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ORIGINAL PAPER

A Systematic Review of the Application and Effectiveness of the BETTER Model for Sexual Counseling in Women's Health

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Abstract
This systematic review analyzed the effects of sexual counseling based on the BETTER model across various health conditions. A literature search was conducted in four electronic databases databases (PubMed, Web of Science, EBSCO, and Science Direct), resulting in the inclusion of 14 interventional studies. The studies focused on women with diverse health issues, including infertility, breast and cervical cancer, and multiple sclerosis. Our findings indicate that the BETTER model appears to have positive effects on women's sexual health, improving functions, satisfaction, and quality of life while also reducing anxiety and stress. The review also found that the model shows promise in enhancing marital satisfaction and body image. In conclusion, the BETTER model is a promising approach for addressing sexual health challenges in women. Future research is needed to explore its effects on couples and diverse populations to better understand its broader impact.

Keywords BETTER model · Sexual counseling · Sexual function · Quality of life · Women's health

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Introduction

The World Health Organization defines sexual health not merely as the absence of disease, dysfunction, or disability, but also as the continued physical, emotional, mental, and social well-being related to sexuality. An individual's sexual health and well-being are shaped by access to adequate information, protection from risky behaviors, quality sexual health services, and supportive environmental conditions [1]. In providing quality and holistic sexual health care, nurses play a critical role in assessing individuals' sexual health and identifying sexual problems [2].

However, in practice, sexual health is often overlooked by nurses. One of the primary reasons for this is a lack of knowledge and training, which leaves nurses unprepared and uncomfortable in initiating communication about sexual health [3–6]. In addition, personal attitudes and beliefs that perceive sexual health as a low-priority or private matter increase nurses' avoidance of addressing these issues. Social norms and taboos also cause both nurses and patients to be hesitant to express their sexual concerns [4, 7–8].

Other barriers include time constraints, unclear professional roles regarding responsibility for discussing sexual health issues, and insufficient institutional support and resources for sexual health education [3, 6, 9]. Due to discomfort or anxiety, nurses may address sexual health only with specific groups; this can lead to selective and inconsistent care [4, 5, 7, 8]. Structured and evidence-based sexual counseling models have been proposed as key strategies to overcome these barriers [9, 10]. Sexual counseling models increase nurses' confidence and competence in initiating communication about sexual health and ensure the integration of sexual health into holistic care [11, 12]. Models such as PLISSIT, EX-PLISSIT, PLEASURE, ALARM, and BETTER are frequently used in the assessment of sexuality [13, 14].

The BETTER (Bring, Explain, Tell, Time, Educate, Record) model is person-centered. The model is efficacious in improving sexual health outcomes in women at various life stages and with different health conditions [11, 14]. Research shows that the BETTER model significantly improves sexual function, increases sexual satisfaction, and reduces dysfunctional sexual beliefs in postmenopausal women, women experiencing infertility, or those who have undergone hysterectomy or mastectomy [15, 16]. The model also produces better sexual function, higher marital satisfaction, and increased sexual self-disclosure compared to standard care or alternative sexual counseling models such as PLISSIT [14, 16, 17].

Although the number of studies on the BETTER model is increasing, the literature remains fragmented. However, existing studies differ in methodology, populations, and measures, and provide limited evidence on long-term effectiveness or cross-cultural validity [14, 15, 17]. A comprehensive search of major databases indicates no systematic review or meta-analysis focusing on the BETTER sexual counseling model in national or international literature.

Therefore, a systematic review of the BETTER model is critical for synthesizing the existing evidence, identifying knowledge gaps, and comprehensively evaluating the model's effectiveness across different populations and settings. Synthesizing the studies in the literature will reveal current trends, methodological limitations, and knowledge gaps, providing a comprehensive evidence base for clinicians, educators, and policymakers. It will also guide the identification of priority areas for future research and the evidence-based implementation of sexual health counseling. Accordingly, this systematic review aims to

identify the contexts in which the BETTER model has been applied and to evaluate its effectiveness across populations and settings.

Methods

Aim

This study aims to systematically analyze and interpret interventional studies examining the effects of sexual counseling provided to individuals based on the BETTER model. To achieve this aim, the following questions are addressed:

- How does sexual counseling based on the BETTER model affect individuals' sexual health?
- How does sexual counseling based on the BETTER model affect individuals' marital relationships?
- How does sexual counseling based on the BETTER model affect individuals' physical and psychological health?
- How does sexual counseling based on the BETTER model affect individuals' life satisfaction?

Design

This study is a systematic review. A PRISMA flow diagram was used to report the study selection process, and the search results are presented in Fig. 1 [18].This systematic review study has been registered with the International Prospective Register of Systematic Reviews (PROSPERO) under the number CRD42024542066.

Selection Criteria

To evaluate the effectiveness and applicability of sexual counseling programs based on the BETTER model, the following PICO(S) criteria were used:

- *P (Population)*: Individuals (patients, couples) with sexual health problems who receive BETTER model-based sexual counseling, specifically within the context of health conditions such as infertility, breast cancer (post-mastectomy), and the postpartum period.
- *I (Intervention)*: Sexual counseling programs or interventions based on the BETTER model.
- *C (Comparison)*: Studies with any of the following comparison groups: Routine or standard care. Interventions based on other sexual health assessment models, such as PLISSIT or EX-PLISSIT. Control groups that do not receive any intervention.

Data Extraction and Analysis

Data were extracted from the included studies by one reviewer (GY) and cross-checked by a second independent reviewer (NGDÖ). Discrepancies were resolved through discus-

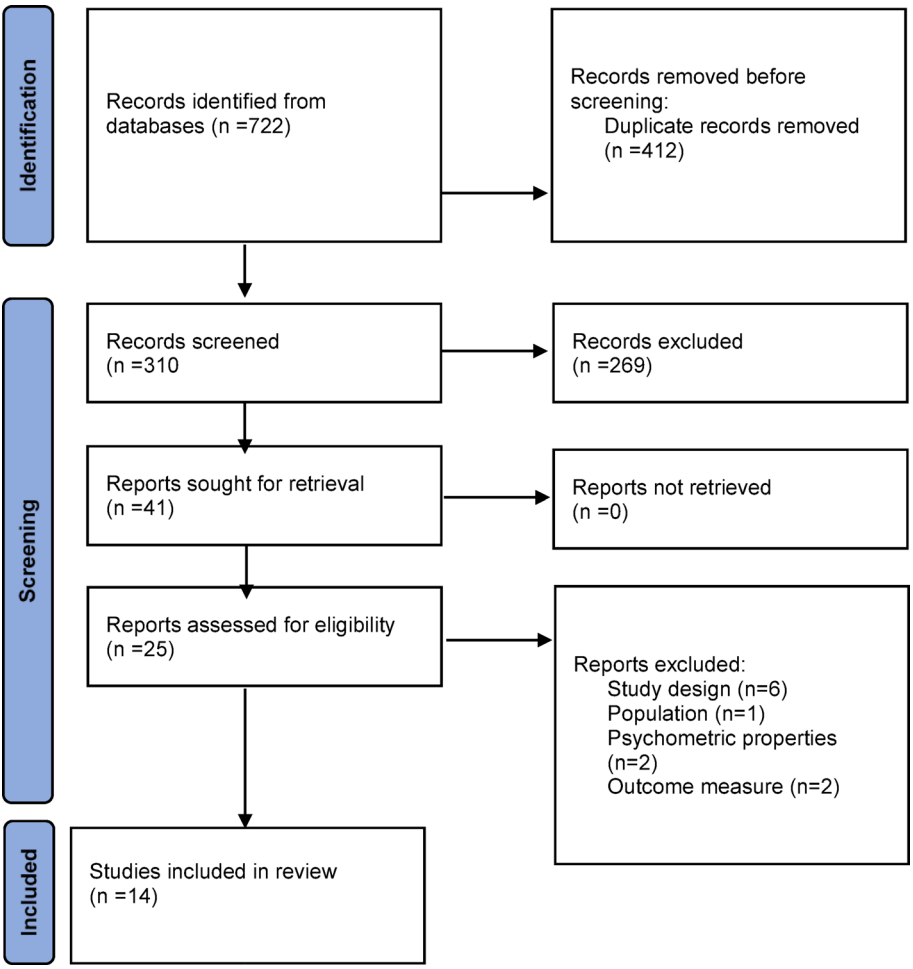


Fig. 1 Identification of studies via databases and registers

sion involving a third reviewer (EA). A standardized data extraction form was developed by the authors for data summarization, and the data were evaluated accordingly. This form includes the country where the study was conducted, the author(s), the publication date, the aim, the characteristics of the research team, the design, the sample size and characteristics, the measurement tools used in the studies, the intervention performed, the findings obtained, and the results. In this study, a descriptive systematic review approach was applied due to the limited number of articles and the heterogeneity in study designs after the selection of articles. One of the main reasons a quantitative synthesis (meta-analysis) was not performed in this review was the high heterogeneity among the included studies. Additionally, the limited number of studies, along with the fact that not all of them reported their outcomes in a way suitable for meta-analysis, also prevented a quantitative synthesis. Therefore, our findings are presented as a narrative synthesis.

- *(Outcome)*: The primary and secondary outcomes evaluated are as follows: Sexual function: Changes measured with sexual function scales (e.g., FSFI, GRISS). Sexual quality of life and sexual satisfaction: Changes measured with sexual quality of life and satisfaction scales (e.g., SQOL-F). Marital/relationship satisfaction: Changes measured with marital and relationship satisfaction scales. Psychological well-being: Changes in levels of anxiety, stress, and depression.
- *S (Study Design)*: Experimental studies quasi-experimental or randomized controlled trials (RCTs) are included in the review. Original studies published in the last 20 years, with full text accessible and written in English, are included in the review.

Qualitative studies, literature reviews, conference papers, expert opinion articles, letters to the editor, book chapters, published abstracts, theses, and articles written in languages other than English and Turkish are excluded from this review.

Search Strategy

Four electronic databases including PubMed, Web of Sciences, EBSCO, and Science Direct were searched between May and June 2024. The data search covered the period from 2004 to May 2024. The studies obtained through the screening and found to be suitable cover publications from the years 2019–2024. The keywords used for searching the databases were "BETTER model" AND "counseling" AND "sexual function" OR "sexual counseling" OR "sexual dysfunction". One of the limitations of the search process was that articles requiring subscription or paid access were not found in the databases and, therefore, were not accessible in the literature review. The same studies were listed more than once in different databases, which made the data-cleaning process difficult. In particular, attention was paid to the literature review, considering that "sexual counseling" and "counseling" are used synonymously in the search terms used in this review.

Quality Assessment

Quasi-experimental and randomized controlled trials (RCTs) included in the systematic review were assessed by three independent researchers (NGDÖ, GY, EA) using the Critical Appraisal Checklist developed by the Joanna Briggs Institute (JBI) [19] (Appendix 1). Each checklist consists of specific questions to assess the study's internal validity, risk of bias, and reliability. For Quasi-Experimental Studies, a 9-item checklist was used to evaluate the homogeneity of the sample, pre- and post-intervention measurement, presence of a comparison group, and appropriateness of statistical analysis. For Randomized Controlled Trials, a 13-item checklist was used to assess criteria such as adequacy of randomization, confidentiality, similarity between groups, blinding, reliability of outcome measures, and integrity of analysis. Each item was scored as "Yes," "No," "Unclear," or "Not Applicable." If a disagreement arose among the three researchers, it was addressed and resolved by a fourth researcher (ÖK). The fourth researcher reviewed the study in detail and provided their opinion to make a final decision. The overall methodological quality of the studies was classified as high.

Results

Study Characteristics

Fourteen studies examining the effects of sexual education and counseling based on the BETTER model on sexual functions, marital relationships, quality of life, and physical and psychological health were included in the review. The first interventional study using the BETTER model was published in 2019. Of the studies included in this review, nine were quasi-experimental and five were conducted as randomized controlled trials. Six studies were conducted in Egypt, six in Iran, and two in Turkey. Although the entire sample in the studies consisted of women, only one study included spouses in the counseling sessions. The total number of women in the studies was 1132. The studies were conducted with women diagnosed with infertility ($n=5$), women who had undergone mastectomy due to breast cancer ($n=4$), women in the postpartum period ($n=2$), pregnant women ($n=1$), women diagnosed with cervical cancer ($n=1$), and women diagnosed with multiple sclerosis ($n=1$) (Table 1).

The measurement tools used in the studies included in this review are as follows: Female Sexual Function Index ($n=14$), ENRICH Marital Satisfaction Scale ($n=4$), Taylor Anxiety Scale ($n=2$), Beck Depression Inventory-II ($n=1$), Body Cathexis Scale ($n=1$), Body Image Scale ($n=1$), Depression, Anxiety, and Stress Scale ($n=1$), EORTC Quality of Life Questionnaire-BR23 ($n=1$), Fatigue Severity Scale ($n=1$), Golombok-Rust Sexual Satisfaction Scale ($n=1$), Hulbert Index of Sexual Assertiveness ($n=1$), Hulbert Sexual Self-Disclosure Index ($n=1$), Index of Sexual Satisfaction ($n=1$), Perceived Stress Scale ($n=1$), Quality of Life Enjoyment and Satisfaction Questionnaire–Short Form ($n=1$), Sexual Quality of Life Questionnaire ($n=1$), Sexual Quality of Life-Female ($n=1$), Sexual Self-Efficacy ($n=1$). Each of the studies included in the research used scales appropriate to their research designs, resulting in a variety of measurement tools.

Interventions and Procedures

In the studies included in this review, sexual counseling based on the BETTER model was provided in a minimum of two and a maximum of five sessions. The duration of the counseling sessions ranged from 20 min to 120 min. Of the studies included in this review, nine were conducted as quasi-experimental, and five were randomized controlled trials. Six of the quasi-experimental studies were conducted with a pretest-posttest design and control groups, while three studies used a single-group pretest-posttest design. In eight of the fourteen studies, the control group received routine care, and in three studies, the control group was provided with sexual counseling based on the PLISSIT model. In almost all of the studies, it was not clearly specified who from the research team provided the sexual counseling based on the BETTER model. However, in eight studies, it was noted that the research team included nurses specialized in women's health and diseases, and six studies were conducted by a multidisciplinary team.

Areas of Study Focus

The impact of sexual counseling based on the BETTER model has been examined in various groups, and it has been found that this model is effective in improving women's sexual functions [20–29], sexual self-efficacy [20], sexual self-disclosure levels [30], sexual satisfaction [20, 22, 29], sexual assertiveness [31], sexual quality of life [32], marital satisfaction [21, 24, 25], body image [27], life enjoyment and satisfaction [26], as well as in reducing levels of anxiety [21, 25, 32], stress [25, 32] and depression [32].

The Impact of Counseling Based on the BETTER Model on Sexual Health

In five studies [20–24], the impact of sexual counseling based on the BETTER model on sexual functions in women diagnosed with infertility was examined. Both immediately after and two months following the sexual counseling based on the BETTER model, the mean total score of the sexual function index in the group of women who received this counseling was found to be statistically significantly higher compared to the group of women who received routine care [20, 22–24]. In a single-group pretest-posttest design study [21], the mean total score of the sexual function index in women diagnosed with infertility statistically significantly increased after counseling based on the BETTER model compared to before the intervention ($p < 0.01$). Additionally, in the study by Dastaran et al. (2022), the sexual self-efficacy levels and sexual marital satisfaction ($p < 0.001$) of women diagnosed with infertility who received sexual counseling based on the BETTER model were found to be statistically significantly higher than the outcomes for those in the control group [20]. In the study by Karakas and Aslan (2019), the sexual satisfaction levels of women in the intervention group were also found to be statistically significantly higher than those in the control group ($p = 0.003$) [22].

In two single-group pretest-posttest design studies, the mean total score of the sexual function index increased significantly in women who had undergone mastectomy due to breast cancer [25] and in women diagnosed with cervical cancer [26] after counseling based on the BETTER model compared to before the intervention ($p = 0.002$ and $p = 0.001$, respectively). In three studies with a pretest-posttest control group design, the mean total score of the sexual function index in women who received sexual counseling based on the BETTER model was found to be statistically significantly higher compared to the control group. Specifically, this was observed in women who had undergone mastectomy due to breast cancer [27], in pregnant women [28], and in women diagnosed with MS [29] ($p = 0.033$, $p < 0.001$, $p < 0.001$, respectively). In the study by Ghafoori et al. (2022), sexual satisfaction in women diagnosed with MS increased significantly statistically at 8 and 12 weeks after counseling based on the BETTER model ($p = 0.01$), while there was no statistically significant difference in the scores of the women in the control group ($p = 0.46$) [29]. On the other hand, in the study by Ahmed Ghazi Mohamed et al. (2023), after counseling based on the BETTER model was provided to women in the postpartum period, the mean sexual function scores of the women were compared with the control group, and no statistically significant difference was found between the groups ($p = 0.523$) [32].

In three studies included in the research [30–32], the impact of counseling based on the BETTER and PLISSIT models on the sexual lives of women who had undergone mastectomy for breast cancer and women in the postpartum period was compared. Both counseling

Table 1 Characteristics of included studies

Author (year), Country	Aim	Research teams	Study design	Sample size and characteristics	Measurement tool
Shalamzari et al., [16], Iran	To compare the effectiveness of individual sexual counseling using the BETTER model with individual sexual counseling using the PLISSIT model in terms of increasing sexual assertiveness	Multidisciplinary	A quasi-experimental study	78 mastectomized women with breast cancer and FSFI score of less than 28 BETTER counseling group: 39 women PLISSIT counseling group: 39 women	Female sexual function index, Hulbert index of sexual assertiveness
Fouad Mohammed & El-Ansary, [28], Egypt	To assess the effect of sexual counseling based on the BETTER model on sexual function of pregnant women	Nurses	A quasi-experimental study	80 pregnant women presenting to the antenatal clinic with gestational age between 24 and 28 weeks and FSFI score of less than 28 Control group: 40 women Experimental group: 40 women	Female sexual function index
Ahmed Ghazi Mohamed et al., [32], Egypt	To determine the impact of BETTER model-based counseling on postpartum women's emotional status having sexual dysfunction	Nurses	A quasi-experimental study	100 postpartum women and FSFI score of less than 28 Control group: 50 women Experimental group: 50 women	Depression, Anxiety, and Stress scale (DASS), Female Sexual Function Index
Shalamzari et al., [16], Iran	To compare the effect of counseling based on two models of PLISSIT and BETTER on quality of sexual life in women with breast cancer after mastectomy	Multidisciplinary	A quasi-experimental study	78 mastectomized women with breast cancer and and FSFI score of less than 28 BETTER counseling group: 39 women PLISSIT counseling group: 39 women	Female sexual function index, Sexual quality of life questionnaire
Karimi et al., [30], Iran	To assess the efficacy of individual therapy using the BETTER model in comparison to individual therapy using the PLISSIT model in terms of increasing sexual self-disclosure in women with sexual problems after childbirth	Multidisciplinary	A randomized controlled clinical trial	80 women within 4 weeks to 6 months after childbirth and FSFI score of less than 28 BETTER counseling group: 40 women PLISSIT counseling group: 40 women	Female sexual function index, Hulbert Sexual self-disclosure index

Table 1 (continued)

Author (year), Country	Aim	Research teams	Study design	Sample size and characteristics	Measurement tool
Salim et al., [26], Egypt	To evaluate the effect of nursing counseling guided by BETTER model on sexuality, marital satisfaction, and quality of life among cervical cancer women	Nurses	A quasi-experimental study with one-group pretest-posttest design	44 women diagnosed with cervical cancer	Female sexual function index, Quality of life enjoyment and Satisfaction Questionnaire–Short Form
Shahin et al., [25], Egypt	To assess the effect of nursing counseling guided by a BETTER model on sexuality, marital satisfaction, and psychological status among breast cancer women	Nurses	A quasi-experimental study with one-group pretest-posttest design	87 mastectomized women with breast cancer	Female sexual function index, Body image scale, ENRICH marital satisfaction scale, Tylor anxiety scale, Perceived stress scale
Ghafoori et al., [29], Iran	To assess the effect of counseling based on the BETTER model on sexual function and satisfaction in married women with multiple sclerosis	Multidisciplinary	A randomized controlled clinical trial	68 women diagnosed with multiple sclerosis and FSFI score≤28 Control group: 33 women Experimental group: 35 women	Female sexual function index, Index of sexual satisfaction, Beck depression inventory-II, Fatigue severity scale
Olcer & Oskay, [27], Turkey	To determine the effect of the BETTER Model-based counseling program on sexual problems of women with breast cancer	Nurses	A randomized controlled clinical trial	60 mastectomized women with breast cancer Control group: 30 women Experimental group: 30 women	EORTC quality of life questionnaire-BR23, Female sexual function index, Body cathexis scale
Ali et al., [21], Egypt	To evaluate the effect of nursing instructions guided by the BETTER model on sexual dysfunction, anxiety, and marital satisfaction among infertile women	Nurses	A quasi-experimental study with one-group pretest-posttest design	60 women diagnosed with infertility	Female sexual function index, Taylor anxiety scale, ENRICH marital satisfaction scale
Dastaran et al., [20], Iran	To determine the effect of BETTER-based sex counseling on sexual quality of life in women with primary infertility	Nurses	A randomized controlled clinical trial	79 women diagnosed with primary infertility Control group: 40 women Experimental group: 39 women	Female sexual function index, Sexual quality of life-female, Sexual self-efficacy (researcher-made)

Table 1 (continued)

Author (year), Country	Aim	Research teams	Study design	Sample size and characteristics	Measurement tool
Karakas & Aslan, [22], Turkey	To determine the effect of sexual counseling based on the BETTER model in individuals with primary infertility and sexual dysfunction	Multidisciplinary	A quasi-experimental study	70 women diagnosed with primary infertility and FSFI score≤26,55 Control group: 35 women Experimental group: 35 women	Female sexual function index, Golombok-rust sexual satisfaction scale
Mohammadzadeh et al., [23], Iran	To examine the effect of sexual counseling based on the BETTER Model on the sexual function of women with infertility	Multidisciplinary	A randomized controlled clinical trial	80 women diagnosed with infertility and having sexual problems Control group: 35 women Experimental group: 36 women	Female sexual function index, ENRICH marital satisfaction scale
Mahmoud Hassan et al., [24], Egypt	To evaluate the effect of nursing counseling based on BETTER model on sexuality and marital satisfaction among infertile women	Nurses	A quasi-experimental study	88 women diagnosed with infertility and FSFI score≤28 Control group: 44 women Experimental group: 44 women	Female sexual function index, ENRICH marital satisfaction scale

Intervention	Results	Conclusion	Quality assessment
BETTER counseling group: A total of four counseling sessions, delivered individually, once a week, each lasting 60–90 min, based on the BETTER model PLISSIT counseling group: A total of four counseling sessions, delivered individually, once a week, each lasting 60–90 min, based on the PLISSIT model	At 4 weeks after the intervention, sexual assertiveness scores increased statistically significantly in the PLISSIT and BETTER groups compared to the pre-intervention period ($p<0.001$). At 4 weeks after the intervention, the sexual assertiveness score of women in the BETTER group (48.6± 12.5) was statistically significantly higher than that of women in the PLISSIT group (54.8± 11.5) ($p=0.027$). The mean change score of sexual assertiveness before and after the intervention in the group who received counseling based on the BETTER model (8.07±4.9) was significantly higher than the group that was counseled by PLISSIT model (5.58±4.7) ($p=0.026$).	The sexual counseling based on BETTER model was more effective than counseling using the PLISSIT method in increasing the sexual assertiveness of mastectomized women with breast cancer.	8/9[a]

Table 1 (continued)

Intervention	Results	Conclusion	Quality assessment
Control group: routine antenatal care Experimental group: Routine antenatal care and a total of four counseling sessions once a week, each lasting 2 h, delivered individually, based on the BETTER model	The mean total sexual function index score of women who received sexual counseling based on the BETTER model was found to be statistically significantly higher compared to the control group at two weeks post-intervention and follow-up evaluation ($p<0.001$).	The sexual counseling based on BETTER model was effective in increasing pregnant women's sexual function at post-intervention and follow-up evaluation in the intervention group compared to the control group.	9/9[a]
Control group: routine care Experimental group: routine care and delivered individually sexual counseling based on the BETTER model, four counseling sessions, lasting approximately 25 to 30 min each	After the intervention, the levels of depression, anxiety, and stress among women in the sexual counseling group based on the BETTER model decreased significantly compared to the control group ($p=0.000$). After the sexual counseling based on the BETTER model, there was no statistically significant difference in the mean total score of sexual function between the two groups ($p=0.523$). In the experimental group, 32% of the women before the BETTER model and 70% after the intervention had good sexual function. In the control group, these rates were 38% and 40%, respectively ($p=0.001$).	The sexual counseling based on BETTER model significantly reduced depression, anxiety, and stress among postpartum women having sexual dysfunction.	9/9[a]
BETTER counseling group: a total of four counseling sessions once a week, each lasting 60–90 min, individual counseling PLISSIT counseling group: a total of four counseling sessions once a week, each lasting 60–90 min, individual counseling	After the intervention, sexual quality of life score increased statistically significantly in both groups compared to pre-intervention (50.5 ± 9.1 in BETTER group and 46.2 ± 10.9 in PLISSIT group, $p<0.001$). However, there was no significant difference between the two groups in terms of the mean sexual quality of life after the intervention ($p=0.063$). The mean change score of sexual quality of life before and after the intervention in the group who received counseling based on the BETTER model (8.6 ± 5.1) was significantly higher than the group that was counseled by PLISSIT model (5.05 ± 6.2) ($p=0.001$).	The sexual counseling based on BETTER model is more effective than the PLISSIT model in increasing the quality of sexual life.	8/9[a]
BETTER counseling group: a total of two counseling sessions, two sessions a week, each session 60–90 min, individual counseling PLISSIT counseling group: a total of two counseling sessions, two sessions a week, each session 60–90 min, individual counseling	After the intervention, mean total sexual self-disclosure score increased statistically significantly in both groups compared to pre-intervention (55.60 ± 6.20 in BETTER group and 51.80 ± 6.30 in PLISSIT group, $p<0.001$). However, after the intervention, the mean total sexual self-disclosure score increased significantly more in the BETTER group compared to the women in the PLISSIT group ($p=0.013$). The mean change score of sexual self-disclosure before and after the intervention in the group who received counseling based on the BETTER model (11.50 ± 6.40) was significantly higher than the group that was counseled by PLISSIT model (7.80 ± 5.40) ($p=0.001$).	The sexual counseling based on BETTER model is more effective than the PLISSIT model in increasing women's sexual self-disclosure.	10/13[b]

Table 1 (continued)

Intervention	Results	Conclusion	Quality assessment
A total of four counseling sessions once a week, each lasting two hours	After the counseling based on the BETTER model (19.4 ± 6.3), there was a highly significant improvement in the mean of sexual functions among women compared with before intervention (11.6 ± 3.8) ($p = 0.0001$). After the counseling based on the BETTER model (40.7 ± 15.7), there was a highly significant improvement in the mean of quality of life enjoyment and satisfaction among women compared with before intervention (25.7 ± 10.3) ($p = 0.0001$). As women's sexual functions improve following the intervention, their quality of life also improves ($p = 0.011$).	The sexual counseling based on BETTER model to women with cervical cancer was successful in enhancing sexual functioning, marital satisfaction, and life quality for the women.	8/9[a]
A total of four counseling sessions once a week, each lasting two hours, delivered individually, based on the BETTER model	After sexual counseling based on the BETTER model, women's sexual function improved statistically significantly compared to pre-intervention ($p = 0.002$). After sexual counseling based on the BETTER model, women's anxiety and stress level improved statistically significantly compared to pre-intervention ($p = 0.009$, $p = 0.003$). Before sexual counseling based on the BETTER model, the rate of low marital satisfaction was 48.30%, whereas this rate decreased to 25.30% after the intervention. After sexual counseling based on the BETTER model, women's body image scores improved statistically significantly compared to pre-intervention ($p = 0.001$).	The sexual counseling based on BETTER model improved the sexuality, marital satisfaction, and psychological well-being of breast cancer women.	8/9[a]
Control group: routine care Experimental group: routine care and four counseling sessions based on the BETTER counseling model, each lasting 60–90 min for couples (each pair separately)	The sexual function scores of women in the intervention group were found to be statistically significantly higher compared to the control group at 8 and 12 weeks after the intervention ($p < 0.001$). At 8 weeks and 12 weeks after the intervention, the sexual satisfaction score of women in the intervention group increased statistically significantly ($p = 0.01$), while there was no statistically significant difference in the scores of women in the control group ($p = 0.46$). There was no statistically significant difference in the sexual satisfaction scores of women in the intervention and control groups 8 and 12 weeks after the intervention ($p = 0.06$). There was no statistically significant difference in the fatigue and depression levels of the intervention and control groups at 8 and 12 weeks after the intervention ($p = 0.61$).	The sexual counseling based on BETTER model improved the sexual function and satisfaction of women with multiple sclerosis	10/13[b]
Control group: routine hospital control Experimental group: A total of four counseling sessions once a week, each lasting 45–60 min based on the BETTER counseling model	After the intervention, it was determined that the women in the experimental group had statistically significantly higher scores in total female sexual function index score compared to the women in the control group ($p = 0.033$). After the intervention, women in the experimental group scored statistically significantly higher on the body image subscale of the quality of life scale than women in the control group ($p = 0.020$).	The sexual counseling based on BETTER model was effective in raising the awareness regarding sexual health after breast cancer treatments and reducing sexual health problems.	10/13[b]

Table 1 (continued)

Intervention	Results	Conclusion	Quality assessment
Five group counseling sessions based on the BETTER counseling model, each lasting 20–40 min	After the counseling based on the BETTER model (19.15), there was a highly significant improvement in the mean of sexual functions among women compared with before intervention (25.92) (p=$p<0.01$). After the BETTER sexual counseling session, infertile women's anxiety levels decreased statistically significantly compared to the pre-intervention ($p<0.001$). After the BETTER sexual counseling session, a statistically significant improvement was observed in the marital satisfaction among infertile women compared to before the intervention ($p<0.05$)	The sexual counseling based on BETTER model has improved the sexual functions and marital satisfaction of infertile women while reducing their anxiety.	8/9[a]
Control group: No intervention Experimental group: A total of two counseling sessions once a week, each lasting 90 min, delivered individually, based on the BETTER model	At the 4th and 8th week after the intervention, the experimental group's sexual function and sexual self-efficacy were found to be statistically significantly better compared to the control group ($p<0.001$). At the 4th and 8th week after the intervention, the experimental group's sexual marital satisfaction was found to be statistically significantly higher compared to the control group ($p<0.001$ and $p=0.009$, respectively).	The sexual counseling based on BETTER model was effective in improving infertile women's sexual self-efficacy, sexual functioning and sexual-marital satisfaction.	8/13[b]
Control group: Routine follow-up Experimental group: Two counseling based on the BETTER counseling model, each lasting 90 min, one session per week	After the intervention, the mean total sexual function index score of the women in the experimental group (21.63 ± 4.81) was statistically significantly higher than that of the women in the control group (18.85 ± 4.87) ($p=0.019$). After the intervention, the total sexual satisfaction mean score of the women in the experimental group (34.71 ± 9.71) was statistically significantly better than that of the women in the control group (42.14 ± 9.22) ($p=0.003$).	The sexual counseling based on BETTER model was found to be effective in improvement of sexual function and sexual satisfaction in the women with infertility.	9/9[a]

Table 1 (continued)

Intervention	Results	Conclusion	Quality assessment
Control group: not specified Experimental group: A total of two counseling sessions, each lasting 60–90 min, delivered individually, based on the BETTER model	Two months after the intervention, the mean total sexual function index score of the women in the experimental group (26.33 ± 3.50) was statistically significantly higher than that of the women in the control group (21.72 ± 4.42) ($p < 0.01$). Two months after the intervention, there was no statistically significant difference between the experimental and control groups in terms of marital satisfaction ($p > 0.05$).	The sexual counseling based on the BETTER model given in two sessions was found to be effective in improving the sexual health of infertile women	8/13[b]
Control group: routine hospital care for infertility and counseling regarding the infertility care Experimental group: routine infertility care and a total of four counseling sessions, each lasting 25–30 min based on the BETTER counseling model	While there was no statistically significant difference in the mean total sexual function scores of the women in the experimental and control groups immediately after the intervention ($p = 0.415$), two months after the intervention, the mean total sexual function scores of the women in the experimental group were statistically significantly higher than the women in the control group ($p = 0.000$). After the intervention and two months later, the mean marital satisfaction scores of the women in the experimental group were statistically significantly higher than those of the women in the control group ($p = 0.002$, $p = 0.000$ respectively).	The sexual counseling based on the BETTER model was effective in improving the sexual function and marital satisfaction of women diagnosed with infertility.	8/9[a]

[a] JBI Critical Appraisal Checklist for Quasi-Experimental Studies (min. 0 point – max. 9 points)

[b] JBI Critical Appraisal Checklist for Randomized Controlled Trials (min. 0 point – max. 13 points)

models increased sexual assertiveness [31] and sexual quality of life [32] in women who had undergone mastectomy due to breast cancer ($p < 0.001$). Counseling based on the BETTER model has also been found to be effective in increasing the level of sexual self-disclosure in women during the postpartum period ($p < 0.001$) [30]. Additionally, in these three studies, sexual counseling based on the BETTER model was found to be superior to the PLISSIT model in increasing women's sexual assertiveness, sexual quality of life, and levels of sexual self-disclosure.

The Impact of Counseling Based on the BETTER Model on Marital Relationships

In four studies [21, 23–25], the impact of sexual counseling based on the BETTER model on marital satisfaction was examined. In the study by Mahmoud Hassan et al. (2023), evaluation conducted immediately after and at the second month following sexual counseling based on the BETTER model in women diagnosed with infertility showed an increase in the mean marital satisfaction scores in the intervention group compared to the control group ($p = 0.002$) [24]. In the study by Ali et al. (2024), an increase in marital satisfaction was observed in women diagnosed with infertility after counseling based on the BETTER model compared to before the intervention ($p < 0.05$) [21]. On the other hand, in the study by Mohammadzadeh et al. (2021), no statistically significant difference was found in the mean scores of marital satisfaction between the experimental and control groups two months post-intervention in women diagnosed with infertility ($p > 0.05$) [23]. In the study by Shahin et al. (2021), the rate of low marital satisfaction in women who had undergone mastectomy due to breast cancer decreased from 48.30% before BETTER model-based sexual counseling to 25.30% after the intervention [25].

The Impact of Counseling Based on the BETTER Model on Physical and Psychological Health

In three of the studies included in the review [21, 25, 32] the impact of counseling based on the BETTER model on women's levels of anxiety, stress, and depression was examined. The single-group pretest-posttest design study by Shahin et al. (2021), found that stress and anxiety levels in women who had undergone mastectomy due to breast cancer statistically significantly decreased after counseling based on the BETTER model compared to before the intervention ($p = 0.003$ and $p = 0.009$, respectively) [25]. In the study by Ahmed Ghazi Mohamed et al. (2023), it was found that after counseling based on the BETTER model, the levels of depression, anxiety, and stress in postpartum women were statistically significantly lower compared to women in the control group ($p = 0.000$) [32]. In the study by Ali et al. (2024), anxiety levels in women diagnosed with infertility decreased in a statistically significant manner after counseling based on the BETTER model ($p < 0.001$) [21]. In the study by Olcer and Oskay (2022), the mean body image scores of women who received counseling based on the BETTER model after undergoing mastectomy due to breast cancer were found to be statistically significant higher compared to the women in the control group ($p = 0.020$) [27]. In the study by Ghafoori et al. (2022), no statistically significant difference was found in fatigue and depression levels between the experimental and control groups at the 8th and 12th weeks after sexual counseling based on the BETTER model in women diagnosed with MS ($p = 0.61$) [29], unlike the other studies.

The Impact of Counseling Based on the BETTER Model on Life Satisfaction

The impact of counseling based on the BETTER model on quality of life was examined only in the study by Salim et al. (2023) [26]. In this single-group pretest-posttest design study, life enjoyment and satisfaction levels in women diagnosed with cervical cancer statistically significantly increased after counseling based on the BETTER model compared to before the intervention ($p = 0.001$).

Limitations of the Study

This study has several limitations. The first limitation is that only five of all the studies reviewed were randomized controlled trials, so the validity of the BETTER model needs to be supported by further research. The second limitation is that the studies did not evaluate the impact of counseling based on the BETTER model on the sexual health and relationships of spouses. This indicates a lack of a family-centered care approach and suggests that a more comprehensive assessment and counseling approach is needed to effectively address women's sexual health. The third limitation is that the samples in the studies included only women, overlooking the sexual health and relationship experiences of men. The fourth and final limitation is the variation in the duration of counseling sessions based on the BETTER model in the included studies. This makes it difficult to compare the results of the studies. These limitations should be considered when interpreting the results of this study and in the planning and conduct of future research.

Discussion

This systematic review aimed to analyze interventional studies examining the effects of sexual counseling based on the BETTER model. Notably, all studies included in the review were conducted in countries with a predominantly Muslim population (Iran, Egypt, and Turkey). Similarly, systematic reviews and meta-analyses on sexual counseling based on the PLISSIT and EX-PLISSIT models also show that most studies were conducted in these regions [33–36]. This situation can be explained by the fact that sexuality and reproductive health remain taboo topics in these societies, as well as by the recognition of individuals' need for professional support [37]. On the other hand, the predominance of studies conducted within a single cultural context may limit the generalizability of the findings to other cultures. Therefore, it is important to test sexual counseling models in different societies.

Another notable finding of the study is that the samples were almost entirely composed of women. Only one study [29] included the spouses of women diagnosed with MS in the counseling process; however, the evaluation was conducted solely based on the women. Similarly, systematic reviews on the PLISSIT and EX-PLISSIT models show limited studies including men or couples [38–40]. This indicates that sexual counseling in the literature is largely women-focused, and the sexual health needs of men are often overlooked. However, sexuality is an experience shaped by couple interactions [41, 42], and sexual dysfunction in women increases the risk of dysfunction in male partners [43]. Therefore, future research should include men in the sample and develop and evaluate couple-centered sexual counseling programs [44].

The results of this review indicate that sexual counseling based on the BETTER model improves sexual function in women with infertility, pregnancy, mastectomy, cervical cancer, and MS. These findings are consistent with systematic reviews examining PLISSIT and EX-PLISSIT models [40, 45–53]. However, in some cases (e.g., postpartum women), the effect of counseling may vary; this suggests that model selection, implementation method, and individual needs play a determining role [32, 44].

Mixed results were obtained regarding the impact of BETTER model-based counseling on marital relationships. While marital satisfaction increased in three studies [20, 21, 24], one study reported no significant change [23]. These results indicate that the effect of sexual counseling may depend on the type of model, duration of application, and the specific conditions of the women. In addition, systematic reviews examining the EX-PLISSIT model have similarly reported positive effects on marital satisfaction [54].

In terms of psychological well-being, BETTER model-based counseling reduced anxiety levels in women with infertility, those who underwent mastectomy, and postpartum women [21, 25, 32]. However, no significant changes were observed in depression levels among women diagnosed with MS [29]. These findings highlight the importance of planning sexual health interventions to address not only sexual function but also mental health.

Finally, eight studies implementing the BETTER model were conducted by nurses specialized in women's health, and six studies were carried out by multidisciplinary teams including nurses, midwives, physicians, and psychologists. Nurses play a critical role in sexual health assessment and counseling, contributing significantly to overall health and quality of life [55]. Therefore, structured educational programs for nurses and strategies to enhance multidisciplinary collaboration are essential to improve sexual health service quality.

Limitations

Despite efforts to improve service quality, the studies included in our review share certain methodological limitations common to other systematic reviews. The included studies generally have short follow-up periods for the effectiveness of the counseling process (Malakouti et al., [54]) and a lack of comparison with other models. Future research should incorporate longer follow-up periods to evaluate the sustained effects of sexual counseling models.

A limitation is the exclusion of studies published in languages other than English or Turkish. This language restriction may have introduced a selection bias, potentially omitted relevant data and affected the comprehensiveness of our findings. Therefore, the results should be interpreted with caution, as they may not represent the entire body of literature on the BETTER model.

One of the significant limitations of this systematic review is the high heterogeneity among the included studies. The studies varied considerably in terms of design (randomized controlled trials vs. quasi-experimental), populations (e.g., women diagnosed with cancer or infertility), duration of interventions, and outcomes measured. This heterogeneity made it impossible to quantitatively synthesize our results (i.e., perform a meta-analysis) and complicated the interpretation of the findings. Therefore, it is important that our results be viewed as a narrative synthesis that discusses the findings of individual studies.

Conclusion

This systematic review focused on studies examining the effects of BETTER model-based sexual counseling on women, as all included studies predominantly involved female participants. Our findings demonstrate the model's positive effects on women's sexual health across various groups, including improvements in sexual function, sexual self-efficacy, and sexual satisfaction, as well as reductions in anxiety and stress levels. However, some outcomes, such as marital satisfaction and postpartum-related effects, were inconsistent across studies.

While the current evidence is promising, it is limited to a small number of studies, and further high-quality research, particularly randomized controlled trials, is needed to strengthen the evidence base.

A notable gap in the literature is the near-total exclusion of male partners from these studies. Considering that sexual health is often a dyadic issue, neglecting the male perspective may limit the overall effectiveness of counseling. Therefore, Future research should expand the BETTER model application to diverse genders and populations, including couples, to fully assess its impact on sexual health and enhance community well-being.

Additionally, it is noteworthy that nearly all reviewed studies were conducted in contexts with predominantly Muslim health care providers, and the BETTER model remains relatively unfamiliar in many Western countries. This highlights the role of socio-cultural factors in sexual health research and the need for culturally sensitive adaptations of counseling models.

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Data Availability The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest The authors declare no competing interests.

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