Original Article

Could a Midwife Leading Health Behavior Counseling Improve Self-Care of Women During Perimenopause? A Quasi-Experimental Study

Katayoon Faraji, Mahnaz Akbari Kamrani, Sara Esmaelzade Saeieh, Malihe Farid

Departments of Midwifery and Community Medicine, Faculty of Medicine, Alborz University of Medical Sciences, Karaj, Iran

Abstract

Background: Promoting the health and providing a sense of well-being in each period of a woman's life could improve her life quality and would bring lots of benefits to the community. Menopause has a remarkable impact on quality of life during the climacteric stage and the early stages of post menopause. **Aims:** This study aims to evaluate the effectiveness of a behaviour change counselling program based on the model A, which is planned in order to improve the women self-care during the climacteric stage. **Methods:** The study is quasi-experimental type, conducted before and after counselling intervention, to evaluate effect of the health behaviour counselling of model 5A on self-care of 42 women aged 39-51 (during climacteric stage) in areas of general health, physical activity, nutrition, sleep, psycho-social health, body image and sexual health. After obtaining permission from the ethics of Alborz University of Medical Sciences, a clinical trial registry (IRCT2016042427557N1) was performed. **Results:** Results of non-parametric Fridman test showed a change in score average grade of self-care before and after the health behaviour counselling in the area studied ($P < 0.0001$). There was a significant difference between the self-care score before counselling, and one and three months later, in all areas except body image and sleep. **Conclusions:** Multidimensional changes of women in climacteric stage may affect their life quality. They need more information about menopause process to manage its symptoms. Results of this study highlight more the effectiveness of health behaviour change counselling planned by emphasizing the individual's self-care level.

Keywords: *Climacteric, health behavior counseling, self-care*

Introduction

Climacteric period is defined as a stage of transition from reproductive to nonreproductive stage.[1] This period can start with a rise in follicle-stimulating hormone and characterized by the different interval of cycles and the absence of menstruation in some cycles and will end with last menstruation.[2] The transition period is marked by physiological inconsistency in endocrine glands and unpredictable changes in hormones;[3] these symptoms are often seen that could be associated with reduced capabilities of ovarian follicles and then loss of estrogen in climacteric period, including disorders in menstrual pattern (e.g., a lack of ovulation and decreased fertility), menstrual irregularities in frequency of menstruations and eventually amenorrhea, vasomotor instability, dyspareunia, general skin atrophy, urinary problems (e.g., urinary urgency, cystitis, and nonbacterial urethritis), health problems caused by long-term estrogen deprivation (e.g., osteoporosis and cardiovascular

Access this article online

Quick Response Code:

Website: www.jmidlifehealth.org

DOI: 10.4103/jmh.JMH_18_17

Address for correspondence: Dr. Mahnaz Akbari Kamrani, Department of Midwifery, Faculty of Medicine, Alborz University of Medical Sciences, Karaj, Iran.
E-mail: akbarikamrani21@gmail.com

How to cite this article: Faraji K, Kamrani MA, Saeieh SE, Farid M. Could a midwife leading health behavior counseling improve self-care of women during perimenopause? A quasi-experimental study. J Mid-life Health 2018;9:195-9.

disease),[4] psychiatric symptoms (e.g., anxiety, depression, low self-esteem, irritability, and basic instability),[5] reduced cognitive function, sexual problems, and psychosocial problems (e.g., insomnia and tiredness, poor concentration, and forgetfulness).[6]

The prevalence of menopausal symptoms in Iranian women menopause includes flushing (59.5%), mood swings (42.6%), vaginal dryness (41.1%), sleep problems (40.4%), night sweats (38.2%), memory loss (32.3%), urinary symptoms (18.3%), palpitations (6.6%), anxiety (5.8%), muscle and joint pain (59.9%), depression (4.4%), and irritability (3.6%).[7] The median age at menopause for 95% of women ranges from 39 to 51 years,[4] and the mean age of menopause in Iranian women is 48.2 years.[8] According to the latest population census, the female population of Iran aged 39–51 years is measured about 13.2% of the total population.[9] Life expectancy has usually reached 74 years among Iranian women. Women spend more than 25 years of their life in the menopausal period. Today, women, especially in developing countries, spend one-third to one-half of their life in menopause or climacteric.[10] Multidimensional changes in climacteric women may affect their quality of life. Most women may be faced with physical, psychological, familial, and social changes during menopause that will affect the quality of their life so that menopausal women require more information and a method to control the symptoms of menopause.[11] Medical interventions at this stage of life should be viewed as an opportunity to provide and strengthen preventive care programs. The preventive health-care issues of women are familiar ones. They can include smoking cessation, body weight control, alcohol consumption control, the prevention of cardiovascular disease and osteoporosis, maintaining mental health (e.g., sexual issues), cancer screening, and treatment of urinary problems.[4]

Women in the transition to menopause require a system of support from family, friends and medical professionals, and people who can explain physical and mental disorders that they have experienced.[11] Both training and consultation, particularly during the period of menopause in women, can be increased their awareness in this area. Increased awareness changes their attitude to reduce their stress. On the other hand, it can be led to health promotion in this group of people by strengthening their health behaviors.[12] According to positive impact of continuous care counseling on the quality of life dimensions, 5 A model known as the health behavior counseling is used by caregivers on several occasions including the health behavior counseling to quit smoking, which it is based on evidence and may be helpful in modifying the behavior and providing proper health care. The health behavior counseling includes five steps of assessment, (a person's beliefs and knowledge), advice (providing specific information about health risks and benefits of behavior change), agreement (setting goals based on interest, trust, and cooperation of authorities that improve their ability to change the behavior), assistance (identifying personal barriers, strategies, problem-solving techniques, and social support), and arrangement (determining program to follow-up, such as meetings, phone calls, and sending messages for reminders).[13] Menopause is a natural event – not a disease. Changes in menstrual function are not a symbol of grim change. There are good physiological reasons for menstrual function. Understanding the physiological change can significantly strengthen natural and positive attitudes about menopause.[4] The aim of this study was to evaluate the efficacy of the health behavior counseling program based on 5 A model to improve women's self-care during the climacteric period.

Methods

Study design and participants

This study was a quasi-experimental one (pre- and post intervention study). In the present study, the effect of health behavior counseling (5A model) was examined on women's self-care aged 39–51 years in seven dimensions: general health, physical activity, nutrition, sleep, psychosocial health, body image, and sexual health. Inclusion criteria for participants in this study were as follows:

Their menstrual cycle has become irregular recently, lack of physical and psychological diseases (such as thyroid disease, high blood pressure, diabetes, bone and joint diseases, and cancer), not being treated with medication to relieve premenopause symptoms, lack of hysterectomy and oophorectomy surgery, their last period has not passed at least 6 months, lack of addiction to drugs, and fluency in Persian language. Sampling in this study was convenient that it was performed on eligible women referred to female park of Jahanshahr in Karaj in Iran. Sampling was performed from April to December 2016. Based on the results of studies conducted and using the sample size that estimates formula comparing two ratios in various self-care areas in the climacteric period of women aged 39–51, the sample size was determined to be 42 people.

- Alfa = 0.05
- Beta = 0.2
- $\mu_1 = 31/95$
- $\mu_2 = 37/30$

- $SD_1 = 7/43$
- $SD_2 = 10/16$

$$n = \frac{\left(Z1-\frac{\alpha}{2}+Z1-\beta\right)^2\left(\sigma_1^2+\sigma_2^2\right)}{\left(\mu_1-\mu_2\right)^2}$$

Measurement scales

The tools used in this study were a questionnaire consisting of demographic characteristics and researcher-made questionnaire of self-care of the women aged 39–51 years.

Demographic questions included age, marital status, age at marriage, age at first menstruation, number of pregnancies, number of children, educational level, income, employment status, client occupation, husband's occupational status, educational status, ethnicity, insurance status, height, weight, and living place, which were 18 questions.

Self-care questionnaire contained of women aged 39–51 years included 73 questions and 7 domains. Domains (and number of questions) included general health (24), physical activity (6), nutrition (13), sleep (8), psychosocial health (8), body image (8), and sexual health (6).

The validity of researcher-made questionnaire was confirmed using face validity and content validity with considering the view of experts and women aged 51–39 years. Its reliability was also assessed and confirmed using test–retest. To measure body mass index (weight (kg) divided by height (m) squared), digital scale and band meter were used.

Data collection and ethical approval procedure

After obtaining permission from the Ethics Committee of Alborz University of Medical Sciences, a clinical trial registry (IRCT2016042427557N1) was performed. Then, researcher informed the public at the women park by flyer and other advertising tools. For eligible participants, after obtaining their conscious consent, and completing the demographic counseling, times were determined for each person. Content and the number of counseling sessions were performed based on health behavior counseling (5A). Consultation was carried out by researcher in five stages:

1. Investigating the self-care level: At this stage, according to the interview results, a person's self-care status was accurately assessed
2. Guidance of client about health risks and benefits of behavior change: At this stage, health risks of the subjects were reminded for them and the benefits of behavior change were emphasized
3. Agreement with client in setting the realistic goals: According to identified problems of each person, appropriate behavioral objectives were determined and practical program was designed for each goal
4. Assistance to develop practical program
5. Follow-up: The performance of study samples was followed up from 1 to 3 months after counseling sessions. In fact, to ensure implementation of practical programs by subjects, researcher contacted with them by phone call, SMS, and telegram so that practical implementation of the program to be reminded for them. From the second session of the counseling, educational packages with content of climacteric cares were provided to participants.

One and three months after counseling sessions, questionnaire was completed by the participants and self-care level of study samples relative to situation before health behavior counseling was measured.

Statistical analysis

After collecting the data, they were analyzed using IBM® SPSS® Statistics Base. For descriptive tests, mean, standard deviation, and absolute frequency were used, and for analytical tests, Friedman and Wilcoxon nonparametric test was used.

Results

The average age of 42 participants in the study was 45.50 ± 3.04. All participants have experienced pregnancy and had children. Most participants (about 97.6%) were covered by insurance, and 35.7% of them had not gone to the doctor for the medical examinations (check-up) as well. From among the samples that were studied, 16.7% were college educated, 35.7% were high school educated, and 47.5% were under diploma. Income level of 71.4% of these individuals was moderate.

Table 1: Self-care frequency distribution (part of research units) before the health behavior counseling (*n*=40)

Variable	Frequency (%)
Pap smear done in the past 1-3 years	19 (45.2)
Mammography done in the past 1-3 years	16 (38.1)
Breast self-examination done in the past 6 months by a midwife or doctor	8 (19)
Nutrition counseling received	15 (35.7)
Physical activity counseling received	8 (19)
Sexual counseling received	0 (0)
Worries about menopause	28 (66.7)
Night sleep pattern change	20 (47.6)
Physical attraction change	17 (40.5)
Vaginal dryness	13 (31.7)
Decreased sexual activity in the past 3 months	14 (34.1)
Dyspareunia experience in the past 3 months	13 (31.7)

Table 2: Average and standard deviation of three measurements of self-care score variable along with Friedman test results

Friedman test results			After test (3 months after counseling)		After test (1 month after counseling)		Before test (before counseling)		Self-care score
P	Df	χ^2	SD	Average	SD	Average	SD	Average	
<0.0001	2	52.288	17.93	74.56	23.01	59.58	23.73	54.35	Physical activity
<0.0001	2	73.569	6.71	94.55	12.64	78.98	13.91	66.79	Nutrition
<0.0001	2	75.213	9.07	83.13	11.60	73.06	11.48	72.56	Psychosocial health
<0.0001	2	68.000	15.46	79.02	19.62	60.00	19.62	60.00	Sleep
<0.0001	2	70.764	1.18	14.51	2.23	11.82	2.31	11.78	Body image
<0.0001	2	75.755	15.78	61.54	15.45	49.64	16.51	40.31	General health
<0.0001	2	36.105	16.61	77.91	23.68	65.41	23.50	65.00	Sexual relation

SD: Standard deviation

The frequency distribution of research units was examined in the areas of general health, physical activity, nutrition, sleep, psychosocial health, body image, and sexual health. Table 1 includes some of these items before counseling.

Table 2 shows average and standard deviation of the self-care score for each area in three stages of preintervention, 1–3 months later, along with Friedman two-way analysis as an inferential statistic to study differences of self-care average grade in each area.

The results of Wilcoxon test for pairwise comparison of self-care mean score for each area in three stages of precounseling 1–3 months later showed that there was a significant difference between the self-care score before counseling and 1 and 3 months later in physical activity, nutrition, general health, psychosocial health, and sexual function areas ($P < 0.0001$). There was also a significant difference between the self-care score 1–3 months after counseling ($P < 0.0001$) in the physical activity area while the highest rate of self-care in each mentioned area was related to 3 months after counseling. Moreover, there was no significant difference between the self-care score in the sleep and body image areas, before counseling and 1 month after it. However, in the sleep area, there was a significant difference between the self-care score before counseling and 3 months after it and also between the self-care score 1 and 3 months after counseling ($P < 0.0001$) in the sleep area.

Discussion

Because of importance of the impact of counseling on women's self-care during the climacteric, this study aimed to determine the effect of health behavior counseling on the healthy self-care of women aged 39–51 who went to Women Park in Jahanshahr in Karaj in 2016.

Results of the current study indicated the positive impact of the health behavior change counseling on the self-care level in all areas studied. Although none of these studies accessed by the researchers of the current study, which had been carried out during the climacteric, were not the health behavior change counseling type, effectiveness of this type of intervention was compared with other interventions. In the physical activity, results would correspond to the research result of Karimy[14] aiming at determining effect of education on the women health-promoting behaviors based on individual empowerment model. Results indicated that in menopause period, there has been a significant difference between the health-promoting behaviors before and after the educational intervention ($P < 0.05$). However, result of a research conducted by Golyan Tehrani *et al.* (2002), aiming at promoting the women health in menopause age with an average age of 49.5 ± 4.5 through educating the self-care principles, indicated an increase in percentage of the research unit exercises during 6 weeks after education, so that rate of those who did not take any exercise increased from 70.4% to 65%, but such difference was not statistically significant, because the mentioned research time might has been less.[12] Comparing to this group, in research of Ghotbi *et al.*[15] (2014), Golyan Tehrani *et al.*[12] (2007), and Navidian *et al.*[16] (2010) in the nutrition area, there was a significant increase ($P < 0.05$, $P < 0.001$, $P = 0.021$, and $P = 0.005$, respectively) between the self-care behavior score before and after the education in the areas related to diet that were in line with our study. In the psychosocial health area, results would correspond to a study of Yazdkhasti *et al.*[17] (2015) and Mohammadi Zeidi *et al.*[18] indicating effectiveness of supportive group education in improvement of life quality and irritating symptoms in postmenopausal women in the psychosocial aspects ($P = 0.001$). According the results of this study, authors suggested that health behavior counseling could be effective after 4 weeks in all dimensions of self-care except sleep and body image. In the sleep area, results

were similar to findings of Sepehrian[19] (2012) and Farshadbakht *et al*.[20] which had, respectively, studied the effect of lifestyle and walking on improving the sleep quality of women aged 40–50 in premenopausal stage. The most common elements of life quality are one's attitude such as body image and attitudes about treatment and symptoms. Body image may be the most important part of a self-concept because the first feature which is judged at facing another person can be physical appearance. Findings showed that body image was always an inclusive concern, especially for women. Psychological and physiological changes that occur with aging and menopause can be led to postmenopausal women's concerns about their weight and nutrition. Reduced body consent could be in line with the reduced life quality. Results from this study showed that due to nature of this area, effectiveness of intervention was significantly improved after 3 months.

Multidimensional changes in women during climacteric may affect their life quality. Women require more information to control the symptoms of menopause. Meanwhile, interest in using the alternative ways to reduce unnecessary interventions has increased, and counseling can play an important role in improving self-care and reducing the treatment costs. Health-care workers, especially midwives and midwifery counselors, should attempt to provide a proper and complete counseling that women need at climacteric stage. Therefore, results of this study highlight more the effectiveness of health behavior change counseling planned by emphasizing the individuals' self-care level.

Acknowledgments

This study was a part of a research project supported by Alborz University of Medical Sciences (Abzums, Rec, 1395, 12). We are grateful to the participants for their cooperation during this study.

Financial support and sponsorship

This paper was a portion of a research project financially supported by Alborz University of Medical Sciences.

Conflicts of interest

There are no conflicts of interest.

References

1. Doubova SV, Espinosa-Alarcón P, Flores-Hernández S, Infante C, Pérez-Cuevas R. Integrative health care model for climacteric stage women: Design of the intervention. BMC Womens Health 2011;11:6.
2. Berek JS, Novak E, editors. Berek and Novak's Gynecology. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2012.
3. Anjaly N, Viswanath L, Anju Philip T. Assess the knowledge on menopausal self-care among perimenopausal women. J South Asian Fed Menopause Soc 2014;2:55-8.
4. Fritz MA, Speroff L. Female infertility. In: Clinical Gynecologic Endocrinology and Infertility. 8th ed., Philadelphia: Lippincott Williams and Wilkins; 2011. p. 1137-90.
5. Jami Abedmokhadam Z, Bijeh N, Hashemi Gavaheri A. The effect of aerobic exercise on menopausal symptoms and quality of life in non-athlete postmenopausal women. J Urmia Nurs Midwifery Fac 2014;12:173-82.
6. Sharifi N, Jalili L, Najar S, Yazdizadeh H, Haghighizadeh MH. Survey of general health and related factors in menopausal women in Ahvaz city, 2012. Razi J Med Sci 2015;21:59-65.
7. Asadi M, Jouyandeh Z, Nayebzadeh F. Prevalence of menopause symptoms among Iranian women. J Fam Reprod Health 2012;6:1-3.
8. Rajaeefard A, Mohammad-Beigi A, Mohammad-Salehi N. Estimation of natural age of menopause in Iranian women: A meta-analysis study. Koomesh 2011;13:1-7.
9. Statistical Center of Iran. The results of the general census of population and housing 1390.2011.
10. Yazdkhasti M, Keshavarz M, Khoei EM, Hosseini A, Esmaeilzadeh S, Pebdani MA, *et al.* The effect of support group method on quality of life in post-menopausal women. Iran J Public Health 2012;41:78-84.
11. Lee PS, Tsao LI, Liu CY, Lee CL. Effectiveness of telephone-based counseling for improving the quality of life among middle-aged women. Health Care Women Int 2014;35:74-86.
12. Golyan Tehrani SH, Mohammad Ali MM, Mahmoudi M, Khaledian Z. Study of quality of life and its patterns in different stages of menopause for women in Tehran. J Hayat 2002;8:33-41.
13. Heidari M, Fayazi S, Borsi H, Moradbeigi K, Akbari Nassaji N. Effect of a self-management program based on 5A model on dyspnea and fatigue severity among patients with chronic obstructive pulmonary disease: A randomized clinical trial. Hayat 2015;20:89-99.
14. Karimy M. Evaluation of the effect of educational intervention based on empowerment model of health promotion behaviors on menopautic women. Daneshvar. Sci Res J Shahed Univ 2011;18:1-11.
15. Ghotbi N, Bagher Maddah SS, Dalvandi A, Arsalani N, Farzi M. The effect of education of self- care behaviors based on family-centered empowerment model in type II diabetes. J Shahid Beheshti Sch Nurs Midwifery 2014;23:7024-7.
16. Navidian A, Abedi MR, Baghban I, Fatehizadeh MA, Poorsharifi H. The effects of motivational interviewing on lifestyle modifications of clients suffering from hypertension. Razi J Med Sci 2010;17:79-94.
17. Yazdkhasti M, Simbar M, Abdi F. Empowerment and coping strategies in menopause women: A review. Iran Red Crescent Med J 2015;17:e18944.
18. Mohammadi Zeidi E, Pakpour A, Mohammadi Zeidi B. The impact of educational interventions based on individual empowerment model on knowledge, attitude, self-efficacy, self- esteem and quality of life of postmenopausal women. Iran J Nurs 2013;26:21-31.
19. Sepehrian F. Effect of yoga based lifestyle intervention on sleeping problem in perimenopausal women. J Urmia Nurs Midwifery Fac 2012;10:41-8.
20. Farshadbakht F, Tadayon M, Abedi P. The effect of walking with pedometer on sleep subjective quality in postmenopausal women. Iran J Obstet Gynecol Infertil 2015;18:10-9.