Original Article

Healthy Life Style Behaviors and Quality of Life at Menopause

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Abstract

Background: Menopause is a natural period of change in which a woman's reproductive ability stops. In studies conducted, it has been shown that the symptoms seen in women decrease with the healthy life style behaviors, and there are not enough studies on this topic.
Objective: The aim of the study was to evaluate healthy life style behaviors and quality of life of women at menopause period.
Methods: The study is a descriptive and cross-sectional type of research. The universe of the study consisted of women who applied to a State Hospital at a particular time and who were at the age of 45-65 years and at menopause period, and the sample of the study consisted of targeted 500 women who accepted to participate in the study voluntarily. The necessary institutional and ethics committee permissions were obtained. "Participant Information Form", "Healthy Life Style Behavior Scale (HLBS)" and "Menopause-Specific Quality of Life Questionnaire (MENQOL)" were used in the collection of the data.
Results: In the study, the average age of women was 56.49±6.30 and the average age of menopause was 47.70±4.70. In the study, 65.1% of the women did not receive any medical help at menopause period and 28.6% of them exercised as an alternative treatment method.
Conclusion: In the study, there was a negative relationship found between total scores of HLBS and total scores of MENQOL. It was determined that complaints decreased with the increase of HLBS in women who were at menopause period.

Key Words: Menopause, healthy life style behaviors, quality of life

Introduction

Menopause is a natural period of change in which a woman's reproductive ability stops, and that appears usually at the end of forties and at the beginning of fifties. As a result of decrease in fertility, it is the outcome of biological aging that occurs suddenly or not suddenly in a few years (Bener, Saleh, Bekir, & Bhugra, 2016; Gerber, Bener, Al-Ali, Hammoudeh, Liu, & Verjee, 2015).

The average menopause age worldwide is 51, ranging from 45 to 55. Menopause age is earlier in developing countries than in developed countries. Menopause age in developed countries is between 49.3 and 51.4 while in developing countries, it is between 43.5 and 49.4. For example, menopause age is 50-51 in Jordan, 47 in Turkey and 48 in Egypt (Gharaibeh, Al-Obeisat & Hattab, 2010; Simon, Kaunitz, Kroll, Graham, Bernick, & Mirkin, 2018).

The most characteristic complaints of postmenopause include vasomotor symptoms such as hot flushes, night sweating, urogenital atrophy, osteopenia, osteoporosis, psychiatric disorders, sexual dysfunctions, skin lesions, cardiovascular diseases, cancer, metabolic disorders and obesity. All of these complaints affect quality of life of women negatively. The most common metabolic disorders in menopause are dyslipidemia, impaired glucose tolerance, insulin resistance, hyperinsulinemia and type 2 diabetes (Lobo, et al., 2014).

In the decision made in 2006 by The Scientific Advisory Committee of The Royal College of

Obstetricians and Gynaecologists, non-drug applications are recommended for the decrease of menopause complaints (RCOG, 2006).

Menopausal symptoms affect quality of life and duration of life of women negatively. For this reason, preventive measures should be considered before pharmacological treatment in women going through menopause.

Therefore, it is very important to make individuals gain healthy life style behaviors. These behaviors are: Medium level physical activity (at least three times a week and at least 30 minutes of moderate exercise); healthy diet, for example, daily salt consumption less than 300 mg (according to British Hypertension Society guidelines), consumption of 1 g calcium per day, providing 800 IU vitamin D intake, reduction of carbohydrate and fat consumption, increase in consumption of fruits, vegetables and seafood; to quit smoking and alcohol; to ensure that these behaviors are remained.

Lowering body mass index (BMI) below 25 kg/m2 is aimed with these behaviors and body weight is maintained at normal level (Elsan, 2018; Lobo et al., 2014; Stachowiak, Pertynski & Pertynska-Marczewska, 2015).

Also, healthy lifestyle behaviors affect the severity of menopausal complaints. In relevant studies, it has been shown that healthy lifestyle behaviors have an important effect in reducing menopausal complaints. The habit of having a healthy diet and regular exercising, the success in stress management, the availability of interpersonal support systems, self-esteem, self-fulfillment and general awareness of health responsibility ensure woman at this period to experience it with less complaints and more comfort (Batista, et al., 2018; Kocak, 2017).

Symptoms seen in menopausal periods in which women spend most of their life time increase the complaints of women and decrease their quality of life. In studies conducted, it has been shown that the symptoms seen in women decrease with the healthy life style behaviors, and there are not enough studies on this topic. Generally, studies conducted are related to alternative treatment methods and they result in an extra cost.

In this study planned, healthy life style behaviors and quality of life of women at menopause period were assessed. Whether the healthy life style behaviors including physical activity, nutrition, spiritual development, health responsibility, interpersonal relations and stress management affect the quality of life of women at menopause period, and the relationship between them will be determined.

Methods

Type of Research, Universe of Research and Sample Selection: This is a descriptive and cross-sectional type of research. Women who applied to a State Hospital in August, September and October 2017 and who were in the age range of 45-65 years and at postmenopausal period constituted the target population of the study. The sample size was calculated to be 500 women.

Application Permit of Research: Institutional permission was obtained from Gumushane General Secretariat and the ethics committee permission was taken from the Scientific Ethics Committee of Gumushane University (Approval Number= 95674917-044-E.9674).

Collection of Research Data and Data Collection Tools: A pilot study was conducted with 15 women who answered the questionnaires. Thereafter any of their comments were used to improve the questions so that they would be better understood. Before each form was filled by the participants, the aim of the study was explained to them. Verbal or written consent were obtained from women who accepted voluntarily to participate in the study. The data was collected by face to face interviews with the women included in the study, using data collection tools. The answers were recorded by reading each question one by one to each person, in a loud and clear way. The questionnaire form which consisted of three parts and prepared by the researcher as a result of the evaluation of relevant literature was applied to the women who met the criteria for inclusion in the study. The first part of the questionnaire form was a question form questioning participants' socio-demographic, obstetric and gynecological characteristics and their chronic disease history, information on menopause period and general health behaviors. The second part was “Healthy Lifestyle Behavior Scale (HLBS)” and the third part was “Menopause-Specific Quality of Life Questionnaire (MENQOL)”.

Healthy Lifestyle Behaviors Scale (HLBS)

The scale was developed by Walker et al. in 1987 and re-examined in 1996. Bahar et al.

adapted the scale into Turkish in 2008 (Bahar, Beser, Gordes, Ersin, & Kisal, 2008; Walker,

Sechrist & Pender, 1987). The scale measures the health behaviors developed relatively with the healthy life style of the individual. The scale has a total of 52 items and 6 subgroups (self-realization, health responsibility, exercise, nutrition, interpersonal support and stress management). The total score of the scale gives the score of healthy lifestyle behaviors scale (HLB). All items of the scale are scored positively and no items are scored reversely. The rating is a 4-point likert type (never (1), sometimes (2), often (3), regularly (4)). For the whole scale, the lowest score is 52 and the highest score is 208. The higher the score taken from the scale, the better the HLBS

Menopause-Specific Quality of Life Questionnaire (MENQOL)

The scale was developed by John R. Hilditch, Jacqueline Lewis et al. in 1996 to create a quality of life scale that is specific to menopausal health status with psychometric properties based on women's experience, was adapted to Turkish society by Kharbouch and Şahin in 2005, and validity and reliability of the questionnaire were determined (Kharbouch & Şahin 2007). Each subdomain score of MENQOL is ranged from 1 to 8. 1 point indicates that there are no problems faced about that topic. 2 points indicate that this topic exists, it is being experienced but it is not annoying at all. Points between 3-8 indicate the severity of the problem and the increasing levels. The scale consists of four symptoms: vasomotor, psycho-social, physical and sexual.

Results

The average age of women who participated in the study was 56.49±6.30. 43.2% of the women and 35.9% of their spouses were primary school graduates, 73.2% were housewives and 56.4% of their spouses were retired. 74% of the participants were married and 50.4% stated that their expenses were equal to their income.

Of the women, 16.4% (*n*=82) were smokers and 0.8% (*n*=4) were consuming alcohol. The average body mass index (BMI) of the women was 28.90±4.78. The average menopause age of women who participated in the study was 47.70±4.70. The information status of menopause period of women is given in table 1.

A 65.1% of the women did not receive any medical help during menopause period, only 39.5% received information from healthcare personnel, 31.6% received herbal treatment for their complaints and 28.6% exercised as an alternative treatment during menopause period.

The average HLBS and MENQOL scores of women who participated in the study are given in Table 2.

According to the comparison of HLB scale scores among women, the lowest score was found in exercise subscale, 13,87±5.07 (*min*=8, *max*=32), the highest score was found in interpersonal support subscale, 26.31±5.16 (*min*=9, *max*=36), and the total score average of HLB was 132.31±21.42 (*min*=52, *max*=228).

According to the comparison of MENQOL scores among women, the lowest score was found in sexual symptoms subscale, 8.77±5.23 (*min*=0, *max*=24), the highest score was found in physical symptoms subscale, 47.09±18.38 (*min*=0, *max*=128), and the total score average of MENQOL was 83.49±29.10 (*min*=0, *max*=228).

No significant difference was found in the advanced analysis test (ANOVA) performed between the delivery method and place of women, and HLBS and MENQOL.

Significant differences were found as a result of the comparison of the educational status scale scores of women at menopause period. As the education level of women increased, HLBS scores (*F*=4.346, *p*=.001) increased. As the education level of women increased, physical symptoms subscale and total scale scores of MENQOL decreased (*F*=3.538, *p*=.004).

In addition, as the income status of women decreased menopause-based complaints increased (*F*=8.869, *p*=.000). Also, psychosocial and physical symptoms which were among the sub-groups of MENQOL increased. The relationship between HLBS and MENQOL scores of the participants is shown in Table 3.

Table 1. The information status of menopausal transition of women

Status of receiving medical help at menopause period	***n***	***%***
Yes	174	34.9
No	325	65.1
Total	499	100.0
Sources used for the information at menopause period	***n***	***%***
TV (Media)	67	13.6
People around	232	47.0
Health personnel	195	39.5
Total	494	100.0
Status of using herbal treatment to eliminate complaints at menopause period	***n***	***%***
Yes	156	31.6
No	339	68.4
Total	495	100.0
Status of beginning any alternative treatment at menopause period	***n***	***%***
Yoga	2	0.4
Massage	48	9.6
Exercise	143	28.6
Acupuncture	3	0.6
Other	187	37.4
No	117	23.4
Total	500	100.0

Table 2. The average Healthy Life Style Behavior Scale and Menopause-Specific Quality of Life Questionnaire scores of women

HLBS	***n***	***ort±ss***	***min***	***max***
Health Responsibility	498	24.07±5.65	9	55
Exercise	498	13,87±5.07	7	48
Nutrition	498	22.77±4.55	11	44
Self-Realization,	498	25.56±4.69	10	38
Interpersonal Support	498	26.31±5.16	12	40
Stress Management	498	20.09±4,18	9	36
Total	498	132.31±21.42	67	222
MENQOL				
Vasomotor	493	11.21±4.75	0	18
Psychosocial	497	17.12±9.43	0	48
Physical	498	47.09±18.38	0	97
Sexual	481	8.77±5.23	0	18
Total symptoms	498	83.49±29.10	0	156

Table 3. The relationship of Healthy Life Style Behavior Scale and Menopause-Specific Quality of Life Questionnaire scores

HLBS sub-dimension		Vasomotor	Psychosocial	Physical	Sexual	Total
Health Responsibility	*r*	.029	-.072	**-.099***	.054	-.062
	p	.522	.108	**.027**	.237	.170
Exercise	*r*	.028	**-.089***	**-.131****	-.074	**-.123***
	p	.532	**.048**	**.003**	.108	**.006**
Nutrition	*r*	**.109***	-.014	-.022	.089	.013
	p	**.016**	.753	.621	.050	.775
Self-Realization	*r*	-.018	-234**	**-.090***	-.084	**-.155****
	p	.685	.000	**.044**	.067	**.001**
Interpersonal Support	*r*	.013	-.205**	-.050	-.084	**-.109***
	p	.774	.000	.263	.065	**.015**
Stress Management	*r*	.018	-.135**	-.056	-.024	-.073
	p	.697	.003	.212	.608	.104
Total	*r*	.044	-.164**	**-.095***	-.014	**-.107***
	p	.325	.000	**.034**	.755	**.017**

r= spearman correlation analysis

As a result of the evaluation of the relationship between HLBS and MENQOL scores: A negative relationship was found between HLBS health responsibility sub-dimension and MENQOL physical symptoms sub-dimension. It was determined that as the health responsibility increased in women, especially physical complaints related to menopause period decreased.

A negative relationship was found between HLBS physical activity subscale, and MENQOL psychosocial symptoms, physical symptoms subscales and total scores. It was determined that as physical activity increased in women, physical complaints and psychological problems related to menopause period decreased.

There was a positive relationship between HLBS nutrition sub-dimension and MENQOL vasomotor symptoms sub-dimension. It was determined that the nutritional status of women at menopause period affected vasomotor symptoms.

There was a negative relationship found between HLBS self-realization sub-dimension, and MENQOL physical symptoms sub-dimension and total scores. With the increase of spiritual development, physical complaints decreased in women at menopause period.

A negative relationship was found between HLBS interpersonal relations subscale and MENQOL total scores. It was determined that menopausal symptoms decreased with

the increase in interpersonal relations among women.

In the study, a negative relationship was found between the total scores of HLBS and the total scores of MENQOL. Women at menopause period were found to have decreased complaints as HLBS increased.

Discussion

World Health Organization (WHO) defines menopause as the "permanent termination of menstruation as a result of the loss of ovarian activity". It is associated with the decrease in estrogen secretion that occurs physiologically due to loss of follicular functions. The average menopause age worldwide is 51, ranging from 45 to 55 (Gharaibeh, Al-Obeisat & Hattab, 2010). The average age of women in the study was 56.49±6.30. 43.2% of the women and 35.9% of their spouses were primary school graduates, 73.2% were housewives and 56.4% of their spouses were retired. 74% of the participants were married and 50.4% stated that their expenses were equal to their income. Educational status of women was lower than of their spouses. Our findings are similar with the study conducted by Tunc (Tunc, 2014). The higher education level, the fact that women have more knowledge about health-related issues and healthy life styles can lead them to be less affected by menopausal symptoms. In the study conducted by Koyuncu, severe somatic and urogenital symptoms were less common among menopausal women who had secondary and higher education level (Koyuncu, 2015).

The average number of pregnancies of women was 4.66±2.63, the average number of births was 3.78±2.04, the average number abort was 1.58±1.09, and the average number of abortion was 1.54±0.88. 79.7% of the participants had vaginal delivery, 38.2% gave birth at home and 12.8% had a gynecological operation. The fact that the province where the study was conducted has a traditional cultural structure, the fact that the age range of women who participated in the study was advanced, and the fact that the education levels of women were low are considered as the reasons for high rate of delivery at home.

65.1% of the women did not receive any medical help during menopause period, only 39.5% received information from healthcare personnel, 31.6% received herbal treatment for their complaints and 28.6% exercised as an alternative treatment during menopause period. In particular, the findings indicate that women spend menopause period which is the one third of their lives, without having knowledge about the period. In the study conducted by Tunc, the women's status of receiving information about menopause was evaluated and it was found that 58.7% of them received information, 77.2% received this information from a physician and 14.1% received it from a midwife (Tunc, 2014).

When HLB scale scores were compared among women, it was determined that the best health behavior was interpersonal relations, and the least behavior was physical activity.

When MENQOL scores were compared among women, it was determined that the least common complaint was about sexual symptoms and the most common complaint was about physical symptoms.

Significant differences were determined between income and education status of women at menopause, and HLBS and MENQOL scores. It was found that as the education level and income status of women increased, HBLS increased, the menopause-specific complaints reduced and the quality of life of women decreased.

Women who have low family income status are considered to less benefit from healthcare services than women who have high income status. In some studies conducted, symptoms of menopause are reported to be more frequently seen in women who have low family income status (Im, Ko & Chee 2014; Karacam & Seker 2007). Also in a study conducted, it was stated that the frequency of menopausal symptoms was lower among

women who had low family income. It was found that the presence of severe somatic symptoms was lower among women who had good family income and it was reported that this difference was abolished, according to the result of logistic regression analysis (Kaulagekar, 2011).

As a result of the evaluation of the relationship between HLBS and MENQOL scores, it was determined that the physical symptoms decreased as the health responsibility of women at menopause increased. Physical symptoms and psychological symptoms were found to decrease with the increase of physical activity. It was determined that the nutritional status and vasomotor symptoms of menopausal women were affected, that physical symptoms decreased with the increase of self-realization, and also that the symptoms of menopause reduced with the increase of interpersonal relations.

In the study, a negative relationship was found between the total scores HLBS and the total scores of MENQOL. It was determined that complaints and thus quality of life decreased with the increase of HLBS in women at menopause.

Conclusion

Reduction of the complaints of women at menopause period to minimum level with healthy life style behaviors and thus the increase of the quality of life of women are important factors. In menopausal period, it is very important for women to know what to do against physical and psychological problems experienced, to use effective coping mechanisms, to be supported to continue their healthy life and to gain healthy life style behaviors.

Main points in coping with menopause:

1. To provide necessary trainings on menopause to women and their families,
2. To discuss aspects related to menopause,
3. To overview healthy life style behaviors such as diet, exercise, smoking and to support individuals to gain positive health behaviors,
4. To overview methods of coping with stress and to encourage the development of them,
5. To discuss personal, health and social issues affecting middle-aged women,
6. To ensure that appropriate counseling is carried out individually or in groups
7. To increase the quality of life of women at menopause period, are needed.

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References

Bahar Z, Beser A, Gordes N, Ersin F, & Kisal, A. (2008). The validity and reliability study of the scale of healthy lifestyle behaviors II. *Cumhuriyet University School of Nursing Journal*, 12, 1-13. [Original work published in Turkish].

Batista JP, Mariano IM, Souza TCF, et al. (2018). The Acute Effects of Mat Pilates on Hemodynamic and Salivary Nitrate Responses After Exercise in Postmenopausal Women. *Journal of Aging and Physical Activity*, 9:1-22.

Bener A, Saleh NM, Bekir A, & Bhugra D. (2016). Depression, anxiety, and stress symptoms in menopausal arab women: shedding more light on a complex relationship. *Annals of Medical and Health Science Research*, 6(4), 224-231.

Elsan T. (2018). Evaluation of the quality of life of period of menopause women in an ASM region. Master Thesis, Kırklareli. [Original work published in Turkish].

Gerber LM, Bener A Al-Ali H, et al. (2015). Bone mineral density in midlife women: the study of women's health in Qatar. *Climacteric*, 18(3), 16-22.

Gharaibeh M, Al-Obeisat S, & Hattab J. (2010). Severity of menopausal symptoms of Jordanian Women. *Climacteric*, 13(4), 385-394.

Im E, Ko Y, & Chee W. (2014). Ethnic differences in the clusters of menopausal symptoms. *Health Care for Women İnternational*, 35(5), 549-65.

Karacam Z, & Seker SE. (2007). Factors associated with menopausal symptoms and their relationship with the quality of life among Turkish women. *Maturitas*, 58(1), 75-82.

Kaulagekar A. (2011). Age of menopause and menopausal symptoms among urban women in Pune, Maharashtra. *The Journal of Obstetrics and Gynecology of India*, 61(3), 323-6.

Kharbouch SB, & Şahin NH. (2007). Determination of quality of life in menopausal periods. *Florence Nightingale Journal of Nursing,* 15(59): 82-90.

Kocak DY. (2017). Effect of pender's healthy life style training, which is applied in the direction of health promotion model, on eliminating the menopausal symptoms, Doctoral Thesis, Istanbul. [Original work published in Turkish].

Koyuncu T. (2015). Menopause Symptoms, Menopause Knowledge Level and Evaluation of the Effectiveness of Health Education on Menopause Symptoms in Middle Age Women in Beylikova. Thesis in Medicine, Eskişehir.

Lobo RA, Davis SR, De Villiers TJ, et al. (2014). Prevention of diseases after menopause. *Climacteric,* 17, 540-556.

Royal College of Obstetricians and Gynaecologists (RCOG). 6 May 2006. Scientific Advisory Committee. Alternatives to HRT for the management of symptoms of the menopause. Opinion paper.

Simon, J.A, Kaunitz, A.M, Kroll, R, et al. (2018). Oral 17β-estradiol/progesterone (TX-001HR) and quality of life in postmenopausal women with vasomotor symptoms. *Menopause,* Nov 26.

Stachowiak, G, Pertyński, T, & Pertyńska-Marczewska, M. (2015). Metabolic disorders in menopause. *Przeglad Menopauzalny,* 14(1), 59-64.

Tunc N. (2014). Determination of Menopausal Women 's Knowledge, Complaints and Coping of Menopause Period. Master Thesis, Sivas. [Original work published in Turkish].

Walker SN, Sechrist KR, & Pender NJ. (1987). The Health- Promoting Lifestyle Profile: development and psychometric characteristics. *Journal of Nursing Research,* 36(2), 76-81.