 in Sindh Pakistan found the mean age to be 52.17 ± 6.01years.Considering the severity of the menopausal symptoms in this study, the most severe symptoms affecting the women were in the domains of vasomotor, psychological, physical and sexual. The most severe of the symptoms are in this order: hot flushes, experiencing poor memory, dissatisfaction with their personal lives, low backache, less or minimum sexual desire. Mild symptoms in these domains were : night sweats, feeling anxious or nervous, and flatulence. Studies report that psychological symptoms such as loss of memory, anxiety, feeling lonely, sadness was more (42.6%) among postmenopausal women. QOL was affected mostly in the domains of Vasomotor and sexual (Ozkan et al 2005). In a study conducted by Hakimi (2018), it was seen that the mean scores of menopausal symptoms had higher scores in the physical and psychological domains in the postmenopausal women. These results are in accordance with several studies which report hot flushes and sweating as the most common and severe symptoms in menopausal women (Nayak et al 2012; Paulose et al 2018). In a study on Singaporean women the results were contradictory showing frequency of hot flushes and night sweats to be only among 17.6% and 8.9% respectively (Chim et al 2002). In a study on Karnataka, it was found that, symptoms like tiredness, aches and pain in the joints and muscles, flatulence were the most severe symptoms of menopause (Nayak et al 2012). Symptoms from the vasomotor and sexual domains are more frequent in Indian women (Jenabi et al 2015). Sagdeo et al 2011 showed that most common problem was joint and muscular symptoms (60.4%) which were followed by hot flushes and night sweats (36.7%). Madhukumar et al, 2012 in a study conducted in rural Bengaluru and Nayak et al 2012 in Karnataka showed that physical and psychosocial symptoms were more (56.92%). The menopausal women felt that they were affected by menopause in negative manner in the domains of vasomotor and sexual symptoms, which is in accordance with the present study. Several studies from India Poomala et al 2013, Puducherry and Sarkar et al 2014 in Jamnagar showed that low back ache (79%) and muscle-joint pain (77.2%) increase in facial hair (15%) and feeling of dryness during intimacy (10.8%) which are very close to the results of this study. Bansal et al,2015 in a study among women of Punjab found that headache (94.1%) and dizziness (81.5%) was the most common complaint in the domain of vasomotor. Most frequent issue in the domain of psychosocial was sleep disturbance (68.9%). In the sexual domain most frequently reported issues were decreased libido (81.5%). In this study, most prevalent psychosocial symptoms reported were feeling of anxiety and nervousness 63.1% and feeling depressed 71.1%.Nisar et al 2009, showed that body ache 165 (81.7%) was the most frequently reported problem in the menopausal women. 66.3% women reported hot flushes, 68.8% reported lack of energy and 66.3% said decrease in physical strengths. In the present study, most prevalent symptoms reported were feeling of anxiety and nervousness 91.4% and feeling tired, decrease stamina 79.1%. The occurrence of vasomotor symptoms was average with 65.6% of them reporting hot flushes and 57.6% reported sweating. Women from Amritsar Bansal et al 2015, reported that more prevalent symptoms were feeling tired (92.90%), headache (88.80%), joint and muscular discomfort (76.20%), physical and mental exhaustion (60.09%), sleeplessness (54.40%), depressive mood (37.30%), irritability (36%), dryness of vagina (36%), hot flushes and sweating (35.80%), and anxiety (34.50%). There was observed a high percentage and scores of menopause rating scale in the peri- and post-menopausal women. Symptoms of vasomotor, psychosocial, physical and sexual domains were hot flushes (29%), experiencing poor memory (48.3%), being dissatisfied with their personal life (44.8%), low backache (41.9%), and change in sexual desire (36.8%) were reported in a study in Egyptian women (Mohamed et al, 2014).Cervantes scale (CS) was translated for this population in study. It took 6to 9 minutes to complete the BEN/CS (the Bengali version of the Cervantes Scale). This was equivalent to that reported for the original version in Spanish (Palacios et al 2002). CS was observed to be >0.7 which was similar to a study conducted by Jos´e E et al, 2011 in Brazil. The validity of the criterion was assessed with the correlation of the BEN/CS in BEN with WHQ and WHOQoL-bref. There was found to be a stronger correlation with WHQ. WHOQoL-bref is an instrument to identify the general changes in the QOL. Hence WHQ was developed for this population and hence a stronger correlation was expected. Considering the discriminant validity of the BEN/CS, from tables 7and 8, significant scores were observed between the groups having different levels of education, family income, presence or absence of vasomotor symptoms and the amount of physical activity. Regarding education, this study found that the higher the level of education, the better was the QOL. Likewise higher family income was also found to be associated with comparatively better QOL. But none of the two categories influenced the vasomotor symptoms. The results were similar to two different studies by Utian et al 2002 and Pronk et al 2011. In this study, presence of vasomotor symptoms and lack of physical activity were associated with lower QOL. Sexuality and couple relationship however did not show any association to QOL. The findings of the present study are as: 1) In the domain of vasomotor; 65.6% of the women reported hot flushes, 60.1%complained on night sweats while 57.6% complained on more sweating as compared to prior menopause. 2) In the physical domain; 93.2% of women felt decrease in physical strength and lack of energy, 79.1% women felt decrease in stamina, 90.7% suffered from low back ache, 89.55 women faced issues in body weight gain, 89% complained on aches joints and muscles, 80.3% suffered from flatulence, 86.5% complained on sleep issues, 71.1% faced involuntary urination specially during coughing and sneezing, while 41.1% complained on frequent urination. 56.4%women had complains on skin including dryness, change in texture and tone. 3) In the psychosocial domain;71% women felt depressed,63.1% felt nervous or more anxious,48.3% complained on gradual loss of memory while 45.3% were dissatisfied with life. 4) Lastly in the sexual domain, 19% women avoided intimacy, 31.2% faced changes in sexual desire, and 29.4% complained on dryness in the vagina.

Furthermore, this study finds that support from the family during the transition period play a significant role in overcoming the symptoms in physical, psychological and social domains of life. Many women experience feeling of guilt and embarrassment in the menopause (Madhukumar et al 2012). These feelings guide the behavior and have an impact on the image of self in the eyes of others. Such feelings are much affected by interpersonal and family relationships (Sarkar et al 2014). A study conducted among the Japanese women reveal that 24.4% and 26.6% postmenopausal women suffer from moderate or severe menopausal symptoms. The level of QOL decreased and it was correlated with the severity of the menopausal symptoms in both the peri and postmenopausal women among community dwellers (Chiu et al 2008).The kind of relationship women have with their husbands and the attitude the women possess regarding menopause affect the QOL in all the domains of vasomotor, psychosocial, physical, and sexual Scores in the vasomotor, psychosocial, physical, and sexual symptom were high in women who had unfavorable relationship with their husbands and children (Madhukumar et al 2012). An Iranian study shows that there was significant difference in the mean of QOL scores with educational intervention and awareness in the domains of vasomotor, psychosocial, sexual and physical (El Sabagh et al 2012). We can hence infer that, the postmenopausal symptoms experienced by women were same, irrespective of their place of residence. Women participants of the present study all belonged to nuclear families. This is also one of the reasons why women depend on various media for information on their health issues. This is unlike those in the olden days when women had a close knit family with whom they could share their experiences and problems arising due to the onset of menopause.

6. Conclusion

In this study the presence of vasomotor symptoms and lack of physical activities were in association with low QOL. The sexuality and couple relationship domains did not show this association. Higher educational qualification was associated with better QOL and similarly higher family income was also associated with better QOL with no difference in the domain of vasomotor. The present study brings forth the issue to create awareness on the physiology of the menopause and to provide necessary help to improve their QOL. Women can cope with the various issues arising due to menopause if they are made aware of these issues prior to the onset of menopause. This study can further help to find out the knowledge of women regarding symptoms related to menopause specially among Bengali women. As there is paucity of works on QOL in menopausal women from India, this study will help to find out how women can improve their QOL during menopause. There is need to address the issues of menopausal women in India and there is ample scope to improve the QOL in Indian menopausal women. Aspects like increasing health education on the symptoms of menopause, its treatment by modifications in their present lifestyle, asking them to avoid sedentary lifestyle and encouraging them for mild exercises can be focused on. Furthermore, there is a need to address the various issues regarding menopause among Indian women and accordingly establish health care facilities for them. Awareness should be created in the community to ensure that they get family support. Health workers, including Anganwadi workers can be trained to help women in the rural areas too. There are remedies for postmenopausal women being developed to enhance their QOL. Alternative medical disciplines like, naturopathy, acupuncture, homeopathy, yoga, meditation and other forms of traditional medicines. These forms were strongly supported in a study (Paulose et al,2018) as non hormonal therapies for the improvement of menopause related QOL in women. The changes due to menopause are inevitable and they are bound to appear in every women's life with menopause. This brings about a major change in the QOL of women. QOL in menopausal women should be given much importance and the Health care sector should come up in assessing, informing and maintaining an improved QOL. None the less, the society, community and the family should come forward and take up a constructive role to help women overcome the issues of menopause and live a fulfilling life ahead. It can thus be concluded that:

- Menopause do bring about problems in the physical and the psychological aspects among women.
- All the domains evaluated were impaired in menopausal women.
- Women all over specially in India suffer from menopausal symptoms.
- Menopausal issues cannot be ignored and should be given priorities in the health sector.
- Educating women on Menopausal issues, creating awareness not only among women but also their family members and providing suitable helps to improve the QOL in the postmenopausal women are very important arena which requires immediate attention.

7. Conflict of interest

None

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