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# Improving menopausal symptoms and reducing depression in postmenopausal women: Effectiveness of transferring experiences in group education

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## Abstract:

**INTRODUCTION:** One of the most critical stages of women's lives is menopause. Meanwhile, group training can have a significant effect on reducing menopausal symptoms. The aim of this study was to investigate the effectiveness of group training on reducing menopausal symptoms in postmenopausal women.

**METHODS:** This study was a randomized controlled trial. The study population was 96 postmenopausal women visiting health centers in the city of Shazand (Markazi Province, Iran). Data collection tools in this study were the Menopausal Rating Scale Questionnaire and the Beck Depression Inventory. Group training intervention consisted of four training sessions. The duration of each session was 2 h. The questionnaires were completed in two stages of pre- and post-test (8 weeks later) for the intervention and control groups. Data were analyzed using descriptive statistics (absolute and relative frequency, mean and standard deviation) and analytical statistics (independent *t*-test, paired *t*-test, and analysis of covariance).

**RESULTS:** The mean age in the intervention group and the control group was  $49.93 \pm 3.44$  and  $51.66 \pm 2.93$  years, respectively. In the intervention group, the mean menstrual time was  $2.37 \pm 167$  years and in the control group, the mean time elapsed from the last menstrual period was  $3.91 \pm 2.68$  years. The mean scores of menopausal physical symptoms ( $F = 58.69$ ), menopausal symptoms ( $F = 43.45$ ), menopausal urinary and genital symptoms ( $F = 33.50$ ), and depression ( $F = 58.25$ ) had a significant decrease in intervention group, while in the control group, these changes were not significant ( $P < 0.001$ ).

**CONCLUSION:** Regarding the findings of this study, which indicates the effect of group training program on the improvement of physical, psychological, urinary and genital symptoms, and menopausal depression, it seems that group training in menopause can be an effective method.

## Keywords:

Group training, menopausal symptoms, menopause, women

## Introduction

Menopause is a physiological event that leads to physical-psychological-social consequences in women's lives and thus affects their quality of life.<sup>[1]</sup> According to the World Health Organization, menopause

is the cessation of menstruation in women that occurs due to the cessation of ovarian follicular activity (for 12 consecutive months) without any pathological reason and leads to the end of pregnancy in women.<sup>[2]</sup> Hormonal changes in menopause cause permanent changes in women. These

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changes predispose women to high blood cholesterol, cardiovascular disease, osteoporosis, bone fractures, and even Alzheimer's.<sup>[3,4]</sup>

Menopause usually occurs around the age of 45–55 years. During this time, a person undergoes extensive physical and psychological changes such as hot flashes, night sweats, sleep disorders, urinary symptoms, sexual and psychological disorders, depression, memory loss and concentration, irritability, suffers from vaginal dryness, and decreased muscle mass due to decreased estrogen secretion.<sup>[5]</sup> According to statistics, which show an increasing number of postmenopausal women around the world, the number of postmenopausal women in the world is expected to reach 1.1 billion by 2025, which will reach about 5 million in Iran in 2021.<sup>[6]</sup>

If women have sufficient knowledge about the symptoms of menopause, they will better tolerate the complications of this period and will prevent the occurrence of serious and irreversible complications with appropriate treatment.<sup>[7]</sup> Studies in Iran show that women have a moderate level of awareness about menopause. Due to the importance of health during menopause, using education based on empowerment model, can promote health-promoting behaviors in women and help improve their quality of life.<sup>[8]</sup>

At present, menopausal women are trained in various ways, but among the teaching methods and models, group health education is a method of education that has attracted the attention of many experts and participants. Group training is about providing an opportunity for learners to talk to each other to share information and experiences, and to help solve problems. This training is a way to challenge attitudes, beliefs, and interpersonal skills, as well as increase the motivation of learners due to the possibility of more people's participation in it.<sup>[9,10]</sup> Therefore, group training is one of the effective teaching methods because the focus of work in this method is discussion and debate and it causes behavior change. Parsa *et al.* showed in their study that the group education has an effect on improving the quality of life in postmenopausal women and this method can reduce the problems of menopause.<sup>[10]</sup>

However, examining the impact of group education and creating a structured framework for this training in Iranian women was one of the limitations of the researchers' study. Accordingly, this study examined the effect of group training in postmenopausal women on improving the signs and symptoms of menopause and depression.

## Methods

The present study was an experimental study conducted in 2018. The research population included

all postmenopausal women aged 55–45 years in Shazand city (Markazi Province, Iran). A total of 96 postmenopausal women referred to health centers were selected by systematic random sampling. The sample size was calculated with 95% confidence interval, 80% test power and 0.6 variance error, 48 people per group. According to the number of people in each group, two centers were randomly selected from urban centers (6 centers) and the centers were assigned to intervention and control groups using random numbers created by SPSS software. In each center, a list of women with inclusion criteria was collected and randomly assigned to each group and invited to participate in the study. The absence in two sessions and the reluctance to continue participating were the exclusion criteria.

After selecting the participants, they were informed about the goals and the process of implementing the research project. In addition, the code of ethics for conducting research was received from the ethics council of Isfahan University of Medical Sciences.

Data collection of study participants were collected using three tools of Demographic Information Questionnaire, Menopausal Rating Scale (MRS), and Beck Depression. The MRS questionnaire has 11 menopausal symptoms in three areas: physical (3 questions) and psychological (4 questions) and genitourinary (4 questions) with a 5-point Likert scale (none to very severe, respectively 0–4).<sup>[12]</sup> Beck's depression questionnaire consists of 21 questions. Each question has four options, and people had to choose one of four options (the mildest to the most severe).

The questionnaires were completed as face-to-face interviews.<sup>[13]</sup> Questionnaires of menopausal grading have been translated and used in the study of McVendi *et al.*<sup>[12]</sup> Due to the lack of reporting of the validity and reliability of the results in the study of Makondi *et al.*, in our study, the face and content validity of the questionnaire was study and approved by 7 experts in the experts panel. Reliability was calculated using Cronbach's alpha coefficient and confirmed with 0.81.

Group intervention was performed according to the test results as well as the study of Rindner *et al.*<sup>[9]</sup> Participants were asked to complete the questionnaires immediately before the first training session, and the first training session was conducted a week later based on the schedule and lesson plan. The training intervention for all subgroups lasted for 1 month. The intervention group was divided into four subgroups of 12 people. The training intervention consisted of 4–2-h sessions using group training (small groups). Group discussion using the experiences and opinions of postmenopausal women of menopausal symptoms (hot flashes, sleep disorders, mood

disorders, sexual dysfunction, bone and joint pain and mental disorders, genitourinary disorders-osteoporosis, and ways to prevent and reduce it) was performed. In group training sessions, participants in each group sit at a roundtable to increase participants' interactions with each other and the instructor.

The topics of the sessions included the following: Session 1: Menopausal generalities, menstruation, hormonal changes and symptoms of estrogen deficiency; Session 2: Menopause and the signs and symptoms of depression, mental disorders and sexual health; Session 3: Reduce the signs and symptoms of menopause and ways to prevent the worsening of menopausal symptoms; and Session 4: Self-care and expression of participants' experiences, solutions, and important cases of menopause.

The control group did not receive any intervention other than the usual care in the center, but after the posttest, the training booklets and the contact numbers of the researchers were given to them.

Eight weeks after the intervention, questionnaires were re-completed for the two intervention and control groups.

Data were analyzed using SPSS software (23 version., IBM, Armonk, NY) and descriptive statistics (frequency, mean and standard deviation) and analytical statistics (independent *t*-test, paired *t*-test, and analysis of covariance). The two main hypotheses studied in this study included: (1) The mean changes in the mean score of menopausal symptoms between the two groups were significant and (2) the changes in the mean score of depression between the two groups were significant. The normality of the data in the two groups was assessed and confirmed by Smirnov's chronograph test. All statistical tests were performed in 95% confidence interval.

## Results

The results of all subjects included 96 people in the intervention and control group (48 people in each group) were analyzed. The mean age in the intervention group and the control group was  $49.93 \pm 3.44$  and  $51.66 \pm 2.93$  years, respectively. In the intervention group, the mean menstrual time was  $2.37 \pm 1.67$  years and in the control group, the mean time elapsed from the last menstrual period was  $3.91 \pm 2.68$  years. Most postmenopausal women 66.7% had primary education, 62.5% had average income, and 95.8% were unemployed. Among the demographic variables, the time of menstruation showed a significant difference between the intervention and control groups. There was no significant difference between other demographic variables ( $P < 0.05$ ). Due to the difference between the two groups regarding menstrual time ( $P = 0.03$ ), this

variable was considered as a confounder variable in the analysis of results [Table 1].

Physical symptoms, psychological symptoms, urinary, and genital symptoms of menopause and depression in the pretest and 8 weeks after the test in the intervention group compared to the control group show a decrease in scores [Table 2].

In order to determine the significance of the changes in the results, the analysis of covariance was performed. The results show that the effect of time and the interaction of group and time in the variables of physical symptoms, mental symptoms, urinary and genital symptoms of menopause and depression were significant [Table 3]. Due to the significant effect of time and group interaction, it can be stated that the reduction of variables in physical symptoms, psychotic symptoms, urinary-genital symptoms, and depression in the intervention group compared to the control group is significant.

**Table 1: Frequency of education level, income, and employment status of women in the intervention and control groups**

Variables	Intervention, n (%)	Control, n (%)	P
Education			
Elementary	32 (66.7)	40 (83.3)	0.29
Junior school	7 (14.6)	6 (12.5)	
High school	2 (4.2)	0 (0)	
Diploma	7 (14.6)	2 (4.2)	
Income			
High	10 (20.8)	15 (31.3)	0.48
Middle	30 (62.5)	25 (52.1)	
Low	8 (16.7)	8 (16.7)	
Job			
Employed	2 (4.2)	4 (8.3)	0.66
Homemaker	46 (95.8)	44 (91.7)	
Marital status			
Married	44 (91.7)	40 (83.3)	0.85
Single	4 (8.3)	8 (16.7)	
Age, mean±SD	49.93±3.44	51.66±2.93	0.19
Menstruation time	2.37±1.67	3.91±2.68	0.03

SD=Standard deviation

**Table 2: Mean and standard deviation scores of physical symptoms, psychotic symptoms, urinary-genital symptoms, and depression in intervention and control groups**

Time	Variable	Mean±SD	
		Intervention	Control
Pretest	Physical symptoms	8.37±2.81	7.35±3.09
	Mental symptoms	8.72±3.12	8.10±4.07
	Urinary and genital symptoms	5.41±2.31	5.56±1.64
	Depression	13.51±7.80	9.87±8.15
Posttest	Physical symptoms	5.43±1.67	3.26±8.04
	Mental symptoms	5.53±2.03	8.10±3.90
	Urinary and genital symptoms	3.66±1.30	5.79±1.70
	Depression	3.20±2.60	9.70±7.89

SD=Standard deviation

**Table 3: Covariance test results to evaluate the effect of intervention in the studied groups**

Variable	Source	Sum of squares	df	Mean square	F	Significant	Partial $\eta^2$
Physical symptoms	Time	9.38	1	9.38	7.39	<0.001	0.07
	Time*Group	74.53	1	74.53	58.69	<0.001	0.39
	Group	10.55	1	10.55	0.72	0.39	0.001
Mental symptoms	Time	34.96	1	34.96	22.37	<0.001	0.19
	Time*Group	67.90	1	67.90	43.45	<0.0001	0.32
	Group	6.69	1	6.69	0.31	0.57	0.003
Urinary and genital symptoms	Time	4.66	1	4.66	5.77	0.01	0.05
	Time*Group	27.18	1	27.18	33.50	<0.001	0.26
	Group	23.27	1	23.27	4.30	0.04	0.04
Depression	Time	474.90	1	474.90	38.65	<0.001	0.29
	Time*Group	715.67	1	715.66	58.25	<0.001	0.39
	Group	2.81	1	2.81	0.31	0.85	0

\*The results of the analysis of covariance by controlling the effect of menstrual time. Df=Degrees of freedom

## Discussion

One of the active and modern teaching methods is group teaching method. This method is most commonly used among discussion-based methods. This method is one of the most useful and valid educational methods. The goal is to achieve participatory learning. Participating in a group discussion makes learning deeper and more lasting.<sup>[14]</sup>

The findings of the present study showed that group education has an impact on menopausal symptoms so that group training has improved and reduced these symptoms. The mean score of the symptoms after the educational intervention in the intervention group showed a significant decrease, while in the control group, this decrease was either not observed or there were few changes. The results of this study were consistent with the studies of Rindner *et al.* Their results showed that group training decreased the symptoms of menopause in women compared to individual training, and this difference was significant.<sup>[9]</sup>

The present study showed that the reduction of menopausal symptoms can be followed by the implementation of educational programs and the improvement of health-promoting behaviors during menopause in women. This result has been mentioned and emphasized in other similar studies.<sup>[8]</sup> Although hormonal changes and their problems during menopause are inevitable, the severity of complications can be reduced, and on the other hand, accepting menopause and having a positive attitude toward it is very important in dealing with the complications of menopause.<sup>[1]</sup>

In line with the present study, Yazdkhasti *et al.* (2014) showed that menopause is a period of mental and psychological disorders that change women's lifestyles and postmenopausal women need more information about their physical, psychological, and social needs.

Empowerment during menopause can help to understand this stage, the importance of self-care, and the use of empowerment programs to increase awareness and adaptability.<sup>[15]</sup>

A study conducted by Parsa *et al.* Entitled "Study of the effect of group counseling on quality of life in postmenopausal women" showed that group counseling can increase quality of life and reduce menopausal problems.<sup>[10]</sup> According to studies in postmenopausal women, the three symptoms of sleep disorders, depression, and sexual problems are more common in women with low socioeconomic status, mental disorders, and late menopause, or who are less educated.<sup>[16]</sup> In this regard, it is important to increase women's awareness and education about these symptoms and how to deal with them, as well as to use strategies to reduce the effects of menopause.<sup>[17]</sup>

The results of the present study showed that group intervention had a positive effect on reducing sexual dysfunction in menopause, which is due to the effect of education in increasing women's knowledge about sexual activity and ways to prevent and treat sexual disorders. Accordingly, educational intervention improved women's performance in sexual activity. In their study, the mean score of women's sexual function and all its dimensions except orgasm in the intervention group was better than the control group and there was a significant difference.<sup>[18]</sup>

The results of the present study showed that group training improved and reduced depression in postmenopausal women in the intervention group compared to the controlled group and these changes were significant.

Based on this, education reduces depression in women by increasing self-care and making positive changes in the lifestyle of postmenopausal women such as having a good appetite, proper weight, regular sleep cycle, proper physical activity, independence, and solidarity. Rindner



*et al.* showed that group training reduces depression in women.<sup>[9]</sup> Group training in menopause is considered to be an effective tool for exchanging experiences between individuals, promoting critical thinking, and verbal skills.<sup>[19]</sup> In Foruhari *et al.*'s study, the effect of group education on women's quality of life during menopause was examined. This study showed the effect of group intervention on improving the quality of life of women in psychological, physical, and sexual fields.<sup>[20,21]</sup>

The women who participated in the intervention had good experiences in this field, and their participation in this intervention and the expression of experiences increased their self-confidence. This method of intervention was able to increase the efficiency of women and help them to control menopausal complications.

The present study had limitations. The evaluation in this study was considered only 2 months after the intervention. Future studies are expected to take longer to follow. Many factors affect the quality of life of women, especially in menopause, and it was not possible to control all the factors in this study, so future studies can further control the Confounding variables by designing accurate planning.

## Conclusion

In this study, four dimensions of physical, psychological, urinary and genital symptoms, posttraining depression were significantly improved. Group training was able to reduce menopausal problems by transferring experiences and reducing the severity of symptoms. Therefore, it is recommended to pay attention to the necessity of designing and implementing training programs (group training) to improve the quality and reduce the symptoms of menopause.

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## Conflicts of interest

There are no conflicts of interest.

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