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Sexual Counseling in Women With Primary Infertility and Sexual Dysfunction: Use of the BETTER Model

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ABSTRACT

The aim of the study was to determine the effect of sexual counseling based on the BETTER model of female sexual health in infertile women with sexual dysfunction. This is an experimental, prospective study carried out in an infertility clinic. The study included 70 women with primary infertility, of whom 35 were in the experimental group and 35 were in the control group. The Female Sexual Function Scale and the Golombok-Rust Sexual Satisfaction Scale were administered at the initial assessment and the final assessment. Two sessions of sexual counseling were given to the experimental group based on the BETTER model. A routine follow-up of the control group was performed. After the counseling, there was a statistically significant improvement in the mean scores for Female Sexual Function Scale and the total scores for the Golombok-Rust Sexual Satisfaction Scale and its subscales in the experimental group compared to the control group. The women who had been infertile for six years and more had less improvement in sexual dysfunction and sexual dissatisfaction. The sexual counseling given in accordance with the BETTER model was found to be effective in improvement of sexual function and sexual satisfaction in the women with one to two years of infertility.

Introduction

The infertility frequency in the world is estimated to be between 3% and 7%, and infertility stems from female-related factors in approximately 37% of all infertility cases (Mascarenhas, Cheung, Mathers, & Stevens, 2012). Sexual lives of individuals and couples are negatively affected during the infertility treatment. Timed sexual intercourse directed toward achieving conception are the most important reasons. The non-scheduled, natural sexual intercourse is affected negatively causes sexual dysfunction, which affects the self-esteem of infertile individuals and couples and impacts the relationship of spouses with each other and the people around them (Cousineau et al., 2008; Johansson et al., 2010; Mascarenhas et al., 2012). In Millheiser et al.'s study, a higher percentage of the women were at risk of sexual dysfunction than in the present study despite being satisfied with their sexual life before the diagnosis of infertility. In addition, they experienced diminished sexual arousal and desire compared with the healthy controls (Millheiser et al., 2010). Duration of infertility also has an influence on sexuality. Sexual impact scores seemed to be the highest in the patients with six to 48 months of infertility and in the patients with longer than five years of infertility. The period of six to 48 months is the most likely time for couples to seek medical help. Therefore, it can be hypothesized that the impact of the infertility diagnosis is the highest during this time (Winkelman, Katz, Smith, & Rowen, 2016).

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Counseling is essential in terms of a systematic evaluation of the sexual life of individuals/couples, prevention of sexual dysfunction, and successful treatment. Eighty percent of the problems can be solved if adequate and appropriate sexual health counseling is given (Bitzer, Platano, Tschudin, & Alder, 2011). However, it is difficult to determine sexual problems. There are several models used within the scope of sexual counseling; ALARM, PLISSIT, BETTER, and KAPLAN are frequently used (Lamont et al., 2012; Quinn & Happell, 2012; Wright & Pugnnaire-Gros 2010). The BETTER Model has six stages: Bring Up, Explain, Tell, Timing, Educate, and Record. The model is useful in enhancement of knowledge and skills of health professionals and provides a comfortable communication process to discuss sexuality (Mick & Hughes, 2004).

It has been reported that interviews based on the BETTER model decrease anxiety and stress and increase sexual satisfaction (Mick & Hughes, 2004; Quinn, Cert, Dip, & Happell, 2013; Tashbulatova, Aridogan, Izol, Urunsak, & Doran, 2013). In several studies, using the model in sexual counseling has been shown to have a healing effect on sexual functions (Faghani & Ghaffari, 2016; Fahami, Pahlavanzadeh, & Asadi, 2015; Kaviani et al., 2013; Shoushtari, Afshari, Abedi, & Tabesh, 2015).

Aim

This study was conducted to determine the effect of sexual counseling based on the BETTER model of female sexual health in women with primary infertility and sexual dysfunction.

Method

Procedure and participants

This is an experimental, prospective study carried out in an infertility clinic between 2015 and 2016. The women with primary infertility presenting to the infertility clinic for detection of sexual dysfunction and going through the diagnosis process were administered the Female Sexual Function Scale (FSFI) (Rosen et al., 2000) and the Golombok-Rust Sexual Satisfaction Scale (GRISS) (Rust & Golombok, 1986). As a result of the preliminary evaluation, 83 out of 90 women were found to have sexual dysfunction. A total of four interviews with the experimental group and two interviews with the control group were conducted (Figure 1).

The inclusion criteria utilized were as follows: having the diagnosis of primary infertility, presence of sexual dysfunction (a score of 26.55 and lower for FSFI and a score of 5 or more for GRISS), not being on infertility treatment, and volunteering to participate in the study. The exclusion criteria were the following: being on in vitro fertilization (IVF) treatment and having a chronic disease (diabetes mellitus and hypertension, etc.).

Power analysis was made to determine the sample size by taking account of sexual dysfunction in infertile women (Tashbulatova et al., 2013). The power of the study was calculated with the G*Power program (Version 3.1.7). When 58 patients, of whom 29 were in the experimental group and 29 were in the control group, were included into the study, the power of the study ($1-\beta$) was found to be .88 at the significance level of 5% and at the effect size of .83. As a result of the power analysis, the researchers planned to include 35 patients into the experimental group and 35 patients into the control group. Thirty-five women with sexual dysfunction, who were assigned odd numbers in accordance with the order of their presentation, were included in the experimental group and 35 women, who were assigned even numbers, were included in the control group.

Appointments were scheduled for two sexual counseling sessions held at an interval of one week with the experimental group. The sexual counseling sessions based on the BETTER model lasted a total of three hours and each session lasted 90 minutes (Figure 2).

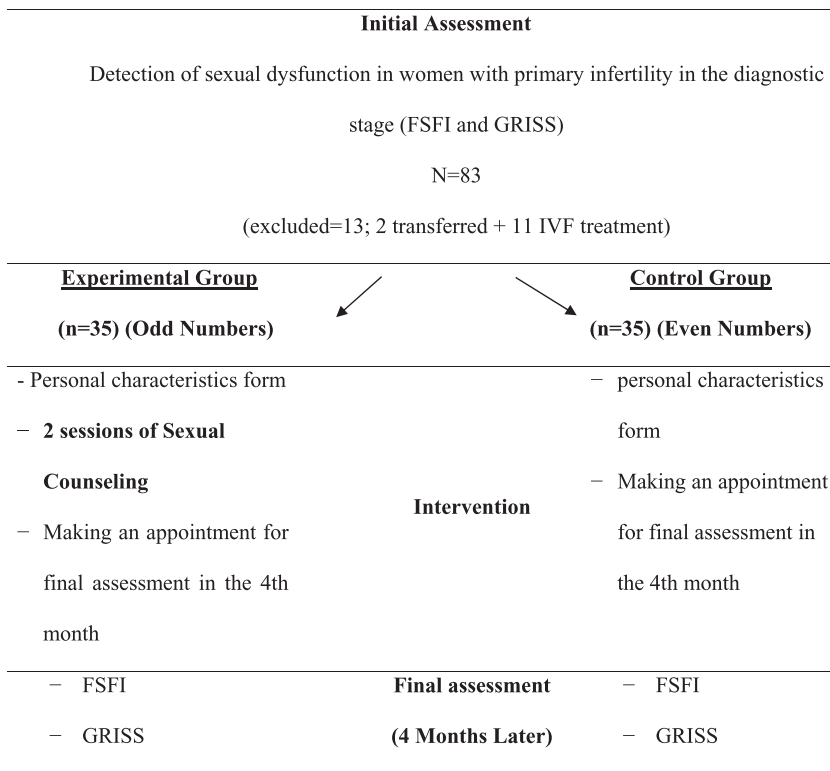


Figure 1. The flow chart of the study. GRISS: Golombok-Rust Sexual Satisfaction Scale; FSFI: Female Sexual Function Index.

In the studies conducted to determine the effectiveness of sexual counseling, patients were reevaluated in the fourth month after counseling (Faghani & Ghaffari, 2016; Fahami et al., 2015; Kaviani et al., 2013; Shoushtari et al., 2015). In the present study, the final assessment was made after three months of sexual experience following counseling. During this time, IVF treatment was not started in the women. All the interviews with the experimental and control groups and sexual counseling sessions were conducted by the researchers in a predetermined private room in the clinic.

Ethical approval was obtained from the research ethics committee (decision no = 8). Permission was obtained from the infertility clinic where the study was performed. The aim of the study and publication of the obtained data for scientific purposes without using participants' names were explained to the participants, and their written consent was taken in accordance with the Declaration of Helsinki.

Main outcome measures

Data were collected with a personal characteristics form, the Female Sexual Function Scale (FSFI), and the Golombok-Rust Sexual Satisfaction Scale (GRISS). The personal characteristics form was prepared by the researchers in light of the literature and included 34 questions about a variety of issues including age, marital status, education, occupation, economic status, smoking, current health problems, duration of infertility treatment, and infertility reasons.

FSFI is a multidimensional measure consisting of 19 items and developed for the evaluation of female sexual functions. The scale assesses sexual functions and problems in the prior four weeks. It

	BETTER (Model)	Topic	Content
Counseling Session I	1. Bringing up the topic	Meeting Patients and Diagnosis /Assessment	Meeting personal characteristics form, FSFI and GRISS assessment and analysis with women
	2. Explaining that sex is an important part of the quality of life	Sexuality	Definition and physiology of sexuality Sexual health Informing about sexual rights
	3. Telling patients that resources will be found to address their concerns	Infertility and Sexual Life / Psychosocial Situation	Learning how women can cope with stressors and problems they encounter during infertility therapy Identifying the psychosocial characteristics of women Determining areas of sexual dysfunction in women Referral to the expert for further assessment if necessary
	4. Timing of intervention		Making an appointment for counseling
Counseling Session II	5. Education regarding sexual side-effects of treatment	Sexual Recommendations	Making suggestions on the management of sexual dysfunction in women, Describing the exercises for increasing sexual satisfaction with visual materials (sexual intercourse positions, Kegel exercise, body discovery exercise, genital discovery exercise, masturbation exercise) Providing visual materials for people wanting to watch at home Providing written training material covering counseling content
	6. Recording	Discussion / Evaluation of Sexual Counseling	Recording of identified sexual problems and suggestions in the patient's file

Figure 2. Content of sexual counseling within the BETTER model.

has six subscales: desire, arousal, lubrication, orgasm, satisfaction, and pain. The items are scored on a 7-point scale. The lowest and highest scores are 2 and 36, respectively. High scores indicate better sexual function. The cutoff value for FSFI is 26.55. The total score for FSFI is 26.55, and lower scores indicate sexual dysfunction (Rosen et al., 2000; Wiegel, Meston, & Rosen, 2005).

GRISS is an improved measure used to assess the quality of sexual functions and sexual life. It was developed for women and consisted of 28 items and seven subdimensions, namely, frequency, communication, satisfaction, avoidance, touch, vaginismus, and anorgasmia. High scores for general sexual functions indicate deterioration in sexual functions and in the quality of intercourse. Raw scores can be converted to standard scores ranging from 1 to 9, with scores higher than 5 indicating sexual problems (Rust & Golombok, 1986).

Statistical analysis

The Statistical Package Program for Social Sciences for Windows (Version 21.0) was used to analyze the data obtained in the study. The descriptive statistics, means, standard deviations, medians, frequency, and minimum and maximum values were utilized for the analysis. Student's *t* test was used to compare normally distributed parameters between the experimental and control groups, and paired sample *t* test was utilized to compare intragroup changes in the pre- and post-tests. Kruskal-Wallis test was used to compare data without a normal distribution between the two groups, and Mann-Whitney U test was employed to determine which group caused the difference. A *p* value of less than .05 was considered as significant.

Results

The mean age of the participants was 29 ± 4.68 years. Of all the participants, 35.7% ($n = 25$) were high school graduates and 14.3% ($n = 10$) were university graduates. The duration of marriage was 4 ± 3.36 years. Of all the participants, 31.4% ($n = 22$) were employed, 87.1% had health insurance, and 58.6% ($n = 41$) had a family income lower than their expenses. The mean age at menarche was $13 \pm .98$ years and the mean duration of the menstrual cycle was 29 ± 4.15 days. The mean time elapsing after the first session of infertility treatment was 5 ± 4.97 months. Most of the women (94.3%; $n = 66$) reported that they had presented to other health institutions for infertility diagnosis and treatment before presenting to the clinic where the study was conducted. More than two thirds of the women (71.4%; $n = 50$) were found to be partially knowledgeable about infertility (Table 1).

The total scores for FSFI in the first assessment and the final assessment were found to be significantly higher in the experimental group than in the control group ($p = .019$). While the total score for the scale in the final assessment significantly increased compared to the initial assessment in the experimental group ($p = .001$), there was no significant change in the control group ($p = .557$) (Table 2).

There was a statistically significant difference in the total score for GRISS in the initial assessment and the final assessment between the experimental and control groups ($p = .003$). Compared to the initial assessment, the total scores for the scale in the final assessment was found to be significantly higher in the experimental group than in the control group ($p = .001$) (Table 3).

There was a statistically significant difference between the total scores for FSFI in the initial and final assessments in terms of duration of infertility in the experimental group ($p = .007$). According to the binary comparisons made, the total score for the scale was significantly higher in the women with one to two years of infertility ($p = .030$) than in those with three to five years of infertility ($p = .029$) and those with duration of infertility lasting six years or more ($p = .004$). In addition, the satisfaction scores were significantly lower in the women with more than six years of infertility ($p = .009$) than in those with one to two years of infertility. According to the duration of infertility in the women, there was a statistically significant relation between the total GRISS scores in the initial assessment and the scores in the final assessment ($p = .014$). The total GRISS scores were found to be significantly higher in the women with an infertility duration of six or more years ($p = .005$) and three to five years ($p = .047$) than in those with one to two years of infertility (Table 4).

Discussion

The results of this experimental study that was conducted to determine the effectiveness of sexual counseling based on the BETTER model in women with primary infertility and sexual

Table 1. Experimental and control group characteristics related to infertility.

		Experimental (n = 35) n (%)	Control (n = 35) n (%)	Test value	P
Duration of infertility	1-2 years	14 (40)	15 (42.9)	.788	^j .674
	3-5 years	12 (34.3)	14 (40)		
	> 6 years	9 (25.7)	6 (17.1)		
The cause of infertility	Female factor	6 (17.1)	4 (11.4)	4.347	^f .584
	Male factor	14 (40)	13 (37.1)		
	Unknown female/male factor	17 (49.8)	16 (45.7)		
The cause of male infertility (n = 29)	Sperm production disorders	2 (14.3)	1 (6.7)	3.257	^f 1.000
	Sperm function anomaly	4 (28.6)	3 (20)		
	Primary testicular failure	1 (7.1)	0 (0)		
	Oligospermia	6 (42.9)	10 (66.7)		
	Azoospermia	1 (7.1)	0 (0)		
	Orchiectomy	0 (0)	1 (6.7)		
The cause of female infertility (n = 12)	Anovulation	3 (50)	3 (50)	2.059	^h .493
	Tubal and pelvic factor	2 (33.3)	1 (16.7)		
	Ovarian cysts	0 (0)	1 (16.7)		
	Myoma	0 (0)	1 (16.7)		
	Uterine anomaly	1 (16.7)	0 (0)		
Knowledge of infertility	No	5 (14.3)	6 (17.1)	.001	^h 1.000
	Yes	6 (17.1)	3 (8.6)		
	Partial	24 (68.6)	26 (74.3)		
Previous treatments	No	2 (5.7)	2 (5.7)	1.078	^f .946
	Yes	33 (94.3)	33 (94.3)		
Time to have a child after marriage	0-3 months	15 (42.9)	14 (40)	4.035	^f .430
	4-6 months	3 (8.6)	2 (5.7)		
	7-12 months	3 (8.6)	5 (14.3)		
	1-5 years	13 (37.1)	13 (37.1)		
	≥ 6 years	1 (2.9)	1 (2.9)		

Note. ^fFisher-Freeman-Halton test. ^gYates's continuity correction test. ^hFisher's exact test. ^jPearson chi-square test.

dysfunction support the hypothesis that sexual counseling contributes to treatment of sexual dysfunction. The BETTER model, which is developed for use by oncology nurses, is not only limited to oncology, but is also used in other clinical areas (Quinn et al., 2013; Quinn & Happell, 2012; Wright & Pugnaire-Gros, 2010). There have not been any study with the BETTER model based sexual counseling in infertile women. In this study, there was a significant reduction in sexual problems after counseling offered to the experimental group, which showed the effectiveness of the BETTER model.

Infertility diagnosis and treatment are important risk factors for sexual dysfunction, and it is important to assess the sexual life of both individuals and couples. Sexual counseling should be given in order to prevent and treat sexual dysfunction in women during infertility treatment. The use of guiding models during sexual counseling is of benefit in systematic assessments of sexual lives of infertile women (Faghani & Ghaffari, 2016; Fahami et al., 2015; Kaviani et al., 2013; Shoushtari et al., 2015).

Infertile women who have sexual dysfunction usually do not seek help for their existing sexual problems, and prioritize the infertility treatment. The BETTER model helps infertile women to express their sexual life problems and prepares an appropriate treatment environment for their sexual function problems. On the other hand, the BETTER model, which is used to evaluation of sexual life, improves the quality and effectiveness of sexual counseling services provided by health professionals (Fahami, Pahlavanzadeh & Asadi, 2015; Faghani & Ghaffari, 2016). The results of the studies by Farnam, Janghorbani, Raisi, and Merghati (2014), Hatzichristou et al. (2004), and Rostamkhani, Jafari, Ozgoli, and Shakeri (2015) about the effect of sexual counseling on sexual dysfunction were comparable with those of the present study

Table 2. Scores for Female Sexual Function Index.

		Experimental (n = 35) Mean ± SD (Median)	Control (n = 35) Mean ± SD (Median)	Test Value	p
Desire	Initial Assessment	2.49 ± 1.15 (2.4)	2.74 ± 1.01 (3)	Z: −.988	^a .323
	Final Assessment	3.29 ± 1.26 (3.6)	2.67 ± .98 (3)	Z: −2.180	^a .029*
	Difference Between Initial and Final Assessments	.81 ± .94 (.6)	−.07 ± .85 (0)	Z: −3.599	^a .001**
Arousal	Initial Assessment	2.69 ± .80 (2.7)	2.87 ± .97 (3)	t: −.845	^d .401
	Final Assessment	3.52 ± 1.02 (3.6)	2.72 ± 1.13 (2.7)	t: 3.133	^d .003**
	Difference Between Initial and Final Assessments	.83 ± .93 (.6)	−.15 ± 1.00 (0)	Z: −3.955	^a .001**
Lubrication	Initial Assessment	3.50 ± .71 (3.6)	3.39 ± .73 (3.3)	t: .595	^d .554
	Final Assessment	3.80 ± .88 (3.6)	3.48 ± 1.03 (3.3)	t: 1.397	^d .167
	Difference Between Initial and Final Assessments	.28 ± .68 (0)	.09 ± .63 (0)	Z: −.921	^a .357
Orgasm	Initial Assessment	2.31 ± 1.10 (2)	2.67 ± .97 (2.8)	Z: −1.512	^a .131
	Final Assessment	3.15 ± 1.20 (3.6)	2.86 ± 1.22 (3.2)	Z: −1.271	^a .204
	Difference Between Initial and Final Assessments	.85 ± .99 (.8)	.18 ± 1.11 (0)	Z: −2.566	^a .010*
Satisfaction	Initial Assessment	2.75 ± 1.03 (2.8)	2.90 ± .91 (3.2)	Z: −.599	^a .549
	Final Assessment	3.39 ± 1.28 (3.6)	3.27 ± 1.16 (3.2)	t: .429	^a .669
	Difference Between Initial and Final Assessments	.64 ± .99 (.4)	.37 ± .82 (0)	Z: −1.614	^a .106
Pain	Initial Assessment	3.92 ± 1.33 (3.6)	3.97 ± 1.36 (4)	Z: −.284	^a .776
	Final Assessment	4.49 ± 1.21 (4.8)	3.85 ± 1.34 (3.6)	Z: −2.033	^a .042*
	Difference Between Initial and Final Assessments	.57 ± 1.17 (.8)	−.11 ± .71 (0)	Z: −2.428	^a .015*
Total Score	Initial Assessment	17.66 ± 3.68 (16.8)	18.55 ± 4.26 (19.3)	t: −.940	^d .351
	Final Assessment	21.63 ± 4.81 (22.9)	18.85 ± 4.87 (18.3)	t: 2.403	^d .019*
	Difference Between Initial and Final Assessments	3.97 ± 4.25 (3.6)	.30 ± 2.96 (.2)	Z: −3.871	^a .001**

Note. ^aMann-Whitney U test. ^bWilcoxon signed-rank test. ^cPaired samples t test. ^dStudent’s t test. *p < .05. **p < .01.

(Farnam et al., 2014; Hatzichristou et al., 2004; Rostamkhani et al., 2015). A study by Fahami et al. in 2015 showed that sexual counseling had a healing effect on sexual functioning in both men and women. In a 2015 study by Shoushtari et al., sexual satisfaction increased after sexual counseling and the effectiveness of counseling was emphasized (Fahami et al., 2015; Shoushtari et al., 2015).

While there was no significant change in the mean FSFI scores between the initial and final assessments in the control group, there was a significant increase in sexual desire, lubrication, orgasm, and satisfaction subdimensions in the experimental group. Rostamkhani et al. (2015) reported a significant increase in the FSFI scores in the experimental group given sexual counseling based on the BETTER model (Rostamkhani et al., 2015). In a study by Farnam et al. (2014), sexual counseling based on the model was shown to have a positive effect on elimination of sexual problems in the experimental group (Farnam et al., 2014). In 14 patients (8 women, 6 men)

Table 3. Scores for Golombok-Rust Sexual Satisfaction Scale.

		Experimental Group (n = 35) Mean ± SD (Median)	Control Group (n = 35) Mean ± SD (Median)	Test Value	^a p
Frequency	Initial Assessment	6.00 ± 2.01 (6)	5.74 ± 1.75 (6)	Z: - .503	.615
	Final Assessment	5.31 ± 2.08 (5)	5.94 ± 1.45 (6)	Z: - 1.269	.204
	^b p Difference Between Initial and Final Assessments	- .69 ± 1.76 (-1)	.20 ± 1.37 (0)	Z: - 2.380	.017*
Communication	Initial Assessment	6.06 ± 1.61 (6)	6 ± 2.25 (6)	Z: - .143	.886
	Final Assessment	4.49 ± 2.72 (4)	6.37 ± 1.96 (7)	Z: - 3.000	.003**
	^b p Difference Between Initial and Final Assessments	-1.57 ± 2.67 (-1)	.37 ± 1.66 (0)	Z: - 3.731	.001**
Orgasm	Initial Assessment	6.17 ± 1.72(6)	6.43 ± 1.17 (6)	Z: - .550	.582
	Final Assessment	5.57 ± 2 (5)	6.63 ± 1.59 (7)	Z: - 2.349	.019*
	^b p Difference Between Initial and Final Assessments	- .6 ± 1.4 (0)	.2 ± 1.41 (0)	Z: - 2.251	.024*
Avoiding	Initial Assessment	4.8 ± 1.62 (5)	5.29 ± 1.89 (5)	Z: - .711	.477
	Final Assessment	4.14 ± 1.59 (4)	5.66 ± 2.2 (5)	Z: - 3.347	.001**
	^b p Difference Between Initial and Final Assessments	- .66 ± 1.3 (-1)	.37 ± 1.57 (0)	Z: - 3.429	.001**
Touching	Initial Assessment	6.14 ± 1.57 (6)	5.94 ± 1.7 (6)	Z: - .401	.689
	Final Assessment	5.66 ± 1.7 (5)	5.97 ± 1.65 (6)	Z: - .921	.357
	^b p Difference Between Initial and Final Assessments	- .49 ± 1.17 (-1)	.03 ± 1.2 (0)	Z: - 2.503	.012*
Vaginismus	Initial Assessment	4.77 ± 1.88 (5)	4.74 ± 2.12 (5)	Z: - .066	.948
	Final Assessment	4.06 ± 1.73 (4)	4.91 ± 1.6 (5)	Z: - 2.149	.032*
	^b p Difference Between Initial and Final Assessments	- .71 ± 1.23 (0)	.17 ± 1.38 (0)	Z: - 2.813	.005**
Anorgasmia	Initial Assessment	7.09 ± 1.31 (7)	6.51 ± 1.48 (6)	Z: - 1.575	.115
	Final Assessment	5.49 ± 1.67 (5)	6.66 ± 1.66 (7)	Z: - 2.934	.003**
	^b p Difference Between Initial and Final Assessments	-1.6 ± 1.54 (-2)	.14 ± 1.4 (0)	Z: - 4.444	.001**
Total Score	Initial Assessment	41.03 ± 7.01 (41)	4.66 ± 8.43 (39)	Z: - .324	.746
	Final Assessment	34.71 ± 9.71 (33)	42.14 ± 9.22 (41)	Z: - 2.991	.003**
	^b p Difference Between Initial and Final Assessments	-6.31 ± 6.93 (-6)	1.49 ± 5.92 (2)	Z: - 4.720	.001**

Note. ^aMann-Whitney U test. ^bWilcoxon signed-rank test. *p < .05. **p < .01.

between the ages of 24 and 60, anxiety and stress levels decreased and patients' sexual quality of life has been reported to increase after sexual counseling with the BETTER model was performed by experienced psychiatric nurses in a physical therapy and rehabilitation center in Australia in 2013 (Quinn et al., 2013; Wright & Pugnaire-Gros, 2010).

In the current study, although there was no significant change in the mean GRISS scores between the initial and final assessments in the control group, there was a significant improvement in sexual function and a significant increase in sexual satisfaction in the experimental group.

Kaviani et al. emphasized in their study that sexual counseling led to positive changes in sexual desire and arousal in women and that information offered about sexual dysfunction was important (Kaviani et al., 2013). In Faghani and Ghaffari's study, there was an increase in the sexual life quality and sexual satisfaction of patients after PLISSIT model-based sexual counseling (Faghani & Ghaffari, 2016).

The results of the present study showed that there was less improvement in sexual dysfunction in the women with infertility of six years or more. It is vital that infertile women be assessed and

Table 4. FSFI and GRISS total scores on initial and final assessments of women in the experimental group.

		Experimental Group Infertility Duration			Test Value	^d p
		1-2 years ^a (n = 14) Mean ± SD (Median)	3-5years ^b (n = 12) Mean ± SD (Median)	≥ 6 years ^c (n = 9) Mean ± SD (Median)		
FSFI	Initial Assessment	19.86 ± 3.10 (2.3)	17.02 ± 3.34 (16.15)	15.09 ± 3.15 (15.6)	χ^2 : 1.047	.007 ^e
	Final Assessment	24.00 ± 3.87 (24)	21.47 ± 3.78 (21.85)	18.14 ± 5.54 (18.6)		
GRISS	Initial Assessment	37.57 ± 4.73 (38)	41.58 ± 7.84 (45)	45.67 ± 6.5 (45)	χ^2 : 7.504	.023 ^f
	Final Assessment	28.93 ± 7.11 (26.5)	35.42 ± 9.0 (34.5)	42.78 ± 8.63 (46)		

Note. ^eKruskal-Wallis test. e,f,g,h a,b<c; e,f,g,h Mann-Whitney U test; GRISS, Golombok-Rust Sexual Satisfaction Scale; FSFI, Female Sexual Function Index.

provided psychological support during this tough period complicated by financial and emotional burden (Jumayev et al., 2012).

The present study has some limitations. Only women with primary infertility were offered sexual counseling, and the study excluded male partners. Long-term outcomes of sexual counseling were not assessed. After sexual counseling, no data were collected to determine the rate of pregnancy in primary infertile women. Therefore, the effects of sexual counseling on fertility given under the BETTER model are unknown. No detailed discussions were made because there was no research that included the effect of this model on infertility. In addition, the study was not randomized and effects of sexual counseling based on different models were not compared. Furthermore, the study included only the women presenting to an infertility clinic. Therefore, it was not possible to compare the results of the study with those of other studies performed on women in other settings such as oncology and physical rehabilitation clinics.

Conclusions

Sexual counseling based on the BETTER model significantly improves sexual functions and sexual satisfaction in women with primary infertility and sexual dysfunction. It can be suggested that the use of the BETTER model in sexual counseling in infertile women may be an effective option. We recommend that further studies be performed to compare sexual counseling based on different models and to reveal their long-term outcomes. The role of the partners in the success of the BETTER model can also be examined in future studies.

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