Original Article

Investigation of the relationship between personality characteristics and vasomotor symptoms in menopausal women

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Abstract

Background: Research demonstrates that most of the menopausal symptoms and problems are the reflection of individual and social circumstances rather than the endocrine events of the menopause. As majority of women live 30 years or more through postmenopausal period, treatment and following up their problems during this period is among the main duties of a midwife. The aim of this study is to determine the relationship between personality traits and vasomotor symptoms in postmenopausal women.

Materials and Methods: This correlation study was conducted on 400 postmenopausal women referring to the training maternity centers of Mashhad, Iran. Subjects were selected through simple sampling method and filled NEO Five-Factor Inventory (NEO-FFI (questionnaire. Their daily records of hot flashes and night sweats were also collected. NEO-FFI questionnaire assesses the five personality aspects of neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness. After the data were collected, they were analyzed by Pearson and Spearman correlation coefficients, Mann–Whitney, Kruskal–Wallis, and linear regression statistical tests. $P < 0.05$ was considered as a statistically significant value.

Results: Most of the women were in average level of personality traits. Among the aspects of personality traits, there was a significant correlation between intensity of hot flashes ($P = 0.041$) and night sweats ($P = 0.028$), and conscientiousness.

Conclusions: According to the results of the study, during treatment of the vasomotor symptoms, a midwife should pay close attention to the personality of postmenopausal women to achieve an effective treatment. These women should also be referred to a psychologist, if needed.

Key words: Iran, menopause, personality characteristics, personality traits, vasomotor symptoms

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Introduction

Menopause is defined as the permanent cessation of menstruation.[1,2] Menopause occurs when the remaining follicles in the ovary refrain from responding to high levels of follicle-stimulating hormone (FSH).[3] Transition from the reproductive to non-reproductive period is associated with increased physical and psychological vasomotor symptoms and might take several years.[4] Vasomotor symptoms are the most common and problematic symptoms in postmenopausal women.[1] Approximately 80% of the women experience

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hot flashes and night sweats within 3 months after natural or surgical menopause.[1,3] About 85% of these women have the symptoms for more than a year and 25–50% experience them for 5 years.[3] In the study of Rashidi *et al.*,[2] 75% of the women and in a research conducted by Nikrahan *et al.*,[5] 70% of the women experienced hot flashes and night sweats.

Complications of menopause may cause serious interruption in the daily life and affect the life quality of women.[6] Hot flashes not only cause disquietude at the workplace and interruption in daily activities, but also disturb sleep. Many women reported having difficulty in concentration and emotional instability during the menopausal transition.[7] Hot flash is the main reason for women's referral and their demands for care and hormone therapy during menopause resulting in some health-threatening problems and a huge financial burden to the health systems.[5] Nowadays, research shows that most of the menopausal symptoms and problems are the reflection of individual and social circumstances rather than the endocrine events of menopause.[1] Elavsky *et al*.[8] showed that impact of physical activities on the management of hot flashes differed in postmenopausal women due to their individual traits. Some women suffer from several severe hot flashes and sleep problems during their menopausal period, while others may have minor hot flashes or no reactions needing much attention.[1] The variety of menopausal symptoms in different people is unknown yet.[8] It is assumed that the nature and prevalence of menopausal symptoms are common in majority of the women rather than being the reflection of physiological factors arising from the differences in temperaments, communities, and women's individual perceptions.[1] According to Raymond–Cattell's theory, 50–65 years of age is the time for personality changes in response to physical changes and social conditions.[9] Steriani (2009) showed that the personality traits such as neuroticism, anxiety, and paranoia caused intense menopausal symptoms.[4]

Personality is the aspect of human life allowing the prediction of one's reaction in a given situation.[9] Most psychological theories agree that human personality and its growth are influenced by genetics and environmental factors, but the impact of environmental factors in formation of personality traits is dominant so that it can affect a person's entire character set.[10]

Based on the five-factor model of personality, proposed by Costa and McRay, personality includes five main elements including neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness.[11] Each individual with one of these aspects can behave specifically differently from others, have special expectations, and possess various abilities, behavioral skills, and needs.[12] Browna (2009)[13] found that high score of neuroticism was accompanied by higher frequencies of hot flashes, night sweat, and sleep disturbances. He reported that all of the complications decreased through higher score of extroversion.[13]

Since menopause is one of the inevitable stages of women's life and women should spend about 30 years after menopause,[14,15] better perception of personality traits and individual differences can allow us to identify the subgroups of menopausal women who need additional intervention to improve the quality of life and control the menopausal symptoms.[16,17] With regard to the Iranian demographic features with almost 5 million menopausal women,[18] and the consequential physical, psychological, and economic troubles imposed upon the individuals and their families, and with respect to different conclusions of existing studies, this study was performed to determine the relationship between personality traits and vasomotor symptoms in women reaching menopause.

Materials and Methods

This correlation study was conducted on 400 menopausal women who referred to the maternity clinics of Mashhad University of Medical Sciences from 22 August to 23 December 2012. The sample size needed to determine the relationship between personality traits and vasomotor symptoms was calculated by the equation of average comparison. At first, a pilot study was performed on 50 menopausal women. Then, sample size was determined for personality trait aspects. As the maximum estimation was related to the aspect of extroversion, it was considered as the sample size. By consideration of 95% confidence interval and 80% test power, the sample size was calculated to be 392 subjects. By including subject dropouts, the final sample size was determined as 400 subjects. After obtaining the approval of the research ethics committee of Medical Sciences University of Mashhad, and getting an introduction letter from the Nursing and Midwifery Faculty of Mashhad and presenting it to the authorities in charge of the women health clinics of educational centers, sampling was conducted among qualified menopausal women referring to such clinics.

Inclusion criteria were women aged 45–60 years, whose last menstruation occurred at least 5 years prior to the study, and having at least elementary school literacy and a normal menopause. Exclusion criteria were hormone therapy by estrogens during 3 months prior to the study, spotting in the recent year, smoking (drugs, cigarettes, and hookah)

or use of alcohol, traumatic or stressful events in the past 6 months, heavy physical exercises, any medication for reduction of menopausal complications, a chronic illness, any type of cancer, any abnormal mass in the breast, and thyroid enlargement found in physical examination. Breast and thyroid examinations were performed for those women who met the inclusion criteria. If there were any abnormalities in the breast or thyroid gland in the form of enlargement, the subjects were excluded from the study and referred to the specialist. Exclusion criteria during the study were incomplete record (less than 60%) of daily night sweat questionnaires, spotting during filling the questionnaires, and deplorable events during the study. Women were free to continue in the study or withdraw from it, and after filling up the consent form, they were selected by convenient sampling and their blood pressure, weight, and height were measured.

Study tools of this research included demographic data, obstetric and menstrual status, visual analog scale for anxiety and fatigue, and the questionnaires for daily record of hot flash and night sweat as well as the personality traits questionnaire of NEO Five-Factor Inventory (NEO-FFI). All assessment tools were completed for women in order.

NEO-FFI was graded based on a 5-point Likert's scale (strongly disagree, disagree, no idea, agree, and strongly agree) and the questions were scored from 0 to 5. Some questions were scored conversely. This questionnaire evaluates all five aspects of personality, including neuroticism, extraversion, openness to experience, conscientiousness, and agreement by 60 questions (each personality trait was evaluated by 12 questions). Score of each personality trait was ranked as very low, low, average, high, and very high. Neuroticism refers to one's potential to experience anxiety, stress, hostility, impulsivity, depression, low self-esteem, and pity seeking.[14] These types of people have general tendency to experience negative feelings such as fear, sadness, distress, anger, guilt, and disgust. These people are often concerned, anxious, and severely restless.[10] Normal people get a middle or low score in neuroticism test. For other aspects of personality, a middle or high score is considered as normal.[17]

Reliability of NEO-FFI was confirmed by Haghshenas in Iran. He reported Cronbach alpha coefficients of 0.86, 0.77, 0.73, 0.68, and 0.81 for neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness, respectively.[14]

Visual analog scale for anxiety and fatigue included information on anxiety and fatigue of menopausal women. It assessed subjects' anxiety and fatigue, ranking from 0 to 100 in the recent month. Daily record of hot flashes and night sweats questionnaires were filled up by women for a month. The questionnaire recorded the daily hot flushes for at least 16 times a day (morning until night) and description of each hot flash with regard to its severity, frequency, and duration. In this questionnaire, the intensity of flushing was rated as asymptomatic, mild, moderate, and severe. The duration of each flushing was measured by the chronometer.

The questionnaire of night sweat recorded the frequency and severity of night sweat. In this questionnaire, the severity of night sweats was ranked as asymptomatic, mild, moderate, and severe. Females completed this questionnaire every morning after waking up.

Content validity was used for confirming the validity of all questionnaires. Ten faculty members of Mashhad Nursing and Midwifery School reviewed the questionnaires and commented on them. Then, the study tools were modified based on their comments.

Reliability of visual analog scale for anxiety and fatigue was confirmed by Abbasi in Mashhad by inter-rater reliability.[19] Test-retest was used for confirming the reliability of daily record of hot flash and night sweat, which resulted in $r = 0.9$ and $r = 0.87$, respectively.

The collected data were analyzed by SPSS 14 (IBM Corporation, San Francisco, USA). Descriptive traits were reported via statistical parameters of central tendency and dispersion (mean and standard deviation) and frequency distribution. To achieve the results of the study, Pearson and Spearman correlation coefficients were used. General linear regression model was employed to control confounding variables. Mann–Whitney and Kruskal–Wallis were applied for determination of the relationship between demographic data and midwifery obstetrics with personality traits and vasomotor symptoms. $P < 0.05$ was considered as the significance level and the confidence interval was taken as 95%. The ethics codes were followed during the study, including obtaining approval of the ethics committee of Mashhad Medical Sciences University, presenting the introduction letter from the Nursing and Midwifery Faculty to the authorities of the research environment, explaining the goals and research procedure to the research units and obtaining a written consent from them to participate in the research, and assuring the research units about the confidential nature of the research and the fact that the data would remain confidential and the results would be reported generally. The research units were assured that filling up the questionnaire would not interfere with the treatment measures. The research units were left free to discontinue from the research and end their cooperation with the researcher whenever they liked, with no effect on the trend of their health care and treatment. The results of the research were presented to

the research units on their request. Subjects with abnormal results in their examinations (suspicious lump in the breast, thyroid gland enlargement, and hypertension) or in any of the questionnaires (hot flashes and severe night sweats, personality disorder) were referred to the associated medical or psychological clinics.

Results

Women who participated in the study were aged 52.3 (4.07) years, with menopausal age of 48.8 (3.5) years and amenorrhea duration of 3.5 (1.5) years. They had gravid of 5.6 (2.8) and the average number of their children was 4.6 (2.2).

The educational status of most women (65.7%) was in elementary level and 87.3% of them were married. Most of them (84%) were homemakers, 67.9% reported enough income, 74.6% had blood pressure (BP) ≤140/90, and 74.5% had body mass index (BMI) >25. The maximum score for the aspects of personality was related to openness to experience (51) and the minimum score was related to neuroticism.[5] Most women were in average level of personality traits [Table 1].

Most women had hot flashes and night sweats with average intensity of 27.7% and 24.2%, respectively.

Kruskal–Wallis test results showed that conscientiousness scores were significantly different from the intensity of hot flashes and night sweats [Tables 2 and 3].

The results of Pearson correlation test showed that there was no statistically significant correlation between the number of hot flashes and night sweats, and neuroticism scores, agreeableness, extraversion, openness to experience, and conscientiousness.

Based on Mann–Whitney test, there was a statistically significant relation between hypertension and the extraversion scores ($P = 0.003$), and openness to experience ($P = 0.021$).

Also, according to the Kruskal–Wallis test, no significant relationship was observed between the number of pregnancies, number of children, and subjects' age, and the levels of neuroticism, agreeableness, extraversion, openness to experience, and conscientiousness.

In addition, based on Pearson test, the number of pregnancies and the number of children were significantly associated with the number of hot flashes, night sweats, and the duration of flushing. Meanwhile, subjects' age was not significantly associated to hot flashes, night sweats, and the duration of flushing. The results of the Kruskal–Wallis test revealed that the severity of hot flushes and night sweats was significantly associated to the variables of age, the number of pregnancies, and the number of children ($P < 0.0001$).

There was a statistically significant association ($P < 0.0001$) between the level of education and all traits of vasomotor symptoms, based on Spearman rank correlation test.

Moreover, there was a significant relationship between women's job, and the intensity of hot flashes ($P = 0.021$) and the intensity of night sweats ($P = 0.026$). The results of Spearman test demonstrated no significant relation between BMI and any of the vasomotor symptoms.

In order to control the efficient variables, all variables were entered into a general linear regression model so that the variables affecting the personality traits and the vasomotor symptoms were entered as independent variables and the two major variables were separately added in several stages in a general linear regression model. At the first stage, Kruskal–Wallis and Spearman tests showed significant relationships between the variables of the intensity of hot flashes with age, number of pregnancy, age of menopause, and the level of education. The association between the severity of the night sweats, and the number of pregnancies,

Table 1: Frequency distribution of surface personality characteristics of subjects

Dimensions of personality characteristics levels	Dimensions of personality characteristics									
	Conscientiousness		Openness to experience		Extraversion		Agreeableness		Neurotics	
	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number
Very low	1.8	7	3.0	12	1.5	6	9.3	37	0.8	3
Low	16.5	66	17.5	70	23.3	93	34.8	139	17.0	68
Medium	62.3	249	59.0	236	43.0	172	42.5	170	55.8	223
High	17.0	68	18.3	73	26.3	105	12.8	51	21.8	87
Very high	2.5	10	2.3	9	6.0	24	0.8	3	4.8	19
Total	100.0	400	100.0	400	100.0	400	100.0	400	100.0	400

Table 2: The mean scores of personality traits to differentiate the severity of hot flash in women

Variable	Severity of hot flash Mean (SD)					Kruskal-Wallis test (*N*=400)
	Asymptomatic	Slight	Average	Severe	Total	
Neurotics	21.6 (4.6)	21.5 (5.5)	22.0 (6.0)	20.9 (6.1)	21.6 (5.6)	*P*=0.998 df=3
Agreeableness	31.2 (3.0)	31.4 (3.7)	30.9 (4.3)	31.0 (3.9)	31.1 (3.8)	*P*=0.467 df=3
Conscientiousness	33.2 (0.6)	34.6 (3.5)	34.5 (4.0)	33.7 (2.4)	34.1 (3.3)	*P*=0.041 df=3
Extraversion	28.2 (4.0)	28.2 (4.9)	28.6 (5.1)	28.8 (4.4)	28.4 (4.6)	*P*=0.624 df=3
Openness to experience	32.0 (5.9)	26.1 (4.1)	26.5 (5.0)	25.4 (4.1)	26.0 (4.1)	*P*=0.396 df=3

Table 3: The mean scores of personality traits to differentiate the severity of night sweats in women

Variable	Severity of night sweats Mean (SD)					Kruskal-Wallis test (*N*=400)
	Asymptomatic	Slight	Average	Severe	Total	
Neurotics	21.6 (4.6)	21.5 (5.5)	22.0 (6.0)	20.9 (6.1)	21.6 (5.6)	*P*=0.718 df=3
Agreeableness	31.2 (3.0)	31.4 (3.7)	30.9 (4.3)	31.0 (3.9)	31.1 (1.8)	*P*=0.672 df=3
Conscientiousness	33.3 (2.6)	34.6 (3.5)	34.5 (4.0)	33.7 (2.4)	34.1 (3.3)	*P*=0.028 df=3
Extraversion	28.2 (4.0)	28.2 (4.9)	28.6 (5.1)	28.8 (4.4)	28.4 (4.6)	*P*=0.795 df=3
Openness to experience	25.9 (3.0)	26.1 (4.1)	26.5 (5.0)	25.4 (4.1)	26.0 (4.1)	*P*=0.546 df=3

the level of wife's and husband's education, level of income, and socioeconomic class was statistically significant. At the next step, these variables were entered to the regression model as independent variables and the variables of the intensity of hot flashes and the severity of night sweats were considered as dependent variables. At the end, among the effective variables on the intensity of the hot flashes and the severity of night sweats, none had a significant difference less than 0.05; therefore, they could not be regarded as the predicting variables.

Pearson correlation coefficient, Kruskal–Wallis, and Spearman tests showed a significant difference between the variables of the frequency of hot flashes, and the number of pregnancy and the number of children. The difference between the duration of the night sweats, and the number of pregnancies, the level of income, the level of wife's and husband's education, and the socioeconomic class was statistically significant. The study showed that there was a significant difference between the number of night sweats and the level of income. At the next step, these variables were entered to the regression model as independent variables and the variables of the number and duration of hot flashes and the number of night sweats were considered as dependent variables. At the end, among the effective variables on the number of night sweats, only the variable of income level ($P = 0.008$, $\beta = 0.132$) had a significance level less than 0.05.

The results of Pearson and Spearman correlation coefficient tests indicated that the variables such as anxiety, tiredness, the number of pregnancy, the age of menarche, duration of menstruation, the age of menopause, socioeconomic class, the level of wife's and husband's education, job, job shifts, the level of BP, the quality of home, and income were effective on the personality aspects. These variables were then entered to the general linear regression model as dependent variables. Finally, the level of anxiety was found as the effective variable on the neuroticism aspect ($P = 0.016$, $\beta = 0.152$) and conscientiousness ($P = -0.116$, $\beta = 0.025$). In studying the agreeableness aspect of personality, none of the variables had a level of significance lower than 0.05. In studying the extraversion aspect of personality, it was found that the age of menarche occurrence ($P = 0.01$, $\beta = 0.135$), job ($P = 0.018$, $\beta = 0.147$), and the socioeconomic class ($P = 0.035$, $\beta = 0.144$) were among the effective variables which had significance level less than 0.05. Finally, investigation of the aspect of openness to the experience

indicated that the level of BP ($P = 0.025$, $\beta = -0.111$), housing condition ($P = 0.026$, $\beta = -0.111$), the amount of income ($P = 0.030$, $\beta = 0.109$), and the age of menopause ($P = 0.032$, $\beta = -0.106$) could be reported as the effective variables, which were found as the predicting variables.

Discussion

In this study, among all the aspects of personality traits, there was a significant relationship between conscientiousness score and severity of hot flashes and night sweats. It was such that an increase in conscientiousness score was followed by a reduction in severity of hot flushes and night sweats. Conscientious-oriented people own personality traits such as intellectual curiosity, love for beauty, independent judgment, artistry, flexibility, wisdom, and a high sensitivity toward positive and negative emotions. Probably due to their high flexibility, creativity, etc., these women felt the severity of hot flashes and night sweats less, in comparison to others.[9] The results of Steriani's study showed that physical symptoms such as hot flashes and night sweats were significantly associated with neuroticism and anxiety. However, this association was not statistically significant according to the regression tests.[4] In Elavsky *et al.*'s study, physical activity reduced the frequency of hot flashes in 50% of the cases, which could be attributed to individuals' differences such as depression and anxiety.[8] In the study of Browna, high score of neuroticism was associated with frequent hot flashes and night sweats.[13] This association was not significant in our study.

In addition, these studies also stated that personality traits could partly explain the vasomotor symptoms during menopause. The difference observed between our results and those of the aforementioned studies could be because of the different instruments used to measure personality traits and also the subjects' cultural differences.

In the present study, BMI was positively associated with vasomotor symptoms. An increase in BMI intensified the number, duration, and severity of hot flashes and night sweats.

But this correlation was not statistically significant. In animal studies, it has been found that leptin and tumor necrosis factor alpha are produced in the adipose tissue, which might disturb the secretion of estrogen. This may also be present in humans.[18]

Moreover, in the present study, there was an association between the level of education and all the features of vasomotor symptoms, in such a way that the duration, number, and severity of hot flashes and night sweats increased with a higher educational level.

In the studies of Elen B Gold and Pimenta *et al.*,[17,20] it was reported that women with a bachelor's degree or above had lower rates of hot flashes and night sweats.[16] Also, in Ayati *et al.*'s study, higher level of education was associated with lower rates of hot flashes.[14] This difference could be due to the differences in the personality traits of the subjects, as educated people are more stressed.

It is concluded that personality differences can play an effective role in reporting hot flashes, and their control and effective treatment may improve the prognosis of treatment.

Psychological therapy in addition to pharmacological therapy for postmenopausal women with hot flashes, maintaining good health in the years before and after menopause, and health policy makers' consideration of these issues can reduce the vasomotor symptoms in women and promote women's quality of life during and after menopause.

The limitations of this study included individuals' differences, psychological state, and the examination-induced stress, which might have influenced subjects' answers to the questionnaire, although they were asked to complete the questionnaire before stressful events and examination in a peaceful location.

The accuracy of subjects' response in completing the forms of daily hot flashes and night sweats was considered important, but a thorough control was impossible. Meanwhile, the women were adequately trained for completion of the forms and reminded by telephone once a week.

Although the subjects were educated about the duration of hot flashes, just their answers were considered by the researcher.

Conclusion

According to the results of the study, personality traits were correlated to vasomotor symptoms. As most women spend 30 years or more of their lifetime through postmenopausal period, their protection and treating the problems of this period are among the main duties of a midwife. Therefore, during treatment of the vasomotor symptoms, the midwives should consider the personality of the postmenopausal women to achieve a more effective treatment. If required, these women should also be referred to a psychologist.

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Conflicts of interest

There are no conflicts of interest.

References

1. Speroff L, Fritz MA. Clinical Gynecologic Endocrinology and Infertility. 8th ed. Philadelphia: Lippincott Williams and Wilkins; 2011. p. 643-57.
2. Rashidi Z, Daneshfar A, Shojaei M. Influence of aerobic in eight weeks on reducing depression in Postmenopausal Women. J Isf Med 2014;244:245-56.
3. Ryan KJ, Berkowitz RS. Kistner's Gynecology and Women's Health. 8th ed. Philadelphia: Lippincott Williams and Wilkins; 2010. p. 633-60.
4. Steriani E, McAuley E. Personality, menopausal symptom,and physical activity outcomes in Middle-aged Women. Pers Individ Dif 2009;46:123-8.
5. Nikrahan G, Kajbaf M, Noori A. The relationship between personality traits, coping styles and stress levels in postmenopausal womens. SID 2011;11:49-57.
6. López-Alegría F, De Lorenzi DR. Lifestyles and quality of life of post menopausal women. Rev Med Chil 2011;139:618-24.
7. Berek JS. Berek and Novak's Gynecology. 15th ed. Philadelphia: Lippincott Williams and Wilkins; 2012. p. 1203- 10.
8. Elavsky S, Molenaar PC, Gold CH, Williams NI, Aronson KR. Daily physical activity and menopausal hot flashes: Applying a novel within-person approach to demonstrate individual differences. Maturitas 2012;71:287-93.
9. Lee M. Make Coming Emerge and Character Development. 4th ed. Iran: Tehran University of Publications; 2008. p. 55-7.
10. Jahromi M, Moeen L, Yazdani L. Relationship between personality traits and marital satisfaction in women Kazeroun city. SID 2011;1:143-62.
11. Tubayi Sh, Farashbandi H. Examine traits of patients with migraine headache. J Urmia Med 2011;21:280-5.
12. Narimani M, Khanbapazadeh M, Saied F. Evaluate personality and job satisfaction among the features. J Med Sci 2008;7:77-83.
13. Brown JP, Gallicchio L, Flaws JA, Tracy JK. Relations among menopausal symptoms, sleep disturbance and depressive symptoms in midlife. Maturitas 2009;62:184-9.
14. Ayati C, Kadkhodaeian S, Rood Sari FV, Shakeri MT, *et al*. Examine the relationship between environmental factors and the symptoms of menopause. J Babol Univ Med Sci 2009;1:40-5.
15. Aliloo MM, Arij A, Roudsari AB, Shahjooee T. Relationship between personality traits and coping styles in HIV positive, addict males. Med J Tabriz Univ Med Sci 2011;33:19.
16. Ghorbani M, Azhari S, Esmaily H, GhanbariHashemabadi BA, *et al*. The Relationship between personality traits with quality of sleep in postmenopausal women referred to women's training health centers in Mashhad in 2011. JMRH 2012;15:23-30.
17. Pimenta F, Leal I, Maroco J, Ramos C. Menopse symptoms' predictors: The influence of lifestyle, health- and menopause-related, and sociodemographic characteristics. J Women Aging 2012;24:140-51.
18. Ghorbani M, Azhari S, Esmaily H. The relationship between life style with vasomotor symptoms in postmenopausal women referred to women's training health centers in Mashhad in 2011. Iran J Obstet Gynecol Infertil 2013;15:23-30.
19. Abbasi Z. Effects of Back Massage on Pain of the First Stage of Labor in Nulliparous Women. Mashhad: IJOGI 2005;10(2):45-52.
20. Gold EB, Gladys B, Sybil C, Laurie L, Gordon F, Heidi M, *et al*. Lifestyle and Demographic Factors in Relation to Vasomotor Symptoms: Baseline Results from the Study of Women's Health Across the Nation. AJE 2004;159(9):1189-99.