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ORIGINAL ARTICLE

Sexual counseling based on the BETTER model in postmenopausal women: a randomized controlled trial

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ABSTRACT

Objective: Sexual dysfunction and sexual dysfunctional beliefs are common problems in postmenopausal women. The purpose of this study was to evaluate the effect of sexual counseling based on the BETTER (Bring up, Explain, Tell, Time, Educate, Record) model in these women.

Methods: The randomized controlled trial study was conducted with 106 postmenopausal women in 2023. Eligible women were assigned randomly to the intervention and control groups. Accordingly, the intervention group received two individual counseling sessions based on the BETTER model. The Female Sexual Function Index (FSFI) and the Sexual Dysfunctional Beliefs Questionnaire (SDBQ) were used for collecting data at baseline and 4 weeks after the intervention.

Results: The sexual function score in the intervention group increased from 15.97 to 18.51 ($p=0.001$), and the score of sexual dysfunctional beliefs decreased from 33.80 to 24.86 ($p=0.001$). In the control group, the sexual function score decreased from 19.09 to 18.59 ($p=0.032$) and the sexual dysfunctional beliefs score increased from 31.83 to 32.18 ($p=0.111$).

Conclusion: Sexual counseling based on the BETTER model has demonstrated efficacy in promoting sexual function and diminishing sexual dysfunctional beliefs. Consequently, the use of this model in the sexual health counseling of postmenopausal women can be considered.

Trial registration: IRCT20150128020854N12; October 12, 2023. Iranian Registry of Clinical Trials: https://irct.behdasht.gov.ir/user/trial/71128/view.

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BETTER model; sexual function; sexual dysfunctional beliefs; menopause; sexual health

Introduction

Menopause is an inevitable milestone in females' lives [1]. Estimations indicate that by 2030 approximately 1.2 billion women globally will have reached menopausal age [2]. Furthermore, it is anticipated that by 2050 one out of three people in developed countries and one out of five people in developing countries will be aged 60 years and older [3–5]. Given that women typically spend a third of their lifespan in this period, it is imperative to address various aspects of their health during this period [6]. Sexual health emerges as a fundamental aspect of health that necessitates particular attention, particularly in older age. The intimate emotional relationship between couples is significantly influenced by sexual issues during this life stage [2,7,8]. Studies have demonstrated that females' sexual function can be influenced by the physiological, hormonal and psychosocial changes associated with menopause [9–11].

Sexual function is a multifaceted biopsychosocial and emotional phenomenon [12,13] recognized as a significant dimension of females' quality of life [14], which has the potential to impact various aspects of life and relationships between couples [15]. The prevalence of sexual disorders tends to increase with age [16,17]. More than 51% of middle-aged women who are sexually active are affected by sexual disorders [18]. Some studies have reported this percentage to be even higher, exceeding 80% [12,16,19]. Additionally, a study conducted in Iran revealed that two-thirds of postmenopausal women experience at least one sexual function-related problem [9].

Besides sexual disorders, postmenopausal women may also experience challenges in their sexual lives, such as sexual dysfunctional beliefs [6]. Sexual dysfunctional beliefs encompass various unrealistic attitudes, stereotypes, expectations and myths, such as knowing sexual desire and pleasure as guilt, or false misconceptions concerning age or body image, which can potentially jeopardize couples' sexual relationships and make them vulnerable to sexual problems [20,21]. It is shown that postmenopausal women are particularly susceptible to the influence of sexual dysfunctional beliefs [6].

A broad spectrum of approaches is available to limit or minimize sexual problems that may arise during menopause. One of the most influential of these is counseling, with the potential to address up to 80% of sexual problems [22,23]. Several models have been developed to tackle sexual issues in

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counseling sessions, such as the BETTER model. Introduced in 2004, the BETTER model is a structured approach and a valuable tool to provide a framework for facilitating discussions on sexual issues related to medical conditions. The obvious characteristic of this model is its simplicity and particular focus on dealing with sexual problems, categorized as a patient-oriented approach [24,25]. The BETTER model consists of six stages: Bring up, Explain, Tell, Time, Educate, Record [25]. This model has been employed to solve sexual problems in various populations and has been suggested as one of the counseling models influential in enhancing sexual function in infertile women, during pregnancy and postpartum, and after breast cancer [23,26–28]. Furthermore, the effectiveness of this model has been noted to surpass that of the PLISSIT (Permission, Limited Information, Specific Suggestions, Intensive Therapy) model [29].

Utilization of the BETTER model in sexual counseling with menopausal women seems to have the potential for a favorable impact in mitigating their problems. Given the increasing number of individuals of older ages with sexual health concerns and the management of sexual health in these ages as an integral part of this, and considering that no research has been conducted on this topic so far, the current research was designed to determine the effect of sexual counseling based on the BETTER model on sexual function and sexual dysfunctional beliefs in postmenopausal women.

Methods

Study design and participants

This parallel-group randomized controlled trial was conducted in Tehran, Iran, in 2023. Initially, two health service centers were randomly selected from centers affiliated with Shahid Beheshti University of Medical Sciences. Subsequently, one center was designated to the intervention group and the other center to the control group by draw. In the next step, eligible women who had health records in these centers were invited to participate in the research. Participants in the control center with an odd last digit of their file number and those in the intervention center with an even last digit of their file number were included in the study.

Inclusion and exclusion criteria

The inclusion criteria included having minimal reading and writing literacy, passing at least 1 year of menopause, being in the first 10 years of menopause, a lack of occurring premature menopause, having sexual activity, not using hormone replacement therapy and drugs affecting sexual function, no sexual dysfunction in the spouse, no history of hysterectomy, oophorectomy or mastectomy, no addiction to cigarette, alcohol or drugs, no known chronic diseases such as hypertension, diabetes and asthma, and not having depression, anxiety and stress (based on the Depression Anxiety Stress Scale [DASS]). Moreover, the exclusion criteria included reluctance to continue participating in the study and stopping sexual activity during the study for any reason (such as illness, death of spouse, etc.).

Data collection

After explaining the research objectives and obtaining informed consent from the participants, they were asked to fill out the demographic information form, the Female Sexual Function Index (FSFI) and the Sexual Dysfunctional Beliefs Questionnaire (SDBQ). Four weeks after the intervention, the participants filled out the questionnaires again. Individuals with stress, anxiety and depression based on the DASS were not included in the study and were referred to the center's psychologist.

Intervention

The counseling program was designed based on the BETTER model and held in two sessions lasting 60–90 min in a private room. These sessions were held by the researcher, who was a master's student in midwifery and had completed the sexual counseling training course based on the BETTER model, under the supervision of the research team. This model contained six steps, which were implemented as presented in Table 1. The first three stages were carried out in the first counseling session and the next three in the second session. The most significant problems raised by the participants encompassed decreased sexual desire, sexual pain, lack of orgasm and also false beliefs that could negatively impact their sexual relationships. Counseling revolved around enhancing women's awareness about the physiological changes associated with menopause impacting sexual function and how to resolve them, sensate focus, not focusing on penetration in sexual intercourse and enjoying love-making, training in the Kegel exercise, reducing stress and anxiety, resolving couple conflicts and correcting false beliefs.

After completing the study, the control group was invited to participate in counseling sessions.

Measures

Sexual function was evaluated by the FSFI, designed by Rosen et al. in 2000 [30]. This scale consists of 19 questions to measure women's sexual function in six domains, including sexual desire, sexual arousal, vaginal lubrication, orgasm, sexual satisfaction and sexual pain, over the last 4 weeks. The total score is obtained by summing the scores in all six domains. The maximum score for each domain is 6, and the total scale is 36. The total score ranges from a minimum of 2 to a maximum of 36. A score equal to or higher than 26.5 is categorized as not having sexual dysfunction and a score less than 26.5 is categorized as having probable sexual dysfunction. The scale's validity has been confirmed by Rosen et al. [30]. The validity of the Persian version of the FSFI also has been confirmed by Mohammadi et al. [31]. In Rosen et al.'s research, the calculated Cronbach's α was ≥0.82, demonstrating a high level of internal consistency [30]. The reliability of the FSFI in Iran was calculated by Mohammadi et al. with a Cronbach's α coefficient of ≥0.70, which is consistent with the results of Rosen et al.'s research [31].

Table 1. Intervention stages based on the BETTER model.

BETTER model stage		*Sexual counseling applications*
1	Bring up	Sexual issues were conveniently discussed with patients and they were assured that they could talk freely. This stage provided the women with an opportunity to talk about sexual matters and identify their concerns.
2	Explain	The importance and influence of sexual issues on the quality of life, anatomy and physiology of the reproductive system, sexual response cycle and sexual health were explained, and the patient was told that she was free to talk about them. The aim was to help normalize sexual discourse and reduce the woman's sense of shame. The patient found out she was not the only one with problems and should not feel alone. Then, she was asked whether she had ever discussed these matters with her husband and what solutions she sought to solve her problem; thereby, the counselor encouraged the women to talk about it.
3	Tell	The patient was assured that the counselor would provide all the information needed to solve her problem. She was encouraged to discuss her sexual concerns with the counselor and she was told how to cope with stressors and problems during menopause. They were encouraged to express their worries. In necessary cases, a referral to the expert for further assessment was considered.
4	Time	The counseling time was determined based on the patient's preference. Even if she was not ready to express sexual problems, they could raise their questions at another time. Since sexual relationship is an ongoing process, the counselor was available at any time to respond to and resolve concerns.
5	Educate	The patients were educated about the complications of menopause and its impacts on sexual issues, and the modification of incorrect beliefs for removing their worries. Recommendations for improving sexual life such as pelvic muscle exercises, using different sexual positions, practicing sensate focus and suggestions on the management of sexual dysfunction were considered in this stage.
6	Record	Discussing and evaluating the counseling process was performed. The patient's assessments, considerations and counseling suggestions were recorded.

Box 1. Sexual Function Beliefs Questionnaire items.

Item

1. Menopause means the end of sexual activity.
2. In the postmenopausal period, women's sexual desire disappears.
3. Sexual activity in the postmenopausal period is not reasonable.
4. Postmenopausal women do not reach orgasm (the peak of sexual pleasure).
5. Women cannot enjoy sexual satisfaction in the postmenopausal period.
6. Men do not pay sexual attention to postmenopausal women.
7. Postmenopausal women can enjoy their sex without vaginal penetration.
8. In the postmenopausal period, women are not sexually attractive to their husbands.
9. Continuation of sexual activity during the postmenopausal period improves physical and mental health.
10. Request for sex from a postmenopausal woman is not acceptable.
11. Having sex during postmenopausal period helps maintain and improve the couple's emotional relationship.
12. The continuation of sexual activity during the postmenopausal period improves quality of life.

A self-designed SDBQ was used in the current study. For this purpose, after reviewing the literature in this field, a questionnaire containing 12 items was designed and scored on a 5-point Likert scale from 'completely disagree' to 'completely agree'. The scoring system was indirect for items 7, 9, 11 and 12, and direct for the other items, with a score range of 12–60. A higher score denotes higher dysfunctional sexual beliefs. The validity of this questionnaire was approved using the opinions of 15 reproductive health and psychology experts. The reliability of the questionnaire was also obtained to be 0.7 based on Cronbach's α coefficient calculation (Box 1).

Additional measure

The DASS was administered to assess anxiety, depression and stress. The scale contains 21 self-report questions to evaluate depression, anxiety and stress, mainly used to measure the severity of depression, anxiety and stress symptoms with a Likert scale, with a score range of 0–21 for each construct [32].

Sample size

According to previous studies [27,29], the sample size was calculated to be 48 women in each group. Considering the 10% drop-out, a sample of 53 women was estimated for each group giving a total sample of 106 participants.

Statistical methods

SPSS software version 22 was used for statistical analysis. The mean and standard deviation, independent *t*-test, Mann–Whitney *U*-test, chi-square test, two-way repeated-measures analysis of variance and Wilcoxon test were used for data analysis. The significance level of the study was considered less than 0.05.

Results

In all, 106 women participated in the study (53 women in intervention group and 53 women in control group). However, three women in the intervention group left the study due to dislike. The flow diagram of the study is depicted in Figure 1. The mean age of women was 55.96 ± 5.01 and 57.96 ± 4.28 years in the intervention and control groups, respectively. The majority of women in both groups had secondary education and were housewives. The participants' characteristics are presented in Table 2. The prevalence of sexual dysfunction at baseline was high (96% intervention group, 95% control group) using the FSFI cut-off score.

Investigating sexual function in the intervention group demonstrated that the total score of sexual function increased from 15.97 (at baseline) to 18.51 (4 weeks after the intervention) ($p = 0.001$). In the control group, the sexual function score decreased from 19.09 (at baseline) to 18.59 (4 weeks after the intervention) ($p = 0.032$). The two intervention and control groups were significantly different at baseline in terms of sexual function scores ($p = 0.008$). After the intervention, although the sexual function score significantly increased

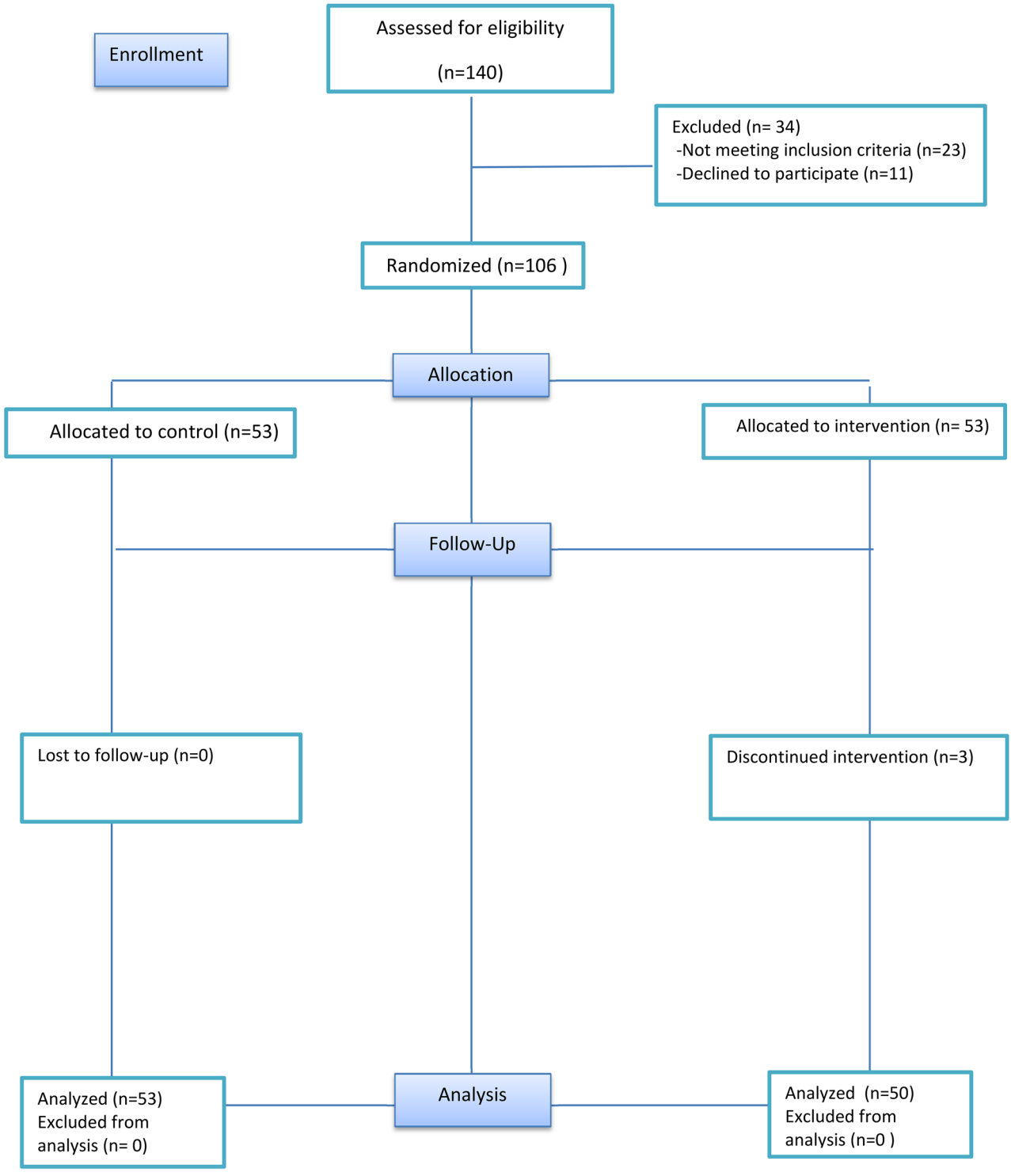

Figure 1. Flowchart of the study process.

in the intervention group, no significant difference was observed between the two groups ($p=0.276$). All domains of sexual function (except for pain) were significantly increased in the intervention group ($p \leq 0.05$).

The total score of sexual function and the score of each domain are presented in Table 3.

The sexual dysfunctional beliefs score in the intervention group decreased from 33.80 (at baseline) to 24.86 (4 weeks after the intervention) ($p=0.001$). In the control group, the sexual dysfunctional beliefs score increased from 31.83 (at baseline) to 32.18 (4 weeks after the intervention), ($p=0.111$). No statistically significant difference was found between the two groups at baseline measurement in the sexual dysfunctional beliefs score ($p=0.073$); however, after the intervention, this difference was significant ($p=0.001$), and the sexually dysfunctional beliefs score in the intervention group decreased (Table 4).

Discussion

The study results revealed that sexual counseling based on the BETTER model was influential in promoting sexual function and diminishing sexual dysfunctional beliefs in postmenopausal women.

Due to its simplicity and a particular focus on improving talking about sexual problems, the BETTER model is categorized as a patient-orientated approach. This model paves the way for women to better express their sexual problems, culminating in finding out the women's chief problems and affecting the treatment process [25,33].

As demonstrated by the study results, sexual counseling based on the BETTER model is effective in improving sexual function and diminishing sexual dysfunctional beliefs in postmenopausal women. This model had the potential to improve all dimensions of sexual function except sexual pain. More lubrication is probably required to relieve sexual pain. Furthermore, painful intercourse can be attributed to physical and medical conditions, such as skeletal-muscular problems, which probably increase during menopause. Therefore, the concurrent use of sexual counseling and vaginal lubricants and solving skeletal-muscular problems may yield better outcomes. Similar studies assessing the impact of education and counseling on females' sexual function confirm the findings of our research [34]. Studies have demonstrated that the lack of sexual knowledge and information can lead to sexual dysfunction, and the absence of authentic information and insufficient training about sexual activity and, subsequently, the inappropriateness of the communication process, incorrect sexual beliefs and anxiety about sexual function contribute to the incidence and persistence of sexual disorders [34,35]. According to the World Health Organization (WHO), comprehensive sex education programs can hinder sexual dysfunction and enhance positive health behaviors [36]. Ziaee et al.'s study showed that sexual skills training could be beneficial in improving sexual performance [37]. Besides training in sexual knowledge and information, the improved sexual function score can be attributed to the techniques presented to the patient in the second session, such as sensitive focus exercise, Kegel exercise, communication techniques, stress reduction and intimacy enhancement, which were also employed in other studies [26,38]. Based on Karakas and Aslan's study, a counseling intervention based on the BETTER model was

Table 2. Characteristics of the participants.

Characteristic	*Intervention group (n = 50)*	*Control group (n = 53)*	p-*Value*
Age (years)	55.96 ± 5.01	57.50 ± 4.28	0.094[a]
Education			0.225[b]
Primary	18 (36)	11 (20.8)	
Secondary	27 (54)	36 (67.9)	
Higher	5 (10)	6 (11.3)	
Employment status			0.134[b]
Employed	3 (6)	6 (11.3)	
Housewife	47 (94)	44 (83)	
Retired	0 (0)	3 (5.7)	
Economic status			0.062[b]
Good	8 (16)	12 (22.6)	
Intermediate	35 (70)	40 (75.5)	
Poor	7 (14)	1 (1.9)	
Duration of marriage (years)	35.36 ± 7.72	35.66 ± 9.17	0.302[c]
Number of pregnancies	3.06 ± 1.18	2.81 ± 1.33	0.224[c]
Number of children	3.02 ± 1.16	2.67 ± 1.31	0.096[c]
Duration of menopause (years)	5.64 ± 3.20	5.81 ± 3.44	0.981[c]

[a]Independent-samples *t*-test.
[b]Chi-squared test.
[c]Mann–Whitney *U*-test.
Data presented as *N* (%) or mean ± standard deviation.

Table 3. Sexual function and its domains in the study groups.

Domain		*Intervention group (n = 50)*		*Control group (n = 53)*		p-*Value*
		Mean	*SD*	*Mean*	*SD*	
Desire	Baseline	2.04	0.82	2.59	0.85	0.001[a]
	4 weeks after the intervention	3.09	0.65	2.35	0.76	0.001[a]
p-Value		0.001[b]		0.002[b]		
Arousal	Baseline	2.37	1.07	2.87	0.97	0.015[a]
	4 weeks after the intervention	2.67	1.27	2.79	0.92	0.582[a]
p-Value		0.002[b]		0.104[b]		
Lubrication	Baseline	2.37	1.47	3.31	1.09	0.001[c]
	4 weeks after the intervention	2.85	1.58	3.02	1.19	0.533[a]
p-Value		0.001[b]		0.003[d]		
Orgasm	Baseline	2.79	1.55	3.46	1.21	0.010[c]
	4 weeks after the intervention	3.21	1.58	3.24	1.19	0.916[a]
p-Value		0.001[b]		0.039[b]		
Satisfaction	Baseline	3.12	1.54	3.69	1.15	0.049[c]
	4 weeks after the intervention	3.55	1.43	3.55	1.03	0.991[a]
p-Value		0.001[b]		0.017[b]		
Pain	Baseline	3.26	1.56	3.15	0.98	0.016[c]
	4 weeks after the intervention	3.12	1.44	3.62	1.01	0.047[c]
p-Value		0.08[d]		0.001[d]		
FSFI total score	Baseline	15.97	6.58	19.09	4.98	0.008[c]
	4 weeks after the intervention	18.51	7.00	18.59	4.95	0.276[c]
p-Value		0.001[b]		0.032[d]		

[a]Independent-samples *t*-test.
[b]Paired *t*-test.
[c]Mann–Whitney *U* test.
[d]Wilcoxon signed-rank test.
FDFI, Female Sexual Function Index; SD, standard deviation.

Table 4. Sexual dysfunctional beliefs in the study groups.

	Intervention group (n = 50)		*Control group (n = 53)*		
Sexual dysfunctional beliefs	*Mean*	*SD*	*Mean*	*SD*	p-*Value*
Baseline	33.80	6.07	31.83	6.33	0.073[a]
4 weeks after the intervention	24.86	5.97	32.18	6.39	0.001[a]
p-Value	0.001[b]		0.111[c]		

[a]Mann–Whitney *U*-test.
[b]Paired *t*-test.
[c]Wilcoxon signed-rank test.
SD, standard deviation.

effective on sexual function and sexual satisfaction in women with primary infertility [23]. Fouad Mohammed and El-Ansary's study also indicated that the administration of BETTER counseling sessions on pregnant women was associated with an enhanced sexual function score in all dimensions of sexual desire, sexual arousal, vaginal lubrication, orgasm and sexual pain [27]. Moreover, another research study revealed that receiving sexual counseling based on the BETTER model for mental health patients led to reduced concerns for 40% of patients regarding sexual issues [25]. It is shown that the effectiveness of the BETTER counseling model surpassed that of the PLISSIT model in females' sexual function [29].

A number of counseling interventions were applied to improve sexual function in postmenopausal women. For instance, a study compared cognitive and behavioral therapy and acceptance and commitment therapy among a sample of menopausal women and found that both were effective in improving sexual functions in these women [39]. Similarly, studies used structured counseling [40] and a sexual enhancement program [41] and showed that such approaches could effectively enhance sexual function. When comparing the aforementioned interventions with the BETTER counseling model, it seems that, firstly, all reported strategies used an element of cognitive strategy in the models and, secondly, since the BETTER counseling method is a less time-consuming and easier approach, it might work better than the other models.

Unlike the present study, the results of another study demonstrated that sexual training and counseling could not improve all dimensions of sexual function due to the short follow-up period and the limited number of counseling sessions [42].

The results indicate that sexual counseling based on the BETTER model resulted in reducing sexual dysfunctional beliefs in postmenopausal women. One of the stages of this model is 'Educate', in this stage, after discovering incorrect beliefs; the researcher endeavored to educate and provide correct sexual information and also diminish these beliefs. An individual's feelings, values and beliefs are very effective in sexual desire and relationships. Having negative beliefs about sexual relationships accompanies reduced sexual pleasure even in later years [43]. Yahag et al. paid particular attention to a collection of sexual dysfunctional beliefs in women, suggesting these beliefs as predisposing factors for sexual disorders [44]. Sexual dysfunctional beliefs are known as a component of emotional divorce among married women [45]. Sexual skills training is shown to be influential in alleviating sexual dysfunctional beliefs of couples about to get married [46]. Additionally, correcting sexual dysfunctional beliefs culminated in elevating the quality of sexual life [47]. Sasanpour et al. suggested that postmenopausal women are at higher odds of sexual dysfunctional beliefs, and training to correct these beliefs can resolve this problem [6]. Providing authentic information about the sexual response cycle and the difference between men and women in expressing love improves sexual skills. Furthermore, it also gives rise to the modification of sexual dysfunctional beliefs among participants [48]. In line with the results of the studies mentioned, the BETTER counseling model in the present research, with a patient-oriented approach based on each individual's problems, was able to reduce incorrect beliefs and stereotypes.

Strengths and limitations

The strength of the current study was the novelty of the topic. The randomization method and presence of a control group made the results more robust and reliable. Controlling psychological confounding factors affecting sexual function, by the DASS questionnaire, was another positive point. However, the study was unable to follow up the participants for a longer period. It is recommended to design studies with longer follow-up and larger sample sizes. Furthermore, sexual distress, a key element in defining female sexual dysfunction, was not evaluated in the present study. Since sexual dysfunction was not an inclusion criterion, the findings may not be generalizable to menopausal women with a clinical diagnosis of female sexual dysfunction.

Conclusion

The BETTER model is an effective and feasible approach for sexual counseling. Given the findings of the study, sexual counseling based on the BETTER model has demonstrated efficacy in promoting sexual function and diminishing sexual dysfunctional beliefs. Accordingly, use of this model in the sexual health counseling of postmenopausal women can be considered.

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Ethical approval

The ethics committee of Shahid Beheshti University of Medical Sciences approved the study (IR.SBMU.PHARMACY.REC.1402.070). Informed consent was obtained from all women who participated in the study.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Data availability statement

The data are available from the corresponding author upon reasonable request.

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