



ASSESSMENT OF QUALITY OF LIFE AMONG PERIMENOPAUSAL WOMEN

Anatomy

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ABSTRACT

Introduction: During perimenopause, shifts in hormone levels, can affect ovulation and cause changes in the menstrual cycle. Most of the women especially in developing countries are unaware of these post menopausal consequences, local health authorities have to prepare and plan remedial measures and also should aid in creating awareness among such regions.

Materials and Methods: A total of 168 women in perimenopausal period were randomly selected from different areas in this hospital, for example, patient attenders - waiting rooms, screening rooms in different clinics. A Predesigned questionnaire pertaining to socio-demographic characteristics, personal history and 29 item questionnaire adopted from MENQOL. Studied population advised to answer questionnaire. Presence of menopausal symptoms was assessed by scale 0 to 6 depending on how bothersome it is. Point scale zero signifies not bothering some and six signifies extremely bothersome.

Results: Majority of the women presented with physical symptoms followed by psychological symptoms. Less prevalence of Vasomotor and sexual domains of MENQOL are observed. Women with normal weight had a high quality of score when compared with overweight or obese. Physically active women with a good life style were showed better QOL score than women exercising <3times/week. The mean QOL score of >5times/week exercise vs 3-5 times/week was 1.7±1.26 and 2.5±1.34 (0.004), >5times/week vs <3 times/week was 1.7±1.26 and 4.8±1.73 (<0.0001).

Conclusion: If a woman in perimenopausal transition period focuses on healthy lifestyle including balanced diet, physical activity, meditation etc., then there can be increase in chances of leading a good quality of life.

KEYWORDS

Quality of Life, Menopausal symptoms.

INTRODUCTION

Menopause is a normal physiological process through which a woman ceases to be fertile or menstruate. It is confirmed when a woman has not had a menstrual period for one year^[1].

Menopause is not a disease or disorder, it does trigger some profound changes in a woman body due to reduce in hormone levels especially oestrogen, because of cessation in functioning of ovaries^[2]. Menopausal onset is not related to age of menarche.

Process of menopause is gradual; this period is called as "perimenopausal transition period". This period means 'time around menopause' usually occurs 3 to 5 years before the age of menopausal onset. Perimenopause lasts up until menopause, the point when the waves stop functioning. In the last 1-2 years of perimenopause, the drop in oestrogen accelerates^[3]. During perimenopause, shifts in hormone levels, can affect ovulation and cause changes in the menstrual cycle.

According to WHO classification perimenopausal women are defined as those women who have experienced irregular menses within the last 12 months or the absence of menstrual bleeding for more than 3 months but less than 12 months^[4].

Majority of women in western world, reach menopause in between the ages of 40-61^[5], but it may occur as earlier as ages 30s, or may not occur until a woman reach her 60s. 'Rule of thumb', which is a rough scale, says women attain menopause at an age similar to that of their mothers. In South Asia, the mean age of onset of natural menopause in Pakistan is 49.3 years, and in India, the mean age ± SD is 45.02±4.35 years [6,7]. Most of the women especially in developing countries are unaware of these post menopausal consequences, hence local health authorities have to prepare and plan remedial measures and also should aid in creating awareness among such regions.

QOL has been defined by the WHO as the "individual's perceptions of their position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards, and concerns."^[8]

There are no studies from this community regarding quality of life among perimenopausal women. So we have undertaken this study to

observe menopausal symptoms among women aged between 40-55 years.

MATERIALS AND METHODS

This observational study conducted prospectively among perimenopausal women who are attending to tertiary care hospital, during the period of December 2017 to February 2018.

Inclusion criteria:

Women aged between 40-55 years in perimenopausal transition period.

Exclusion criteria:

1. Women who underwent surgical menopause for example oophorectomy or hysterectomy or both,
2. Women with cardiovascular disease, thyroid abnormalities, diabetes & hypertension.
3. Women who used hormone replacement therapy.

A total of 168 women in perimenopausal period were randomly selected from different areas in this hospital, for example, patient attenders-waiting rooms, screening rooms in different clinics. Verbal consent has taken from the study population, those who agreed to participate in this study.

Exercise was defined as any physical activity for a duration of 20-30 minutes and was divided into three levels: infrequent (<3 times/week), average (3-5 times/week) and more frequent (>5 times/week). In addition, height and weight were measured, body mass index (BMI) was then calculated using the formula weight/(height)² and reported in kilogram per square meter.

A Predesigned questionnaire pertaining to sociodemographic characteristics, personal history and 29 item questionnaire adopted from MENQOL^[9]. MENQOL questionnaire was related to quality of life due to menopausal symptoms based on four domains: vasomotor, psychosocial, physical and sexual. Vasomotor domain has 1-3 items, psychosocial domain has items 4-10, physical domain has items 11-26, and sexual domain has 27-29 items. Studied population advised to answer questionnaire.

Presence of menopausal symptoms was assessed by scale 0 to 6

depending on how bothersome it is. Point scale zero signifies not bother some and six signifies extremely bothersome.

All the data entered into spread excel sheet and was analyzed by statistical analysis using Graph pad software. A P value less than 0.05 considered as significant.

RESULTS

Most women observed in peri menopausal group were fall in the age group of 46-50 years (41.6%), followed by 27.9% in the age group of 41-45 years, 51-55 years age group was 22.02% and 56-60 years was 8.33%. 70.8% of peri menopausal included in this study were Hindus, 16.6% were Muslims, 10.1% were Christian and 4.1% were belongs to other religious groups. Majority of the studied population were under upper lower class and lower middle class. Among peri menopausal women, 54.7% were premenopause (still having menstrual cycles) and 45.2% were post menopause (whose last menstrual period occurred 12 months or later). Out of 168 women, 64 were under overweight group (38.09%), 52 (30.9%) were normal weight, 37 (22.02%) were obese and 15 (8.9%) were underweight. 86.3% of women were not participating in exercise of <3 times/week (Table 1).

Table 1. Evaluation of socio demographic profile among peri menopausal women

Socio demographic parameters	No. of patients	Percentage
Age in Years		
41-45	47	27.9%
46-50	70	41.6%
51-55	37	22.02%
56-60	14	8.33%
Peri menopausal women		
Pre menopause	92	60.7%
Post menopause	76	39.2%
Religion		
Hindu	119	70.8%
Muslim	28	16.6%
Christian	17	10.1%
Others	7	4.1%
Socioeconomic status		
Upper Class	0	0
Upper middle class	8	4.7
Lower middle class	62	36.9
Upper lower class	85	50.5
Lower class	13	7.7
Body Mass Index		
Under weight	15	8.9
Normal weight	52	30.9
Over weight	64	38.09
Obese	37	22.02
Exercise (Times/week)		
<3	145	86.3
3-5	12	7.1
>5	11	6.5

Majority of the women presented with physical symptoms followed by psychological symptoms. >90% of the studied population reported decrease in physical strength, decrease in stamina, feeling lack of energy, fatigue; all these are physical menopausal symptoms. Around 80% of women have symptoms like feeling anxious or nervous (psychological symptoms), aches in muscles, flatulence and difficulty in sleeping (physical symptoms). Vasomotor and sexual related symptoms were noticed in 20-45% of peri menopausal women (Table 2).

Table 2. Representing menopausal symptoms prevalence

Menopausal symptoms	No. of patients	Percentage (%)
Vasomotor (Items – 3)		
Hot flushes	72	42.8
Night sweats	58	34.5
Sweating	75	44.6
Psychological (Items – 7)		
Dissatisfaction with personal life	84	50
Feeling anxious or nervous	143	85.1
Experiencing poor memory	92	54.7
Accomplishing less than I used to do	48	28.5

Feeling depressed or down	95	56.5
In patience with other people	28	16.6
Willing to be alone	18	10.7
Sexual (Items – 3)		
Change in sexual desire	70	41.6
Vaginal dryness during intercourse	35	20.5
Avoiding intimacy	65	38.6
Physical (Items – 16)		
Flatulence or gas	134	79.7
Aching in muscles or joints	145	86.3
Feeling tired	154	91.6
Difficulty in sleeping	127	75.5
Aches in back of neck and head	125	74.4
Decrease in physical strength	160	95.2
Decrease in stamina	152	90.4
Feeling lack of energy	154	91.6
Drying of skin	85	50.5
Facial hair	14	8.3
Weight gain	60	35.7
Changes in appearance, texture and tone of skin	85	50.5
Feeling bloated	69	41.07
Frequent urination	102	60.7
Low backache	127	75.5
Involuntarily urination when laughing/ coughing	117	69.6

Statistical significance of Quality of life assessment observed between ≤ 50 years and > 50 years perimenopausal women, which showed p value <0.001. P value of Obese vs Normal weight was <0.001, normal weight and underweight was 0.003, normal weight and overweight was <0.001, Obese and underweight was 0.0002, under weight and overweight was 0.01, obese and overweight was 0.061. Extremely statistical significant showed between Normal weight vs obese and Normal weight vs overweight. On assessing Exercise patterns by comparing with Mean ± SD of menopausal symptoms, extreme statistical significance noted between <3times/week and >5 times/week (Table 3).

Table 3. Assessment of Statistical significance among various parameters

Characteristics	No. of patients	Mean ± SD of Menopausal symptoms	**P value
Age group			
≤50 years	117	3.24±1.3	<0.001 *SS
>50 years	51	5.2±1.67	
BMI			
Obese	37	5.4±1.41	SS observed in between groups of BMI except Obese vs Overweight (0.06)
Normal weight	52	2.8±0.65	
Underweight	15	3.7±1.23	
Overweight	64	4.8±1.6	
Exercise			
< 3 times/week	145	4.8±1.73	SS observed in between groups of Exercise
3-5 times/week	12	2.5±1.34	
>5 times/week	11	1.7±1.26	

*SS – Statistical Significance. ** The p value <0.005 is considered as statistical significant.

DISCUSSION

During perimenopausal period, hormonal imbalance occurs. Menopausal symptoms are due to hormonal changes, showing effects on organ systems of body, mostly cardiovascular and musculoskeletal affecting their quality of life^[10].

Menopausal symptoms presents differently in every woman. Symptoms most commonly during perimenopausal transition period are hot flushes, night sweats, muscle and joint pains, sleep disturbances, urinary frequency, vaginal dryness, poor memory, anxiety and depression^[11,12].

Epidemiological studies reported higher prevalence (40%–60%) of physical, psychological, vasomotor, and sexual disorders among menopausal women and a positive linear relationship between menopausal changes and QOL^[13,14].

Most women observed in peri menopausal group were fall in the age group of 46-50 years (41.6%), followed by 27.9% in the age group of 41-45 years, 51-55 years age group was 22.02% and 56-60 years was 8.33%. Women with age ≤ 50 years showed good QOL score, the mean QOL score of perimenopausal women ≤ 50 years was 3.24 ± 1.3 and women > 50 years was 5.2 ± 1.67 , which is significant. Out of 168 women, 64 were under overweight group (38.09%), 52 (30.9%) were normal weight, 37 (22.02%) were obese and 15 (8.9%) were underweight. Among peri menopausal women, 54.7% were premenopause (still having menstrual cycles) and 45.2% were postmenopause (whose last menstrual period occurred 12 months or later) in the present study.

Gayathry Nayak et al^[15] did a similar study on peri menopausal women; they reported mean age of the group was 48.30 ± 5.30 of years. In similar to our study, 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). This study done in Karnataka, a state in south India observed 129 (61.7%) women were premenopausal, and 80 (38.3%) postmenopausal within 40-55 years and 45-57 years age groups respectively.

Women with normal weight had a high quality of score when compared with overweight or obese. The mean QOL score of obese vs normal weight was 5.4 ± 1.41 and 2.8 ± 0.65 (< 0.001), obese vs under weight was 5.4 ± 1.41 and 3.7 ± 1.23 (0.0002), obese vs over weight was 5.4 ± 1.41 and 4.8 ± 1.6 (0.06).

Thilagavathy Ganapathy et al^[16] reported Menopausal women who had higher secondary and university education had lower QOL scores as compared to those with the lower level of education in all the domains. MENQOL score of physical health-related QOL $22.87 + 1.21$ vs. $31.34 + 0.44$; psychological health-related QOL score $10.17 + 1.02$ vs. $13.56 + 0.03$; vasomotor health-related QOL score $2.61 + 1.03$ vs. $5.51 + 0.09$; and sexual health-related QOL scores $2.32 + 0.53$ vs. $5.31 + 0.47$. Women who were from higher-income group had good MENQOL scores in physical ($23.04 + 1.07$ vs. $31.07 + 0.09$); psychological ($10.44 + 0.09$ vs. $13.36 + 0.41$); vasomotor ($3.10 + 0.81$ vs. $5.09 + 0.76$); and sexual health-related QOL scores ($2.41 + 0.84$ vs. $5.44 + 3.93$) as compared to those from lower-income group.

As per this study, majority of the women presented with physical symptoms followed by psychological symptoms. In similar to the present study, Gayathry Nayak et al^[15], Josefa Márquez Membrive^[17], Aida AlDughaiter et al^[18] also observed majority of menopausal symptoms are physical factors related. Neslihan from Turkey also reported higher rate of musculoskeletal symptoms compared with vasomotor^[19].

In the present study $> 90\%$ of the studied population reported decrease in physical strength, decrease in stamina, feeling lack of energy, fatigue; all these are physical menopausal symptoms. Around 80% of women have symptoms like feeling anxious or nervous (psychological symptoms), Aches in muscles, flatulence, difficulty in sleeping (physical symptoms). Vasomotor and sexual related symptoms were noticed in 20-45% of peri menopausal women.

Gayathry Nayak et al^[15] documented menopausal symptoms as feeling tired or worn out 141 (67.5%), decrease in physical strength and stamina 134 (64.1%), muscles and joint pain 115 (55.0%), 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.

Nabarun Karmakar et al^[20] reported 60% of hot flushes and 47% sweating. Most prevalent psychosocial symptoms reported were feeling of anxiety and nervousness (94%) and overall depression (88%). Physical symptoms were quite varying in occurrence with some symptoms such as feeling tired or worn out, decrease in physical strength and lack of energy occurring in 93% of the women to only 5% suffering from growth of facial hair. Overall sexual changes were

reported among 49% who reported of avoiding intimacy with a partner and 26% complained of vaginal dryness.

Thilagavathy Ganapathy et al^[16] observed the prevalence of symptoms in physical, vasomotor, psychological, and sexual domains was 74.56%, 60.7%, 44.68%, and 26.4%, respectively. An overall mean MENQOL score of physical ($27.1 + 0.72$), psychological ($2.01 + 0.27$), vasomotor ($4.08 + 0.79$), and sexual ($3.89 + 0.59$) health-related QOL among menopausal women showed poor QOL. Statistical significant differences were observed between the sociodemographic variables and the health-related QOL scores in all domains at $P < 0.05$.

A study from western population also reported the prevalence of hot flushes ranged from 40% to 60% among perimenopausal and 8% to 80% among postmenopausal women^[21]. Where as Saudi Arabia study by Aida AlDughaiter et al^[18] reported less prevalence of these symptoms, similar to the present study. Avis NE^[21] also observed that Indian women less affected by hot flushes unlike the Caucasians. Rahman S et al^[23], Neslihan Carda S^[19] et al reported less prevalent of sexual symptoms in their study when compared to the women of Caucasian origin.

Physically active women with a good life style were showed better QOL score than women exercising < 3 times/week. The mean QOL score of > 5 times/week exercise vs 3-5 times/week was 1.7 ± 1.26 and 2.5 ± 1.34 (0.004), > 5 times/week vs < 3 times/week was 1.7 ± 1.26 and 4.8 ± 1.73 (< 0.0001).

Thilagavathy Ganapathy et al^[16] reported Menopausal women who were physically active had a lower-quality score among physical, psychological, vasomotor, and sexual as compared to those who led a sedentary lifestyle. The MENQOL score in physical health-related QOL was $23.08 + 1.01$ vs $31.21 + 0.46$; psychological health-related QOL was $10.18 + 0.14$ vs $13.61 + 0.21$; vasomotor health-related QOL was $3.05 + 1.01$ vs $5.10 + 0.69$; and sexual health-related QOL was $2.76 + 0.94$ vs $5.09 + 0.67$.

Aida AlDughaiter et al^[18] did a study on MENQOL among Saudi Arabia. They have observed Smoking had no effect on the quality-of-life score. Women who exercised on average 3-5 times/week had a lower score than those who exercised less frequently (< 3 times/week) or more frequently (> 5 times/week). Women with a normal BMI had a significantly lower total score ($P = 0.017$) compared to underweight, overweight, or obese women. Moreover, somatic ($P \leq 0.007$) and psychological subscale ($P \leq 0.008$) scores were significantly lower in women with normal BMI.

Ministerio de Trabajo y Asuntos Sociales (ES)^[24] stated the stress developed in the workplace is also related with a lower perceived HRQoL, among teachers as well as clinical nurses.

Gayathry Nayak et al^[15] implemented 12 week yoga therapy among perimenopausal women including selective asana-s (postures), pranayama (breathing exercise) and meditation, reported good results with significant improvement in perimenopausal symptoms.

Menopausal symptoms vary from community to community depending on the climatic conditions, race, dietary factors, social background, education, physical activity, estrogen levels, and also awareness about perimenopausal symptoms & its consequences. Gupta P et al^[25] documented estrogen levels, environmental and socio-cultural factors such as diet, exercise and other life style modifications seems to be determine the menopausal symptom profile. These studies are indirectly helping to create awareness about menopausal symptoms. Educating about these symptoms and consequences avoid unnecessary apprehension among women in perimenopausal transition period. Studies on prevalence of menopausal symptoms help to plan and alleviate symptom burden as well as can improve the quality of life.

CONCLUSION

Perimenopausal women with abnormal BMI and not Participating in exercise showed higher rate of menopausal symptoms i.e., lower quality of life. They are expected to live their rest of life after menopause, where quality of life makes a great concern for them. If a woman in perimenopausal transition period focuses on healthy lifestyle including balanced diet, physical activity, meditation etc., then there can be increase in chances of leading a good quality of life.

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