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RESEARCH ARTICLE

IMPACT OF MENOPAUSE SYMPTOMS ON HEALTH RELATED QUALITY OF LIFE AMONG MENOPAUSAL WOMEN

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ABSTRACT

Background: Menopause, an important and unavoidable physiological and biological change of a normal women. It is considered as another undesirable sign of ageing. Menopausal symptoms influences the psychological, physical, vasomotor and sexual health related quality of life of the women. Thus the current study was aimed to access the menopause related symptoms and their impact on the women's quality of life using Menopause-Specific QOL Questionnaire (MENQOL). **Materials and Methods:** A cross-sectional study was conducted among 250 menopausal women and health-related of QOL was assessed using menopause quality of life questionnaire (MENQOL). **Results:** The mean age at menopause was 46.63±2.15 years. Nearly 94.24% of women experienced more than five menopausal symptoms. The prevalence of symptoms in each domain of MENQOL was recorded as physicaldomain73.82%, vasomotor domain was 63.4%, psychologicaldomain 48.68%, and sexual domains (24.4%) accordingly. An overall mean MENQOL score of physical (30.72±3.67), psychological (12.49±3.25), vasomotor (4.59 ± 2.96), and sexual (3.975±2.33) health-related QOL indicating poor quality of life after menopause. Statistical significant differences were observed between the demographic variables and the MENQOL scores in all domains at $P < 0.05$. The high MENQOL scores in all domains, showed menopausal symptoms was associated with poor quality of life. **Conclusion:** The present study finding concluded that the menopausal symptoms affects both physical and psychological aspect of women's life. Ageing, educational status and sedentary life style contributes more towards the poor quality of life of menopausal women.

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INTRODUCTION

In recent days the life expectancy of females have increase (Cheng *et al.*, 2005), specifically related to age at menopause, an average women spends nearly one thirds of her life in menopausal stage (Ray, 2012). It is estimated that in 2030, there are about 1.2 billion women will be there in post-menopausal stage worldwide (Krajewska-Ferishah *et al.*, 2011). Menopause is a sequence of reproductive aging, depletion of follicles, which results in lower level of circulating oestrogen (Khanum, 2016) and biologically unfavourable metabolic alteration. WHO defined menopause as twelve months of amenorrhea after a last menstrual period. Menopausal symptoms have negative impact on QOL of women.

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The vasomotor, physical, psychological and sexual changes occurs during the menopausal period disturb the overall woman's quality of life. Further the QOL of menopausal women was largely influenced by socio-cultural and behavioural factors and health seeking behaviour. In developing countries like India, women's health is centred on reproductive health, motherhood and to some extend the adolescent health, perhaps, the menopausal issues of the women remain unattended (National Program Implementation Plan). During menopausal stage of a women the common symptoms includes, hot flushes, night sweats, sleep disturbance and vaginal dryness (Lewis, 2009). Nearly 85 % of the women in menopausal stage experience menopausal symptoms in their life time (Woods, 2005). There is a positive correlation between menopausal period and non-communicable diseases such as Diabetes Mellitus, Hypertension, cancer, etc., (Pallikadavath *et al.*, 2016). Women in menopausal period come across many psychological issues such as depression, sleep disorders, mood swings. Poor compliance to recommended life style

modifications and limited knowledge could impede a better overall health-related quality of life (QOL) (Aaron, 2002). Even though there are many studies focused on the symptoms of menopause, there is a paucity of data which focused on the quality of life of menopausal women in developing countries (Lai, 2006; Santoh, 2005). Thus the current study was aimed to access the menopause related symptoms and their impact on the women's quality of life using Menopause-Specific QOL Questionnaire (MENQOL).

MATERIAL AND METHODS

A hospital based descriptive, quantitative cross-sectional study was conducted in outpatient clinic in Chennai, Tamil Nadu. A convenient sample of 250 women who had attained physiological menopause, were recruited during the period of March to September 2020.The study subjects were recruited base on inclusion and exclusion criteria by briefly explained the purpose of the study. Those women who were mentally oriented, aged between 40 and 60 years who had attained physiological menopause and were not on hormonal replacement therapy and willing to fill in MENQOL questionnaire were included. Those women who were on alternative treatment for menopausal symptoms and other risk factors such as diabetes and hypertension were excluded from the study.

All women were informed that participation is voluntary. Oral acceptance of women to participate in the study was obtained. Study subjects medical history was collected from the case sheet. Anthropometry, demographic, and health complication history, and medication history was measured and recorded accordingly. The questionnaire consist of two sections: the first section includes demographic details which included age, gender, marital status, educational qualification. The second section includes Menopause-Specific Quality Of Life (MENQOL) Questionnaire which has 29 items spreads over four domains, vasomotor consist of 3 items, psychological consist of 7 items, physical consist of 16 items and sexual consist of 3 items on a 7-point Likert scale ranging from 0 – not at all bothered to 6 – extremely bothered. For the analysis, score 1 for "No" and 2 for "Yes" given. The mean scores of the symptoms in each domain were computed by dividing the sum of scores by the number of participants. SPSS Software version 20 (IBM corp.) was used to access the data. Socio-demographic characteristics and the prevalence of menopausal symptoms were analysed and presented as means, standard deviations, and percentages. The relation of demographic variables with QOL was investigated using analysis of variance (ANOVA). P values less than 0.05 were considered significant.

RESULTS

In the present study, a total of 250 women were interviewed was under the age group of 40 – 60 years. The mean age of the participants was 53.3± 2.15 years ranging from 42 to 60 years. The mean age at menopause was 46.63±2.15 years. Nearly 92.25% of women experienced more than five menopausal symptoms. Majority of the participants aged less than 50 years (n=148), all the participants are educated with 151 (60.4%) were completed their graduation followed by 39.6% completed their schooling (n=99). In relation to the occupational status majority were employed (n=162, 64.8%) and 35.2% (n=88) of women were homemakers. Majority of the participants had an active life style 214 (85.6%) and 36 (14.4%) were leading sedentary life style. Among 250 women, 66 (26.4%) were obese (BMI ≥ 30), 108 (43.2%) were overweight (BMI 25-30) and 76 (30.4%) were normal weight (BMI 18.5-24.99). The prevalence of symptoms in each domain of MENQOL was recorded as physical domain (73.82%), vasomotor domain (63.4%), psychological domain (48.68%), and sexual domains (24.4%) respectively. In Vasomotor domain majority of the women experienced hot flushes or flashes (66.4%), followed by Night sweats (56.38%) and Sweating (56%) In Psychosocial domain majority of the women feeling depressed, down, or blue (77.6%) followed by Feeling anxious or nervous (67.6%), Feeling of wanting to be alone (57.2%), Being dissatisfied with personal life(49.6%), Experiencing poor memory (47.6%), Accomplishing poor memory(27.2%) and Being impatient with other people (19.6%) (Table 1).

In Physical domain majority of the women felt low backache (94%), Decrease in physical strength (91.2%), Feeling tired or worn out (87.6%),Increased facial hair (86.4%), Aching in muscles and joints (85.6%), Aches in back of neck or head (83.6%), Feeling a lack of energy (81.6%), Difficulty in sleeping(80.4%),Decrease in stamina (77.2%),Changes in appearance, texture, or tone of skin (76.4%), Flatulence (wind) or gas pains (75.6%), Involuntary urination when laughing or coughing (69.6%), Drying skin (52%), Feeling bloated (46.4%), Frequent urination (40.4%) and Weight gain (38%). In Sexual domain majority of the women felt changes in sexual desire (49.6%) (Table 1).

MENQOL in different domains based on socio-demographic characters: Menopausal women aged greater than 50 years had poor quality of life in all the domains of menopausal QOL, Vasomotor (2.39±1.17 vs. 4.62±0.71; p<0.0001), Psychological (10.33±4.04 vs. 14.41±0.04; p<0.0001), Physical (22.81±0.14 vs. 28.19±0.14; p<0.0001) and Sexual domain (2.45±0.84 vs. 4.13±0.17; p<0.0001). The health-related QOL was better in women with higher education. Menopausal women who had higher education had lower QOL scores as compared to those with the lower level of education in all the domains.

The domain scores as follows vasomotor (2.92±1.03 vs. 3.96±0.09; p-0.001), psychological (11.14±1.02 vs. 14.52±0.03; p<0.0001), physical (23.98±1.21 vs. 30.46±0.44; p<0.0001) and sexual domain (2.52±0.53 vs. 6.12±0.47; p<0.0001). Lifestyle of menopausal women showed a significant difference in physical domain (24.11±1.01 vs. 30.33±0.46; p=0.019) and borderline significance in Psychological domain of menopausal QOL. Perhaps there is difference in mean scores. In relation to employment status significant difference was observed in Psychological (10.76±0.14 vs. 12.94±0.21; p=0.035), and sexual domain (2.7±0.94 vs. 5.72±0.67; p=0.002) of MENQOL, whereas other domain failed to show significant difference (Table 2). The overall mean MENQOL score in physical (30.72±3.67), psychological (12.495±3.25), vasomotor (4.59 ± 2.96), and sexual (3.975±2.33) health-related quality of life among menopausal women showed poor QOL (Table 3).

Table 1. Prevalence of menopausal symptoms among the participants

Dimension	Symptoms	n=250 n (%)
Vasomotor	Hot flushes or flashes	166 (66.4)
	Night sweats	142 (56.8)
	Sweating	140 (56)
Psychosocial	Being dissatisfied with personal life	124 (49.6)
	Feeling anxious or nervous	169 (67.6)
	Experiencing poor memory	119 (47.6)
	Accomplishing poor memory	68 (27.2)
	Feeling depressed, down, or blue	194 (77.6)
	Being impatient with other people	49 (19.6)
	Feeling of wanting to be alone	143 (57.2)
Physical	Flatulence (wind) or gas pains	189 (75.6)
	Aching in muscles and joints	214 (85.6)
	Feeling tired or worn out	219 (87.6)
	Difficulty sleeping	201 (80.4)
	Aches in back of neck or head	209 (83.6)
	Decrease in physical strength	228 (91.2)
	Decrease in stamina	193 (77.2)
	Feeling a lack of energy	204 (81.6)
	Drying skin	130 (52)
	Weight gain	95 (38)
	Increased facial hair	216 (86.4)
	Changes in appearance, texture, or tone of skin	191 (76.4)
	Feeling bloated	116 (46.4)
	Low backache	235 (94)
	Frequent urination	101 (40.4)
	Involuntary urination when laughing or coughing	174 (69.6)
Sexual	Changes in sexual desire	124 (49.6)
	Vaginal dryness during intercourse	111 (44.4)
	Avoidance of intimacy	56 (22.4)

Table 2. Comparison of socio-demographic characteristics of post-menopausal women with MENQOL domain

Variables		Vasomotor	P value	Psychological	P value	Physical	P value	Sexual	P value
Age	≤50	2.39±1.17	<0.0001*	10.33±4.04	<0.0001*	22.81±0.14	<0.0001*	2.45±0.84	<0.0001*
	>50	4.62±0.71		14.41±0.04		28.19±0.14		4.13±0.17	
Education	Graduation	2.92±1.03	0.001*	11.14±1.02	<0.0001*	23.98±1.21	<0.0001*	2.52±0.53	<0.0001*
	Higher secondary	3.96±0.09		14.52±0.03		30.46±0.44		6.12±0.47	
Life style	Active	2.92±1.01	0.431	11.78±0.14	0.077	24.11±1.01	0.019*	2.25±0.94	0.286
	Sedentary	4.83±0.69		14.36±0.21		30.33±0.46		4.97±0.67	
Occupation	Employed	3.83±1.01	0.879	10.76±0.14	0.035*	23.90±1.01	0.053	2.7±0.94	0.002*
al status	Home maker	3.95±0.69		12.94±0.21		30.92±0.46		5.72±0.67	

*Significant;P<0.05

Table 3. Mean scores of menopausal health-related quality of life scores in each domains

Domain	Over all Mean score ± SD (n =250)
Vasomotor	4.59 ± 2.96
Psychosocial	12.495±3.25
Physical	30.72±3.67
Sexual	3.975±2.33

DISCUSSION

Now a day's menopausal stage has emerged as a prominent issue in women's health. With increase in the population of older people all over the world, the number of women in the postmenopausal period was increasing too. Menopause affects physical domain of life, however it also influences the mental and social domains as well. The problems in all the domains of MENQOL can be detected earlier and can lead to the appropriate treatment plans in post-menopausal women. The concept of holistic approach towards the treatment plan can make their lives better. The current study findings highlighted that, women aged below 50 years, with graduation / post-graduation education with physically active life style had lower scores in physical, psychological, vasomotor, and sexual domains, when compared to women greater than 50 years of age, higher secondary/ secondary level of education, and with sedentary lifestyle behaviour From the present study finding it is observed that in menopausal women aged greater than 50 years, showed high MENQOL scores in all domains, showed poor quality of life than those aged less than 50 years of age. The domain wise score was statistically significant. This highlighted that less the age, less were the symptoms and better was the QOL (Ganapathy, 2018). Similar findings are reported in other cross sectional studies showed that quality of life is better in women with higher level of education and physically active, further lower education status is linked with the poor quality of life (Chiu, 2018; Yanikkerem, 2012). Educated and employed women has lower scores in all domains when compared to their counterparts. Thus education increases and create awareness and better understanding of

menopausal related health issues and coping abilities which leads to better quality of life. Further earning money increase the self-confidence and gain social support in terms of friends and co-workers might increases the better quality of life (Senthilvel, 2018). The most common vasomotor symptoms in menopausal stage of a women are hot flashes, generalized sweating, and night sweats. The physiological mechanisms behind these symptoms remains unclear, however it is believed that it could be the consequence of oestrogen levels (Deecher, 2007). These vasomotor symptoms results in emotional outburst or disturbances, lack of concentration in work and sleep related disorders. In the present study, the menopausal women showed a considerably poor QOL in the physical, psychological, vasomotor, and sexual domains. These findings are in line with the previous studies that mid-life women suffer with the occurrence of vasomotor symptoms (Karmakar, 2017) reported 99% of the menopausal women suffer from physical problems, 96% with psychological disorders, 71% with vasomotor symptoms and 66% with sexual dysfunctions (Nisar, 2009).

The most prevalent psychosocial symptom in the present study was; poor memory that agrees with results of many previous findings, which indicated that the most common and severe symptom that was reported by women was poor memory (Chedraui, 2007; Ganapathy, 2018). Regarding physical domain, our study showed that most of the women had a complaint of severe low backache while study done by Kalahroudi *et al*. (2012) report that feeling a lack of energy is the most complain and the most severe symptom was aching muscles or joints while somatic and psychological symptoms are not related to menopausal status because these symptoms are multi-factorial, rather than due to hormonal imbalance and middle aged women usually experience these symptoms due to health problems related with aging. Active life style plays a major role in the satisfaction, emotional wellbeing, whereas physically inactive report poor psychosocial health (Villaverde-Gutiérrez, 2006). In the present study, physically active women showed a better quality of life in all the domains of MENQOL (vasomotor, psychological, physical and sexual) when compared to women leading sedentary and physically inactive life style. The findings of the study conducted by Kakkar *et al*. (Kakkar, 2007) is in line with the present study which shows that women leading sedentary life style showed higher score of menopausal QOL when compared to working and active lifestyle women. The cross-sectional design of the present study inevitably limits the capacity of the data to project prevalence of menopausal symptoms. Study limitation includes limited sample size and single centred study, thus the study finding lacks generalizability, and thus further multi-centre study is required to generalize the study finding.

Conclusion

Menopause affect physical and psychosocial aspect of women. Further aging affect the overall quality of life of post-menopausal women. The current study findings highlighted that in menopausal women factors such as age, education, and life style plays a significant role in the intensity and increasing frequency of menopausal symptoms and poor vasomotor, psychological, physical and sexual health related quality of life in menopausal women.

Thus there is a need to increase awareness of health condition among post-menopausal women. It is important for health professionals to understand the variation of menopausal symptoms and potential treatments and management strategies, to be able to provide a more tailored approach in advising women. Multidimensional approach through life style modification and counselling the family members is necessary to equip the women to improve the QOL and deal with the inevitable stage of their life.

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