# The Effect of Education Based on the Health Promotion Model on Awareness about Menopause among Healthcare Volunteers in Kashan

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## Abstract

**Background and Objectives:** Menopause, the beginning of a new era in the life of a woman, like all the other stages of life can create some problems, which threaten the women's health. The aim of this study was to examine the effects of education on the awareness of female health volunteers about menopause in the city of Kashan based on the health promotion model in 2016. **Materials and Methods:** In this semi-experimental study, 280 female health volunteers in the cities of Kashan and Aran Bidgol were selected by simple random sampling in 2016. The health volunteers' knowledge of menopause was compared before and 6 months after the training. The theoretical framework used in this study was the structures of Pender's health promotion model. Data were collected through a questionnaire and analyzed using correlation tests and regression analysis with the SPSS software. **Results:** The results showed that the mean age of the participants was 30.05 ± 5.17 years (age range, 18–43). The mean score of knowledge before training was 7.6 ± 3.75 and after the intervention was 7.81 ± 6.4, which was increased. There was a significant difference between the mean scores of knowledge before and after the training ($P < 0.001$ and $t = 33.5$). The results showed a significant difference in the mean scores of the health promotion model before and after the training ($P = 0.05$). **Conclusion:** The results of the present study showed the positive impact of education based on the health promotion model on the knowledge of the volunteers about menopause. It is recommended that some training and research programs be performed to select the optimal training methods for volunteers, and strengthen their scientific knowledge and empower them. Given that the health volunteers have a close relationship with the community, training them can change the health behaviors, reduce the cost of healthcare, and improve the health status of the community.

**Keywords:** Education, health promotion model, health volunteers, menopause

## Introduction

One very successful example of community participation in health and social activities is the program of health volunteers.[1] The supporters of healthcare are at the forefront of providing services and it is necessary to be trained.[2,3] After the success of the plan in 1993, it was implemented in all parts of the country as a comprehensive program.[4,5] Menopause like all the other stages of life can create some problems. Bone problems are completely preventable, but sexual problems and mood swings are problems in which changes in lifestyle, expectations, and attitudes are required.[6] Providing information about the signs and symptoms of the menopause can be helpful for all women and can be implemented through health education.[7,8]

Menopause means the cessation of menstruation and fertility. Menopause can also occur due to the surgical removal of the ovaries.[9] Menopause can affect women's quality of life and cause problems such as osteoporosis and heart diseases.[10-18] Reports suggest that women in menopause often suffer from lack of information about this period. Education is one of the most important ways to empower women in this issue.[19]

Health promotion is the process of enabling people to manage their health, health promotion, and providing comprehensive

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Quick Response Code:

**Website:** http://iahs.kaums.ac.ir

**DOI:** 10.4103/iahs.iahs_13_17

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**How to cite this article:** Motaghi M, Mojarrad LM, Nadjafi M, Omidi M. The effect of education based on the health promotion model on awareness about menopause among healthcare volunteers in Kashan. Int Arch Health Sci 2017;4:31-5.

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social and political processes. It includes not only promotion in the skills and abilities of individuals but also changes in environmental, social, and economic conditions. This model emphasizes the importance of cognitive processes in controlling behavior and consists of the following components:

1. Perceived benefits of an action: Psychological description of positive consequences or consequences reinforcing a behavior
2. Perceived barriers of an action: Barriers, complexity, and personal cost of performing a specific behavior
3. Perceived self-efficacy: Judging a person's ability in organizing and performing a series of activities
4. Emotions related to the behavior: States of abstract emotion based on relevance of stimuli associated with the behavioral event
5. Interpersonal influences: Cognitions related to behavior, opinions, or attitudes of others
6. Situational influences: Individual understandings of any situation or background that can facilitate or hinder the behavior
7. Commitment to the plan of an action: The obligation to perform a particular action, regardless of competing preferences
8. Pattern: Factors to change the behavior or make a health decision
9. Behavior: An act that performed at a specific time and in a specific context and with a specific purpose.

According to this model, health behaviors are considered as activities, which are operational based on the lifestyle and can be useful throughout life. The model was used for each nonhealth behavior in which the threat is not posed as the main source of behavioral arousal.[20-24] This means that a good model with the basic needs of the health system will be a more effective educational program.[25,26] Menopause is a natural phase of a woman's life, meaning the cessation of menstruation and fertility.[27,28,29] The results of Salehi *et al*., Teymouri *et al*., Morowatisharifabad *et al*., Saravi *et al*.[5,22,23,30] showed that the health promotion model can serve as a model for predicting and intervention of the health behaviors.

The results of Mehri *et al*. study on the effective factors in oral and dental health showed a significant correlation between all variables of the health promotion model and the oral health behaviors among people were evaluated as moderate in this study. The results of this study showed the efficacy of the health promotion model in predicting oral health behaviors.[25]

Menopause is a natural phase of a woman's life, meaning the cessation of menstruation and fertility.[29]

The health promotion model can be suggested as a framework for explaining complex physical, social, and psychological processes that encourage people to adopt behaviors to promote health. This model consists of the seven cognitive-perceptual factors and five modifying factors to explain and predict health behaviors. Perceptual-cognitive factors in this model included health care, the definition of health, perceived health status, perceived self-efficacy, perceived benefits, and perceived barriers. Modifying factors included biological and demographic characteristics, interpersonal interactions, situational effects, and health factors.[24] Education is the key mechanism for the development of individuals' skills and human resource development is a nation's greatest asset.[31] The health volunteers should be trained to help women dealing with the problems of menopause.

## Materials and Methods

In this quasi-experimental study with before and after interventions, 280 female health volunteers were selected from the cities of Kashan and Aran Bidgol using the simple random sampling method in 2016. Awareness levels of the volunteers before and 6 months after the intervention were compared.

To determine the sample size, after conducting the preliminary pilot study, the mean and standard deviation of the awareness were calculated to determine the reliability of the questionnaire. Based on the mean of 4.44, the standard deviation of 0.9, precision of 0.1, 95% confidence interval, and with respect to a limited number of volunteers (about 1500 people), the estimated sample size was 258.[18] Furthermore, to deal with the possibility of attrition by 10%, 280 patients were enrolled in the study. The volunteers were selected from the Bidgol city, Isfahan province. They were invited to the program trained and then were enrolled in the study. Afterward, the samples were divided into 15 groups of 18 or 19 by the authorities.

Within 6 months after the intervention, volunteers could call the researcher to ask their questions if needed. The posttest was conducted 24 weeks after the pretest and training programs.

Data were analyzed using *t*-test with the the SPSS software (SPSS Inc., Illinois, USA) (Leland Stanford Junior University). $P < 0.05$ was considered statistically significant. The research tool was a questionnaire consisting of 10 sections and 30 questions. The "positive feeling" with 3 questions, "self-efficacy" with 3 questions, "negative feeling" with 3 questions, "perceived benefits" with 3 questions, "interpersonal influences" with 2 questions, "situation influences" with 2 questions, "commitment to the plan" with 2 questions, "pattern" with 2 questions, "behavior" with 2 questions, and "demographic data" with 8 questions were the ten sections of the questionnaire.

To confirm the content validity of the questionnaire, we used some reference books and consulted with the professors of Tehran Science and Research University and also Kashan University of Medical Sciences. The reliability of the questionnaire was confirmed by determining the Cronbach's alpha coefficient and using the internal consistency by conducting the pilot study on twenty health volunteers who were matched with the target group, and it was calculated 0.87. The questionnaires were anonymous to maintain the confidentiality of the participants.

The inclusion criteria were being female and in a menopause age, having willingness to participate in the study, and working

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in Kashan University of Medical Sciences. The exclusion criteria included a lack of cooperation in completing the questionnaire and lack of participation in the training program and not having any history of working in the Kashan University of Medical Sciences. To comply with ethical considerations in this study, the participants can stop participating in this plan at any time. The researcher was obligated not to disclose the subjects' information.

## Results

The mean age of the population was 30.05 ± 5.17 years (age range, 18–43). In terms of education, the results of the study showed that 58% of the participants had the high school diploma or higher, 16.5% were under high school diploma, and 25% were elementary. The average duration of activity as a health volunteer was 7.93 years. About 81% of the volunteers were married, 17% single, and 2% were divorced. Furthermore, 54% were postmenopausal volunteers and others were premenopausal. The mean score of knowledge before training was 7.6 ± 3.75 and after the intervention was 7.81 ± 6.4, which was increased. The paired *t*-test results showed a significant difference between knowledge scores before and after the intervention ($P < 0.001$ and $t = 5.33$) [Table 1]. The results showed a significant difference in the mean scores of health promotion before and after the training ($P = 0.05$) [Tables 1 and 2].

Results of the present study showed that 36.97% of the volunteers obtained their knowledge from Internet and mass media; 22.58% from their friends and relatives; 20.35% from books and newspapers; 8.44% from books and nontext books; and 11.66% from doctors and health centers. According to the results of the current study, most of the health volunteers (91.24%) believed that training is necessary [Table 2].

## Discussion

The results showed the positive effect of education on knowledge about menopause among health volunteers, which was in agreement with the results of the Ghobe *et al*.[32] study conducted in health centers in north of Tehran. Furthermore, the results of the studies of Golyan *et al*.[33] and Azghadi *et al*.[34] and Mansory *et al*.[35] were in accordance with the results of our study. Therefore, it seems that implementing large-scale training programs is needed for the volunteers. Since the health volunteers are in contact with postmenopausal women, increasing their awareness about menopause can promote the health status of these women and can be effective in health promotion.

In a study conducted by Moosavi *et al*.[36] in Yasouj city, contrary to our study, the training programs about the postmenopause period did not have a positive effect on awareness of the health volunteers. The results of the study showed that the productivity and performance of the healthcare volunteers did not improve.

In the present study, there was no significant relationship between the health care volunteers' menopause knowledge

**Table 1: Comparison of scores of the health promotion model constructs before and after the intervention**

| Structural health promotion model | Number | The mean score before the intervention | The mean score after the intervention | The mean difference | *P* |
|---|---|---|---|---|---|
| Perceived benefits | 263 | 23.43±4.1 | 25.45±3.62 | 2.02±2.4 | 0.02 |
| Perceived barriers | 263 | 61.9±2.52 | 67.65±11.36 | 5.75±1.8 | 0.01 |
| Efficacy | 263 | 15.15±2.54 | 17.28±2.79 | 2.13±2.4 | 0.01 |
| Sense of behavior | 263 | 5.2±3.1 | 7.5±2.1 | 2.3±2.6 | 0.03 |
| Interpersonal influences | 263 | 15±4.2 | 19.6±2.2 | 4.4±3.2 | 0.03 |
| Situational influences | 263 | 44.4±2.1 | 47±3.5 | 2.6±2.8 | 0.01 |
| Commitment to the project | 263 | 4.7±1.1 | 7.5±2.3 | 2.8±1.7 | 0.01 |
| Pattern | 263 | 75.3±6.7 | 81.7±6.4 | 6.4±6.4 | 0.01 |
| Previous-related behaviors | 263 | 32.2±3.5 | 35.4±2.4 | 3.2±3.3 | 0.01 |

**Table 2: Correlation between knowledge in the field of menopause and the structure of the health promotion model in health volunteers before and after the intervention**

| Structural health promotion model | Solidarity before intervention | *P* | Solidarity after intervention | *P* |
|---|---|---|---|---|
| Perceived benefits | 0.1 | 0.03 | 25.45±3.62 | 0.02 |
| Perceived barriers | 0.04 | 0.01 | 67.65±11.36 | 0.01 |
| Efficacy | 0.2 | 0.02 | 17.28±2.79 | 0.01 |
| Sense of behavior | 0.09 | 0.01 | 7.5±2.1 | 0.03 |
| Interpersonal influences | 0.21 | 0.02 | 19.6±2.2 | 0.03 |
| Situational influences | 0.1 | 0.02 | 47±3.5 | 0.01 |
| Commitment to the project | 0.11 | 0 | 7.5±2.3 | 0.01 |
| Pattern | 0.4 | 0.01 | 81.7±6.4 | 0.01 |
| Previous-related behaviors | 0.2 | 0 | 35.4±2.4 | 0.01 |

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and their age, which was not consistent with the results of the Moosavi *et al*.[36] and Tashakori *et al*.[37] studies.

There was a significant relationship between education and the health care volunteers'' menopause knowledge, so that the awareness level was increased in those who had higher education. This finding was consistent with that of the Seyam *et al*.[38] study.

In this study, 24.91% of the participants believed that training in this area is necessary. The results of the studies in Taiwan[39] and America regarding menopause showed that 40% of the participants obtained their information in this regard from mass media,[40] which was in accordance with the results of the current study.

The results of Abedzadeh *et al*.[41] study showed that the quality of life was relatively good among the menopause women in Kashan City and highlighted the effect of the training program, which was in accordance with the results of Forouhar *et al*.[42] The results of the Sohrabi *et al*.[43] study pointed out the positive effect of education in promoting awareness and the quality of life of postmenopausal women.

## Conclusion

The results showed that participatory teaching methods such as the health promotion model can have a significant effect on the promotion of knowledge in the field of menopause. Given that this social class is the best group to participate in health programs, education, and empowering them can raise their participation and the awareness level of the society. This strategy as a people-centered educational approach (community-based education) can be considered as a best way to meet the needs of education and sociocultural changes. In addition, with regard to the relationship between the knowledge and education of the volunteers, the volunteers should be selected from among well-educated people to be effective in health promotion.

### Acknowledgment

The authors wish to thank all the participants collaborated in this study and clinical research unit of Kashan Shahid Beheshti hospital.

### Financial support and sponsorship

This article is the result of a research plan (No. 92045) approved by the Kashan University of Medical Sciences.

### Conflicts of interest

There are no conflicts of interest.

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