

# Effectiveness of the teach-back method in improving self-care activities in postmenopausal women

Narjes Bahri<sup>1</sup>, Sharareh Saljooghi<sup>2</sup>, Ali Delshad Noghabi<sup>3</sup>, Mahdi Moshki<sup>4</sup>

<sup>1</sup>Department of Midwifery, Nursing and Midwifery School, Gonabad University of Medical Sciences, Gonabad, Iran

<sup>2</sup>Student Research Committee, Nursing and Midwifery School, Gonabad University of Medical Sciences, Gonabad, Iran

<sup>3</sup>Department of Community Health, Nursing and Midwifery School, Gonabad University of Medical Sciences, Gonabad, Iran

<sup>4</sup>Department of Public Health, Public Health School, Gonabad University of Medical Sciences, Gonabad, Iran

## Abstract

**Introduction:** Menopause is a physiological process during which women can improve their quality of life by taking proper self-care measures. Performing self-care requires proper and effective training. The present study was conducted to investigate the effect of self-care training programs based on the teach-back method on the self-care status in postmenopausal women.

**Material and methods:** The present clinical trial was conducted in 2016 in Gonabad, in the east of Iran. Eighty postmenopausal women, whose last menstrual period was 1-5 years earlier, were randomly allocated to an intervention group ( $n = 40$ ) and a control group ( $n = 40$ ). The intervention group attended four 45-minute sessions of a training program based on the teach-back method on the principles of self-care during menopause, whereas the control group received no training. Knowledge and self-care status were assessed in all subjects before and one month after implementing the training program. The data were analysed in SPSS-20.  $P < 0.05$  was set as the level of statistical significance.

**Results:** Before the intervention, no significant differences were observed between the two groups in terms of demographic variables, including age, occupation, level of education, and the time elapsed since the last menstrual period ( $p > 0.05$ ). No significant differences were observed between the two groups also in terms of the score of knowledge about menopause and self-care practice before the intervention ( $p > 0.05$ ). The mean scores of knowledge and self-care were found to be significantly higher in the intervention group compared to those in the controls one month after the intervention ( $p < 0.0001$  and  $p = 0.001$ , respectively). Statistically significant differences were observed between the two groups in terms of the change scores of knowledge and self-care practice before and one month after the intervention ( $p < 0.05$ ).

**Conclusions:** The results showed that the self-care education program based on the teach-back method improves the self-care activities in postmenopausal women. It is therefore recommended that healthcare providers apply this method in menopausal care training programs.

**Key words:** self-care, menopause, teach-back method.

## Introduction

Menopause is an inevitable phenomenon that mostly occurs in 48–55-year-old women, but in Iranian women the mean age of menopause is about 48 years [1]. As women spend about one-third of their life in menopause, it is crucial to pay attention to the health status of postmenopausal women [2]. Educational interventions for teaching correct self-care principles are a solution for health improvement and to help postmenopausal women more properly cope with menopause problems, tackle their personal disabilities, and enhance their self-efficacy [3]. Postmenopausal women need to learn self-care practices to enjoy a healthy lifestyle. Self-care refers to informed, learned, and pur-

poseful measures and activities performed by individuals to survive, and maintain and promote their own and their family's health [4].

Previous studies suggest that the lack of knowledge about self-care and unhealthy lifestyles are the cause of many serious complications in the menopausal period. Despite emphasising the importance of knowledge about menopause care in previous studies, research suggests that 40.3–44.5% of Iranian women have poor awareness and only 0.8% present proper postmenopausal self-care practices [5]. Postmenopausal women often suffer from a lack of information in this period [6], and helping them perceive their problems is very promising. Improving self-care information positively affects

Corresponding author:

Sharareh Saljooghi, Nursing and Midwifery School, Gonabad University of Medical Sciences, Gonabad, Iran, e-mail: nargesbahri@yahoo.com

Submitted: 26.11.2017

Accepted: 06.02.2018

health behaviours and health status in postmenopausal women [7]. Numerous education interventions have been conducted in this regard, including Orem's Self-Care Theory [8], learning based on the women empowerment model [9], and teaching menopausal health to spouses [10].

The teaching method is an important principle that reflects the educational effect. Today, there are a variety of health teaching methods, including the teach-back method, in which the learner is asked questions to examine their comprehension of the discussed subject. In this method, after presenting the education content, the learner is asked to express what they have heard or learned. The teach-back method is used to evaluate the effect of a teacher's ability on conveying the educational content to the learner [11, 12]. The effectiveness of the teach-back method has been reported in different circumstances, such as improving the knowledge of nurses taking care of heart-failure patients [13], improving the health literacy using self-care skill training in an adult group [11], improving the perception of discharge instructions and satisfaction of emergency patients with limited health literacy [14], improving self-care in haemodialysis patients [15], and reducing anxiety in primiparous C-section candidates [16]. Given the crucial role of training programs in improving health status in postmenopausal women and the effectiveness of the teach-back method in health promotion training interventions, the present study was performed to investigate the effect of self-care training using the teach-back method on improving the self-care status in postmenopausal women.

## Material and methods

### Trial design

The protocol of the present clinical trial study was approved by the research council of Gonabad University of Medical Sciences, Iran (Code: 69/4/P). This study was also registered in ClinicalTrials.gov (registration ID: NCT03313739). This clinical trial was reported based on the CONSORT statement 2010 checklist [17].

### Participants and setting

The present study was conducted in Gonabad, north-east of Iran, between July 2016 and September 2016. The participants included literate postmenopausal women whose last menstrual period dated 1-5 years before and had no history of hysterectomy and ovariectomy. The exclusion criteria comprised unwillingness to continue the participation in the educational sessions, failing to respond to all the questionnaire items, contracting a special disease, and hospitalisation during the study.

### Sample size and randomisation

The sample size was calculated after performing a pilot study and using the comparison of means formula. The test power was considered 80% ( $\beta = 0.84$ ) and confidence interval (CI) 95% ( $\alpha = 0.05$ ). The sample size was accordingly calculated as 30 in each group. The sample size was increased to 40 women in each group to allow for dropouts.

Stratified sampling was used to select the subjects. A list of postmenopausal women was first prepared in four community health centres of Gonabad's urban population. A number of these women were then selected using simple random sampling based on the population covered by each centre. To prevent the effect of training programs on the control group, two centres were randomly considered for selection of the intervention group and two for the control group.

### Study instruments

The data collection tools consisted of a demographic and reproductive questionnaire and a self-care assessment questionnaire. The demographic and reproductive questionnaire comprised a number of variables including age, occupation, level of education, social class, gravidity, parity, age at menarche, last menstrual period, and menopause age. The self-care activities questionnaire was a 40-item researcher-made tool with five 8-item subscales, including nutrition, physical activity, methods of relaxation and stress control, healthy lifestyle, and screening for menopause-associated problems and diseases. The items were scored on a four-point Likert scale, from 1 to 4, respectively associated with never, sometimes, often, and usually. The overall score of this scale was 40-160. The validity of this questionnaire was confirmed using the content validity method and through including the comments of 10 experts. A Cronbach's  $\alpha$  of 0.89 also confirmed the reliability of this questionnaire.

### Interventions and outcomes

The eligibility of the randomly selected participants was evaluated through phone calls, and in case of meeting the inclusion criteria, they were invited to participate in the study. A randomised block design was used to assign the subjects to the intervention or control groups. The training program based on the teach-back method was implemented in the intervention group. The principles of the educational content included the pretest steps, targeting based on the pretest results, holding the training sessions, evaluation, and making decisions to repeat the steps cited based on the learning level of the participants. To implement the educational intervention, all the participants were

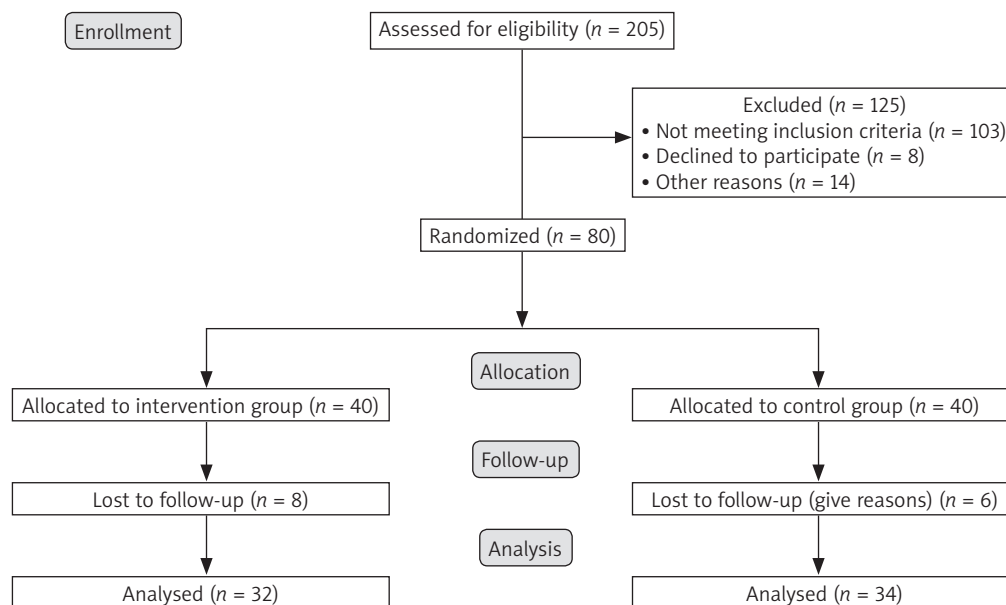


Fig. 1. Schematic representation of the study

briefed on the study objectives and methods. Moreover, the self-care assessment questionnaire completion method was accurately taught to them. The educational intervention was then implemented in the intervention group as four 45-minute sessions of face-to-face education using a video projector by the first author, who was well experienced in menopausal care. The content of the sessions was as follows:

- The first session: Teaching 10 self-care tips associated with diet and physical activity.
- The second session: Teaching 10 self-care tips associated with methods of relaxation and stress control.
- The third session: Teaching 10 self-care tips associated with a healthy lifestyle.
- The fourth session: Teaching 10 self-care tips associated with screening for menopause-associated chronic diseases and complications.

The subjects in the control group received the routine care associated with middle age provided in the community health centres. All the study subjects completed the self-care assessment questionnaire before and one month after the intervention.

**Statistical analysis**

The data were analysed using SPSS version 16 (SPSS Inc., Chicago, IL). Frequency distribution tables and the associated diagrams were used to explain qualitative data and mean and standard deviation to describe quantitative data. The Kolmogorov-Smirnov test was used to evaluate the data normality. The paired *t*-test and ANOVA were used to compare the means in case the data distribution was found to be normal; otherwise, equivalent non-parametric tests were used.

**Ethical considerations**

The present study protocol was approved in the regional medical Ethics Committee of Gonabad University of Medical Sciences (IR.GMU.REC.1395.56). Written, informed consent was obtained from all the subjects before entering the study, and the principle of anonymity was observed in all stages, including data collection, analysis, and publication of results. To observe the ethical principle in the study, all the subjects in the control group attended a training session at the end of the study. In this session, the content of educational sessions in the intervention group was presented through a discourse and using data projectors, and the participants’ queries were answered.

**Results**

Although 80 women were initially recruited, 12 women were excluded and 68 women (32 in intervention and 34 in control group) completed the study (Fig. 1).

No statistically significant differences were observed between the two groups in terms of demographic variables, including age, marriage age, gravidity, parity, age at menarche, the time elapsed since the last menstrual period, and marital relationships (*p* < 0.05) (Table 1).

The knowledge of self-care during menopause was measured before and one month after the educational intervention. Although the two groups were found to have no statistically significant differences before the intervention (*p* = 0.614) (Table 2), Student’s *t*-test showed a significant increase in the score of knowledge in the intervention group compared to that in the controls one month after the intervention (*p* = 0.001)

**Table 1.** Baseline sociodemographic characteristics of the two groups

Variables	Intervention group (n = 30)	Control group (n = 30)	p
Women age (years), mean ± SD	53.47 ±1.53	53.33 ±1.64	0.737
Women job, n (%)			1.000
Housewife	24 (80%)	24 (80%)	
Employee	2 (6.70%)	2 (6.70%)	
Retired	4 (13.30%)	4 (13.30%)	
Age of menarche (years), mean ± SD	12.90 ±1.37	12.72 ±1.57	0.567
Number of children, mean ± SD	3.50 ±1.21	3.40 ±1.1	0.312
Last menstrual period (years ago), mean ± SD	3.33 ±1.47	3.25 ±1.34	0.418

**Table 2.** Comparison of knowledge and self-care activities about menopausal health over time in the two groups

Variables	Intervention group (n = 30)	Control group (n = 30)	P*
<b>Knowledge about self-care during menopause</b>			
Baseline	12.93 ±4.04	12.32 ±3.56	0.614
One month	20.87 ±1.50	12.40 ±2.97	0.001
Change score	5.9 ±4.77	3.35 ±1.6	0.001
<b>Self-care activities during menopause</b>			
Baseline	55.40 ±9.94	50.50 ±21.19	0.256
One month	81.53 ±10.69	48.00 ±19.56	< 0.0001
Change score	14.14 ±26.13	2.50 ±7.85	0.001

\*Independent-samples t-test was used

(Table 2). The change in the score of the knowledge of self-care during menopause between baseline and one-month intervention was significant between the two groups ( $p = 0.001$ ; Table 2).

As seen in Table 2, there were no statistically significant differences between the two groups in terms of the score of self-care activities before the intervention ( $p = 0.256$ ; Table 2); however, the scores of self-care activities significantly increased in the intervention group compared to those in the controls one month after the educational intervention ( $p < 0.0001$ ; Table 2). Moreover, the change in the score of self-care activities before and after the intervention was significant between the two groups ( $p = 0.001$ ; Table 2).

The present study investigated four dimensions of self-care, including nutrition, physical activity, stress control and relaxation, healthy lifestyle, and screening for menopause-associated diseases. The intervention and control groups showed no statistically significant differences in the mean score of all the four domains of self-care activities before the intervention ( $p > 0.05$ ) (Table 3). However, the mean score of all the four domains of self-care activities significantly increased in the intervention group compared to that in the controls one month after the intervention (Table 3). Furthermore, the change in the score of the four dimensions of self-care is significant between the two groups before and after the intervention (Table 3).

## Discussion

The results of the present study show that teaching self-care based on the teach-back method improves knowledge and self-care activities in postmenopausal women. Previous studies proposed the teach-back method as an effective strategy for filling the existing gaps in the comprehension of the presented concepts during the training process between healthcare providers and patients to evaluate their ability to perform self-care practices [12, 18]. Although the teach-back method has been used in different circumstances and populations, a review of exited literature suggested that this method has not yet been used in the postmenopausal female population. However, Golyan Tehrani *et al.* examined the effect of teaching self-care on postmenopausal women's health and reported that using this method positively affects women's awareness of their self-care principles, as a way of promoting their health level [19]. Although these authors focused on teaching self-care, which was the case in the present study, they did not use the teach-back method. In contrast, Oshvandi *et al.* assessed the effect of the teach-back-based training on self-care behaviours in patients with type 2 diabetes. They found the teach-back-based training to significantly promote self-care in these patients and play a key role in both alleviating the complications of this disease and enhancing quality of life in these patients [20]. Samuels *et al.* also found the teach-back-based method

**Table 3.** Comparison of four domains' self-care activities over time in the two groups

Domains	Intervention group (n = 30)	Control group (n = 30)	P*
<b>Nutrition</b>			
Baseline	12.93 ±2.67	12.80 ±5.96	0.368
One month	15.67 ±2.92	12.03 ±5.79	0.003
Change score	2.66 ±4.66	0.77 ±0.23	0.015
<b>Physical activity</b>			
Baseline	4.53 ±3.74	4.43 ±3.80	0.919
One month	10.30 ±3.51	4.27 ±3.66	0.001
Change score	4.68 ±5.76	1.14 ±0.16	0.001
<b>Stress control and relaxation</b>			
Baseline	14.07 ±4.41	14.07 ±7.39	0.986
One month	23.33 ±6.20	13.90 ±7.97	0.001
Change score	7.47 ±9.26	-1.16 ±3.67	0.001
<b>Healthy lifestyle and screening for menopause-associated problems and disease</b>			
Baseline	22.87 ±5.40	21.20 ±9.08	0.391
One month	33.23 ±6.71	19.80 ±6.92	0.001
Change score	10.36 ±7.64	-1.40 ±5.46	0.001

\*Independent-samples *t*-test was used.

improve the perception and behaviour of patients in the emergency department [21]. Kornburger *et al.* proposed a training program using the teach-back method for promoting the safe transition of patients from hospital to home during the discharge process. They reported that this method can reduce the risk and prevent medication errors [22]. Wilson *et al.* used the teach-back method to improve the maternal immunisation literacy in low-income pregnant women in Jamaica, and the results indicated that this method could successfully enhance the frequency of safe pregnancies [23].

As suggested by the results of the studies cited, the teach-back method is an effective educational technique in different domains, which can be explained by the most important feature of this method, i.e. ensuring the correct comprehension of learners of the educational content. The teach-back method investigates the learner's knowledge during the training process so as to quickly intervene and clarify the misunderstood concepts. Using this approach can inform the healthcare provider of what the patient has exactly understood and provides the teacher with a good opportunity for instant clarification of any type of misconception about the educational subject [12]. Mahramus *et al.* also confirmed that evaluating learner comprehension of the educational content presented is an important component of patient education. The teach-back method is a strategy that evaluates the clients' understanding following the learning process [13].

The Joint Commission, the Institute for Healthcare Improvement (IHI), and the Agency for Healthcare Research and Quality (AHRQ) defined the teach-back method as the best practical method of promoting

knowledge and improving the quality of patient transition from intensive care units to home [12]. The AHRQ developed the teach-back method as a major principle of patient safety, in which patients are asked to retell the information given to them. This method is used to improve the evaluation of patient understanding of the educational content [18].

The present study was performed in the small city of Gonabad, with its own cultural and social characteristics, which can be considered a limitation of this study that restricts the generalisability of the results to other communities. Furthermore, a lack of similar studies on teaching self-care to postmenopausal women using the teach-back method makes it impossible to compare the results of the present study with those found in literature. Further research is therefore recommended in the future using similar educational interventions in postmenopausal women in other communities, so that evidence-based care can be performed in these women.

## Conclusions

The results of the study show that training self-care abilities using the teach-back method improves the self-care activities of menopausal women. Therefore, it is recommended that community healthcare centres implement self-care training programs based on the teach-back method in these women.

## Acknowledgements

The present study was approved by the Research Council of Gonabad University of Medical Sciences

(Code: 69/4/P). The authors would like to express their gratitude to the Deputy of Research in Gonabad University of Medical Sciences for funding this project.

## Disclosure

Authors report no conflict of interest.

## References

- Rajaeeafard 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.
- Sharifi N, Jalili L, Khazaeian S, Nia AN. The Relationship between Physical Activity and General Health among Menopausal Women in Ahvaz, Iran. *Electron Physician*. 2017; 9: 3639-3645.
- Masoudi R, Soleimani MA, Hashemini AM, et al. The effect of family-centered empowerment model on the Quality of Life in elderly people. *Journal of Gazvin University of Medical Science* 2010, 14: 57-65.
- Eller LS, Lev EL, Yuan C, Watkins AV. Describing self-care self-efficacy: definition, measurement, outcomes, and implications. *Int J Nurs Knowl* 2018; 29: 38-48.
- Hasan Por Azghadi B, Abbasi Z. Effect of education on middleaged womens knowledge and attitude towards menopause in Mashhad. *Birjand University of Mmedical Sciences* 2006; 13: 48-54. .
- Rindner L, Strömme G, Nordeman L, et al. Reducing menopausal symptoms for women during the menopause transition using group education in a primary health care setting-a randomized controlled trial. *Maturitas* 2017; 98: 14-19.
- Torres RY, Marks R. Relationships among health literacy, knowledge about hormone therapy, self-efficacy, and decision-making among postmenopausal health. *J Health Commun* 2009; 14: 43-55.
- Bezerra ML, Chaves MD, Lopes Nunes SF, et al. Nursing diagnoses of the domain health promotion in menopausal women with osteoporosis. *Journal of Nursing UFPE on line* 2016; 10: 969-976.
- Karimi M, Amin Shekarvi F, Zareban E, et al. The Effect of Education on empowerment model on quality of life menopausal women. *Lorestan University of Medical Sciences Journal* 2014; 16: 1-11.
- Bahri N, Yosheni N, Morovati Sharif Abad MA, et al. The Effects of menopausal health training for spouses on women's quality of life during the menopause transitional period. *Menopause* 2016, 23: 183-188.
- Porter K, Chen Y, Estabrooks P, et al. Using Teach-Back to Understand Participant Behavioral Self-Monitoring Skills Across Health Literacy Level and Behavioral Condition. *J Nutr Educ Behav* 2016; 48: 20-26.e1.
- White M, Garber R, Carroll M, et al. Is "Teach Back" associated with knowledge retention and hospital readmission in hospitalized heart failure patients? *J Cardiovasc Nurs* 2013; 28: 137e146.
- Mahramus T, Penoyer D, Frewin S, et al. Assessment of an educational intervention on nurses' knowledge and retention of heart failure self-care principles and the Teach Back method. *Heart Lung* 2014; 43: 204-212.
- Griffey RT, Shin N, Jones S, et al. The impact of teach-back on comprehension of discharge instructions and satisfaction among emergency patients with limited health literacy: A randomized, controlled study. *J Commun Healthc* 2015; 8: 10-21.
- Nasiri A, Poodineh Moghadam M. Effect of an educational program based on Teach-Back method on the self-care deficits of hemodialysis patients' referring to Valiasr Hospital, Birjand. *Modern Care Journal* 2012; 9: 344-335.
- Hatefi Moadab N, Elahi N, Moradbeygi Kh, et al. Effect of teach-back educational method on surgical anxiety in prim parous cesarean section women. *J Clin. Res Paramed Sci* 2015; 4: 169-177.
- CONSORT 2010 checklist of information to include when reporting a randomised trial. Available from: <http://www.consort-statement.org/media/default/downloads/consort%202010%20checklist.pdf>. [site access: November 14, 2017].
- Institute for Healthcare Improvement. Safe Practices for Better Healthcare – 2010 Update: A Consensus Report. Available at: [http://www.qualityforum.org/Publications/2010/04/Safe\\_Practices\\_for\\_Better\\_Healthcare\\_%E2%80%93\\_2010\\_Update.aspx](http://www.qualityforum.org/Publications/2010/04/Safe_Practices_for_Better_Healthcare_%E2%80%93_2010_Update.aspx). [Access: September 27,2017].
- Golyan Tehrani SH, Mir Mohammad Ali M, Mahmoudi M, Khaledian Z. Study of quality of life and its patterns in different stages of menopause for women in Tehran. *The J Fac Nurs Midwifery* 2002; 8: 33-41.
- Oshvandi KH, Jokar M, Khatiban M, et al. The effect of Self-care education based on teach back method on promotion of self-care behaviors in type 2 diabetic patients. *Iranian Journal of Diabetes and Metabolism* 2014; 13: 131-144.
- Samuels M, Mphil M, Hardy E, et al. "Like a dialogue": Teach-back in the emergency department. *Patient Educ Couns* 2016; 99: 549-554.
- Kornburger C, Gibson C, Sadowski S, et al. Using "Teach-Back" to Promote a Safe Transition From Hospital to Home: An Evidence-Based Approach to Improving the Discharge Process. *J Pediatr Nurs* 2013; 28: 282-291.
- Wilson FL, Mayeta-Pearl A, Parada-Webster L, et al. Using the teach-back method to increase maternal immunization literacy among low-income pregnant women in Jamaica: a pilot study. *J Pediatr Nurs* 2012; 27: 451-459.