Original Article

Social Determinants and Reproductive Factors of the Menopausal Symptoms among Women in Tabriz-Iran

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Accepted for publication: 20 Jun 2014

Abstract

Background: Menopause is a natural event in which different degrees of psychosomatic changes occur. The social, demographic and behavioral factors in different nations have a significant effect on symptoms of menopause. The aim of this study was to determine the relationship between the personal, demographic, social and reproductive factors with symptoms of menopause and the frequency of the mental and physical symptoms of menopause among women in Tabriz, Northwest of Iran.

Methods: A cross-sectional study was conducted in the clinics and health centers of Tabriz, East Azerbaijan and Iran. A total of 300 women aged 40-60 years filled a questionnaire on the socio demographic variables, reproductive history and symptoms checklist.

Results: Among the symptoms, muscle and joint pain (68.7%), and increased facial hair (20.5%) were the most and the least common ones respectively. According to participants, as age increases, the symptoms worsen ($p=0.003$).

The frequency of the symptoms of the employed women was less than those of retired ones and housewives ($p=0.001$). The physical and mental symptoms had negative relation with educational status ($p<0.05$). An increase in the number of the children, the history of the oral contraceptive use and dysmenorrhea had positive relation with the frequency of the symptoms.

Conclusion: The quality of life of the women during menopause worsens with an increase in age and number of children, whereas it improves with higher educational levels and employment.

Key words: Menopause; Quality of life; Socioeconomic factor; Climacteric

Cite this article as: Alizadeh M, Sayyah-Melli M, Ebrahimi H, Kazemi Shishavan M, Rahmani F. Social Determinants and Reproductive Factors of the Menopausal Symptoms among Women in Tabriz-Iran. SDH, 1(1), 2015:8-14.

Introduction

Menopause by itself is a natural event (1); however, in climacteric period, different degrees of psychosomatic changes may occur. With increasing life expectancy, menopause will be an increasingly important aspect of women's health. Most women agreed that menopause leads to increased freedom especially from contraception and

pregnancies (2). Although women experience similar hormonal changes due to menopause, their menopausal experiences are affected by their age at menopause onset, education, employment, individual and cultural differences, health status, types of menopause (natural and surgical), sources of stress, environmental conditions, relationships and desire for giving birth. Furthermore, they may have a number of problems such as "emptiness syndrome" happening by the time of children leaving home, divorce, loss of spouse, serious health problems, functional losses, illness or death of a family members, and poverty (3, 4, 5, 6).

Menopausal symptoms including hot flashes, night sweats, fast heartbeat, headache, poor memory, difficulty sleeping, anxiety, mood swings, vaginal dryness, dyspareunia, lower urinary tract problems, incontinence, increased risk of infarcts, osteoporosis, joint and back pain are important and associated with psychological status, vasomotor, urogenital, cardiovascular and musculoskeletal systems changes depending on age. (7-12). A study in Turkey revealed that the most frequent menopausal symptom was muscle, joint and bone pain followed by hot flashes, irritability, decreased concentration, poor memory, difficulty in sleeping, decreased libido, anxiety, vaginal dryness, headache, stress incontinence, depression, dyspareunia, fast heartbeat, tenderness in the breast and itching in the vulva (13). Some studies in other countries also report similar symptoms though they have different frequencies (14, 15). The age of menopause varies among countries. However, some studies show that it generally occurs in younger ages in underdeveloped countries compared to developed countries. In the United States of America, the median age of menopause is 51 years (5), in Iran 49.6 years (4), and in Turkey 45.6–47.0 years (16). According to the literature (15, 17), Sociocultural characteristics should also be taken into account in planning and offering individual care.

The frequency and severity of menopausal symptoms could be assessed by quality of life (QOL). Quality of life is a multidimensional concept and several factors may affect its individual, physical and emotional aspects (18). Various validated tools have been used to quantify the influence of the climacteric over QOL (19). However, there is little information about the factors associated with menopausal symptoms and quality of life among the women in East Azerbaijan, Iran.

The present research aimed to investigate factors associated with quality of life by determining the frequency of the menopausal symptoms among the women in Tabriz, Northwest of Iran.

Materials and Methods

In a cross-sectional study conducted in Tabriz, Northwest of Iran, women aged 40-60 were included consecutively among attendees in general, obstetrics/gynecology clinics and health centers.

Written consent had been obtained from the participants before filling the questionnaire. The project was approved in ethics committee of the university under the registration number of 5.1273.

Hormone replacement therapy (HRT), using any medications for psychological and rheumatologic disorders, history of spine surgery and surgical menopause were the exclusion criteria. As some of the participants were illiterate, a trained medical student completed the questionnaire through face-to-face interview to avoid errors in grading symptoms, instead of using self-administration. Menopausal status was identified as pre-menopausal (no irregular periods in the previous 12 months, peri-menopausal (irregular periods less than 12 months), or post-menopausal (cessation of menses for 12 months or longer). The Menopause-Specific Quality of Life Questionnaire (MENQOL) proposed by Hilditch et al. was used to assess the symptoms of the menopause (20). The forward-backward method was used to

validate the Farsi version of the questionnaire (21). A clinician translated the questionnaire to Farsi and another clinician translated it to English, then the third person with good background in English language compared two questionnaires and a final version was provided after some cultural adaptations. The researchers assessed the internal consistency of the questionnaire by Cronbach's alpha coefficient equal to 0.7 to test the reliability.

The questionnaire was composed of 3 parts: socio-demographic, reproductive history and symptoms (QOL). The third part was based on the MEQOL, composed of a series of yes/no questions on the symptoms, if the respondent has experienced the problem in the last month. She also should circle how often the problem occurred on a seven-point Likert scale. A mean score within each domain is estimated according to each participant's response. The higher the score within each domain the greater was the impairment of QOL. Mean domain scores as well as factors associated with higher scores within each of the domains of the questionnaire were determined. Considering the scores of each symptom, the QOL score was between 0 (the worst QOL) and 180 (The best QOL). Lower scores indicate decreased menopausal symptoms and better QOL. Data was presented as means, medians, standard deviations (SD) and percentages (%). Correlation test to determine the relationship between variables and t-test to compare means were used. Analysis of variance was used to compare continuous variables. A p-value <0.05 was considered statistically significant.

Results

Among 393 women, who were assigned to the study, 36 and 28 used psychotherapy medication and HRT respectively, 26 refused to respond the questionnaire, 3 had spinal surgery. Three hundred women aged 40-60 participated. Mean age of participants was 47.9 (SD: 5.8) years (median: 47 years). According to the menopause transition phases 21.6%, 31.9%, and 46.5% were pre-menopause, peri-menopause and post-menopause, respectively. Mean age and SD of each menopause phase were 44.6±3.8, 46.4±4.5, and 53.1±4.8 years, respectively. The marital status of the participants was: 84% married, 9.3% widowed, 4% divorced, and 2.7% single. Details about the women and their husbands' educational status, history of menstrual regularity, and method of contraception are presented in table 1, 2 and 3. The prevalence of symptoms is shown in table 4. Table 5 provides the prevalence of symptoms in pre-menopause, peri-menopause, and post-menopausal women.

Table 1. Women's and their husband's education levels (%)

Levels of education	Illiterate	Primary school	Middle school	High school	Diploma	Bachelor	Master	PhD
Woman	18.7	19.4	9.7	19.7	7	18.1	3	4.3
Spouse	12.5	16	8.9	20.6	6.2	20.6	5.4	9.7

Table 2. The History of the menstrual regularity in premenopausal women (%)

Query	Always	Most times	Sometimes	Seldom	Never
Regular menses	50.7	33.4	9.1	4.1	2.7
Irregular menses	9.6	17.8	21.9	27.1	23.6

Table3. Methods of contraception in premenopausal women

Methods of contraception	Pill	Injection	Implant	Mini pill	IUD	TL
Contraception users (%)	51.9	3.8	0.7	3.5	17.6	12.3
Mean years of use	5.71	3.7	3.3	2.1	7.4	11.09

Table 4. Frequency of symptoms and complaints of women during menopause

Symptoms	%
Aching in muscles and joints	69
Feeling tired or worn-out	66
Feeling anxious or nervous	65
Decrease in physical strength	62
lack of energy feeling	60
Decrease in stamina	60
Accomplishing less than I used to	58
Feeling depressed, down or blue	58
Experiencing poor memory	56
Hot flushes	54
Aches in back of neck or head	49
Low back pain	48
Change in sexual desire	47
Difficulty in sleeping	46
Changes in appearance , texture or tone of skin	45

Sweating	43
Feeling bloated	42
Drying skin	40
Feeling of wanting to be alone	38
Night sweats	38
Vaginal dryness during intercourse	37
Avoiding intimacy	34
Being dissatisfied with personal life	34
Being impatient with other people	33
Weight gain	30
Frequent urination	29
Involuntary urination when laughing or coughing	29
Hearing loss	28
Face edema	26
Increased facial hair	21

Table 5. Frequency of symptoms according to the phase of menopause among the women of Tabriz

Symptoms	Pre (%)	Peri (%)	Post (%)
Hot flushes	31.4	70	75.6
Night sweats	19.2	39.7	64
Sweating	27.3	41.4	64.4
Feeling bloated	37.1	45.9	48.9
Aching in muscles and joints	56	85.2	76.4
Feeling tired or worn-out	57.9	72.1	72.2
Difficulty in sleeping	36	36.7	67.8
Aches in back of neck or head	44	50.8	52.2
Being inpatient with other people	51.2	65	65.2
Decrease in physical strength	48.8	76.7	70.0
Feeling a lack of energy	52.4	63.9	64.8
Drying skin	31.2	47.5	48.3
Weight gain	24.8	34.4	31.1
Increased facial hair	20.6	24.6	16.9
Changes in appearance , texture or tone of skin	33.6	48.3	57.8

Hearing loss	15.3	29.5	44.4
Face edema	18.1	36.1	31.1
Low back pain	43	55.7	51.1
Frequent urination	25.8	32.8	33.6
Involuntary urination when laughing or coughing	21.6	39.3	30.3
Change in sexual desire	31.9	48	70.8
Vaginal dryness during intercourse	28.1	40	50
Avoiding intimacy	22	30	53.5
Being dissatisfied with personal life	28.9	33.9	46.1
Feeling anxious or nervous	57.9	70.7	72.7
Experiencing poor memory	41.6	62.1	69.3
Decrease in stamina	46	65	66.7
Feeling depressed, down or blue	49.2	69.5	61.8
Feeling of wanting to be alone	23.6	22	36.7

Table6: The relationship between menopause symptoms' score (QOL) and socio-demographic and reproductive factors among women in Tabriz-Iran

Factor	Symptom score(QOL)*	P-value
Marital status		
Single	13.3	
Divorced	24.7	**0.01**
Married	37.5	
Widowed	45.2	
Employment		
Employed	27.5	
Retired	34.1	**0.001**
Unemployed	43.1	
Educational status		
Doctor or PhD	13.8	
MSc or MA	12	
BSc or BA	21	
High school	36.6	**0.01**
Elementary school	43.6	
Illiterate	52.9	
History of OCP† use		**0.01**
Positive	43.5	
Negative	31.5	
History of irregular menstruation		**0.009**
Positive	44.1	
Negative	36.7	
History of dysmenorrhea		**0.01**
Positive	41	
Negative	33.9	

***Quality of life: (0: without any symptoms, 180: having all the symptoms with the most frequency)**
† Oral Contraceptives

Hot flushes were significantly more common among post-menopause women (p=0.001), and the marital status had no significant effect on hot flushes (p=0.7). Other menopausal symptoms including night sweats, sweating, being dissatisfied with personal life, experiencing poor memory, decrease in physical strength, sleeping difficulty, dry skin, changes in skin appearance, hearing loss, face edema, and sexual complains were also significantly more in postmenopausal women ($p<0.05$). In addition, feeling of depression, down or blue, anxiety, feeling tired or worn out, muscles and joint pain were significantly more in the peri-menopausal group ($p<0.05$). The mean of symptoms (QOL) score among pre, peri and postmenopausal women was 28.1, 41.6 and 47.8, respectively (p=0.0001). There was a significant relation (p=0.01) between marital status and symptoms. The mean score of symptoms was 13.3, 24.7, 37.5 and 45.2 for single, divorced, married and widowed women, respectively. As shown in table 6 there was a significant relation between symptom score and employment, educational status, contraceptive use and history of dysmenorrhea.

Discussion

The results of this study indicate that most of the Iranian women report some symptoms of menopause at their midlife. The frequencies of most of these symptoms are consistent with other studies (22-24).

In a study on the perception of the women about menopause and prevalence of its symptoms in Nigeria, the most common complaints were joint pain (53.8%), hot flushes(51%) and night sweats (42%) (22). In Tabriz (this) study hot flushes and sweating were not as common as Nigerian study. A possible explanation for this dissimmilarity is the age difference of the women in these studies. The women in Nigerian study were older and all were postmenopausal (22).

However, according to the results of a study in Chile by Lopez et al. (23), the most frequent menopausal symptoms were muscle and joint pain (85%) followed by mental and physical exhaustion (80%). These findings and Delavar's results in a study in North of Iran (25) are similar to results of Tabriz study. The findings of this study further support the idea of Waidyasekera et al. (24) who pointed out that joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%) and hot flushes (39.1%) were the most common symptoms. They indicated hot flushes, sleep problems and joint or muscular pain had increased prevalence from pre to post-menopausal phases. Another important finding in Tabriz study was the differences in the frequency of the symptoms in pre, peri and post-menopausal women. These results are in agreement with the study of Syed Alwi et al. in Malaysia (26) and Gjelsvik's findings on Norwegian women (27). However, the prevalence of symptoms in Tabriz study does not support the results of the findings of Chaw SL et al. in Taiwan (28), which indicated that low back pain, fatigue and impairment of memory were the most common symptoms. These dissimilarities are possibly due to the prevalence of these symptoms in general population, cultural differences and age distribution of these countries.

Among the symptoms of menopause, hot flushes and mental symptoms are more common in Tabriz study compared to other countries (22-27). A possible explanation is higher prevalence of mental problems such as depression and anxiety in general population of Iranian women compared to other countries.

The results of this study revealed the negative relation between educational level and the prevalence of the physical and mental symptoms. These findings are consistent with Gjlsvik et al. (27) study in Norway that indicated women in the lowest education group had more hot flash episodes compared to women with university degree. Likewise, Sievert in a study in United States revealed the same association between the educational level and menopause symptoms. (29).

The results indicated that QOL worsens with an increase in age and number of children, whereas improves with an increased educational level and employment. Finally, as a caveat, our findings must be confirmed in larger, longitudinal designs among a sample from general population.

Acknowledgment:

The authors wish to thank the staff of the health centers and clinics for their help, and all the study participants for their contributions. We are grateful to Dr. Farzaneh Naseri sis, Dr. Roshanak Naseri sis and Dr. Mehrdad Alizadeh Mizani for reading and editing this work. The Research deputy of Tabriz faculty of medicine funded this study.

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