

## Effect of Nursing Counseling Based on BETTER Model on Sexuality and Marital Satisfaction among Infertile Women

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### Abstract

**Back ground:** Psychological results of infertility may precipitate negative impact on marital and sexual fulfillment. Various therapeutic affiliations have emphatically prescribed mental intervention involving counseling to assist infertile couples. **Aim:** To evaluate the effect of nursing counseling based on BETTER model on sexuality and marital satisfaction among infertile women. **Design:** A quasi-experimental study design. **Setting:** The study was carried out at outpatient clinic of Obstetrics and Gynecology department in Benha University Hospital, Egypt. **Sampling:** A purposive sample included 88 infertile women divided equally into two groups; each group included 44 infertile women. **Tools:** Three tools were utilized, A structured interviewing sheet, Female Sexual Function Index and ENRICH Marital Satisfaction Scale. **Results:** There was a high statistical significant difference in mean scores of total Female sexual functions among study and control groups at follow up phase of BETTER model application ( $P < 0.001$ ), there was a statistical significant difference between both groups in total mean score of marital satisfaction after application of BETTER model and at follow up phase ( $P \leq 0.05$ ) and ( $P < 0.001$ ) in addition, there was a statistical significant positive correlation between total female sexual function and total marital satisfaction score among study group after application of BETTER model and at follow up phase ( $P \leq 0.05$ ) and ( $P < 0.001$ ). **Conclusion:** The application of nursing counseling utilizing BETTER model was efficient in improving infertile women's sexual function and marital satisfaction after intervention and at follow up phases compared with pre intervention. **Recommendations:** Counseling of infertile couples should be established at every stages of diagnosis and treatment of infertility to enhance marital and sexual functions.

**Keywords:** BETTER model, Infertile women, Marital satisfaction, Nursing counseling, Sexuality.

### Introduction

The sexual life of infertile women is a very important point for research as infertility is accompanied with disruption of a woman's sexual function, including sexual desire, arousal, orgasm, sexual satisfaction, and other areas of sexual life. Therefore, infertile couples are more likely to suffer from sexual disorder and psychological imbalance (Sene et al., 2021).

Infertility is the absence of couple's ability to conceive after one year of regular intercourse without using of any method of family planning. Infertility is considered one of the risk factors that affect sexual life, as 71.8% of infertile women have sexual dysfunction. Infertility not only affects the patient's self-esteem, but also increases the monetary and psychological loads hence; infertility may impact the relation of couples and satisfaction with intercourse (Azarbayjani et al., 2021).

Two types of infertility are identified, primary and secondary infertility. Primary infertility involves the couple who hadn't a child before. Secondary infertility is that the inability to have children despite a previous

pregnancy. Infertility affects marital life negatively, because it affects the wife's respect for herself and the concept of her body image. It also affects badly the sexual lifetime of both husband and wife. Most wives demonstrated a significant decline in their sexual activity, including performance and practice, frequency, quality and satisfaction, particularly after receiving an infertile diagnosis (Zayed and El-Hadidy, 2020).

There are many psychological factors that are negatively affected by infertility and treatment process, such as mental health and sexual satisfaction, so the lack of attention to the emotional disorders of infertile woman leads to many consequences that reduce the success of treatment, such as interpersonal disorder and marital resentment, and also, reduction of sexual desire. Furthermore, there are studies that indicate a significant decrease in sexual satisfaction for both spouses during infertility treatment (Bakhtiar et al., 2022).

Counseling is very important for the systematic evaluation of individuals' sexual life, as well as the prevention of sexual dysfunction. About 80% of sexual problems can be solved if proper and adequate sexual health counseling is

given. Although it is difficult to identify sexual problems, there are many models that are used in the scope of sexual counseling, such as PLISSIT, ALARM, KAPLAN and BETTER. Several studies have shown that interviews based on the BETTER model reduce stress and anxiety and also, increase sexual satisfaction, as well as having a therapeutic effect on sexual functions (*Demir and Aslan, 2019*).

BETTER model is considered as effective tool that provides a convenient framework for addressing sexual issues related to medical issues. This model improves sexual activity through six stages: Bringing up, Explaining, Telling, Timing, Educating and Recording. The mentioned model also helps healthcare professionals improving their knowledge and abilities, as well as creating a relaxed setting where people may openly discuss sexual issues and raise sexual pleasure (*Mohammed and El-Ansary., 2022*).

The assessment of sexual problems is a vital role for nurses to provide guidance related to treatment and improvement of sexual activity. Some sources make it clear that this aspect of care is not appropriately handled by nurses, due to communication gaps that are usually exist among nurses and suffering women. In order to provide women the chance to speak effectively and resolve difficulties relating to their sexual well-being, nurses should include pertinent questions in their assessments (*Shahin et al., 2021*).

Because nurse is the first member of health care team to contact with all types of patients in healthcare institutions, they have a special responsibility when it comes to the psychological and social effects of infertility on women. A comprehensive approach to care is required for infertility, and this care must include psychological assistance. Women who have infertility may experience negative effects on their quality of life. Knowing this should motivate nurses and other healthcare professionals to provide compassionate care and display empathy to the women and their partners who seek treatment and support at healthcare facilities (*Olowokere et al., 2022*).

In order to make infertile women feel comfortable during their treatment time, nurses working in infertility clinics must be knowledgeable about effective communication techniques. However, infertile women may experience a variety of stresses that sap their motivation (*Fata and Alus Tokat., 2021*). In the course of infertility treatment, the goal of nursing care is to assess couples using a bio-

psychosocial approach and to provide a double-specific strategy after assessing the couple's needs (*Çambel and Akköz Çevik., 2022*).

#### **Significant of the problem:**

Infertility is one of the most important medical and social problems which are so complex. Infertility affects 186 million people globally, the majority of whom reside in underdeveloped nations. In industrialized countries, the prevalence of infertility ranges from 3.5% to 16.7%, while in poor countries it ranges from 6.9% to 9.3% (*Salman et al., 2022*). According to experts, about 10% of married people in Europe are infertile, 17% in Canada and about 8-15% in the United States. In addition, infertility cases in Russia ranges from 8 to 21% and these percentages do not tend to decrease at the present time. Studies have also shown that more than 55% of infertile cases are due to reproductive disorders (*Akhmatovna, 2021*).

Egypt's overall fertility rate dropped from 3.5 in 2014 to 3.4 in 2017 and then to 3.1 in 2018. The total fertility rate decreased by about 3.4 percent in 2017 but declined further by roughly 11.1 percent in 2018 as compared to 2014 and by about 8 percent from 2017 and 2018 (*Sayed, 2020*). Infertility affects 12 percent of Egyptian couples, with 64 percent of cases being caused by the female partner, 20 percent by the male partner, 12.2 percent by causes affecting both partners, and 3.3 percent going undiagnosed and among these women, 7.7 percent experience secondary infertility and 4.3% experience primary infertility (*Moustafa et al., 2020*).

Most women experience discomfort when discussing sexual issues with healthcare provider hence, it is crucial for healthcare professionals to understand the sexual activity of infertile women for recognizing any changes in sexual function and providing appropriate comprehensive care related to women's needs. Sexual counseling utilizing BETTER model and dissemination of scientific information about sexuality have a positive effect on sexual activity (*Shahin et al., 2021*). Some studies mentioned that using BETTER model for addressing sexual problems was beneficial especially for women suffering from breast cancer or mental disorder. Nonetheless, it is necessary to investigate its effectiveness among infertile women. So, the researchers conducted the present study to evaluate effect of nursing counseling based on BETTER model on sexuality and marital satisfaction among infertile women.

### Aim of the study

This study aimed to evaluate the effect of nursing counseling based on BETTER model on sexuality and marital satisfaction among infertile women.

### Study Hypotheses

The following hypotheses were formulated, to accomplish the aim of this study:

H1- Infertile women with sexual dysfunction who will receive nursing counseling utilizing BETTER model will demonstrate an improvement in sexual function than others who don't.

H2- Infertile women with sexual dysfunction who will receive nursing counseling utilizing BETTER model will demonstrate an enhanced level of marital satisfaction than others who don't.

### Operational definition

BETTER model for counseling: is a comprehensive sexual counseling approach that focuses on addressing the sexual problems among infertile women. This model is comprised of six distinct stages, bringing up, explaining, telling, timing, educating, and recording.

### Subjects and methods

#### Study Design

A quasi-experimental design (two groups/ time series study) was employed to achieve the aim of the current study. A quasi-experimental research design attempts to determine causal relationships by applying a treatment or condition to one group (study) and comparing the outcome with a control group. There is manipulation of an independent variable in quasi-experimental research, just like in experimental research. It necessitates that subjects are randomly assigned to the groups to avoid bias and it controls all extraneous variables and uses a broader array of data collection techniques and statistical analyses.

#### Study Setting

The study was conducted at outpatient clinic of Obstetrics and Gynecology department in Benha University Hospital, Benha City, Egypt. The University Hospital has a key role in undergraduate education for healthcare professionals. It provides free and paid services during pregnancy, labor, postpartum and miscarriage. It also provides fertility treatment and gynecological care for public clients.

### Sampling

A purposive sample which involved 88 participated women followed inclusion criteria of this study as: married women with infertility diagnoses and who were between the ages of 18 and 45 (reproductive years), with a sexual function score below 28, has the ability to read and write and has agreed to participate in the study. Women who met the inclusion criteria were divided equally into two groups (study and control) and each group included 44 women.

**Exclusion criteria:** Women who suffering from any medical problem that affect sexual activity such as diabetes mellitus, heart disease and hypertension and women with psychiatric problems.

**Sample size:** Based on data obtained from Benha University Hospital Statistical center, 2022 the number of infertile women attended to the hospital was 192 and the sample size was calculated according to the following formula: Stephen Thompson's equation (*Fearon et al., 2017*).

$$n = \frac{N \times p (1-p)}{((N-1) \times (d^2 + z^2)) + p(1-p)} = 88$$

N = Population size is 192

p = Ratio provides a neutral property is equal to 0.12

d = the error rate is equal to 0.05

z = Class standard responding to the level of significance equal to 1.96

### Tools of data collection:

The following three tools were used for data collection:

**Tool I: A structured interviewing sheet:** It was constructed by the researchers and involved three parts:

**Part I:** General characteristics of the studied women as (age, residence, level of education, occupation, monthly income, anthropometric measurement as weight, height and body mass index).

**Part II:** Infertility history of the studied women as (marriage duration, duration of infertility, attempting to initiate pregnancy, causes of infertility, previous evaluation for infertility, method of evaluation and type of treatment)

**Part III:** involved the sexual history of the studied women as (Presence of problems related to erection, use of lubrication during intercourse, timing intercourse with ovulation and frequency of intercourse).

**Tool II. Female Sexual Function Index (FSFI):** it was a multidimensional self-report questionnaire, adopted from (*Rosen et al.,*

2000) and included 19 questions that used to assess 6 various aspects of sexual function which are, desire (2 questions), arousal (4 questions), lubrication (4 questions), orgasm (3 questions), satisfaction (3 questions) and sexual pain (3 questions).

**Scoring System:** Each item yields a score based on 5 points of Likert scale that ranged from 1 to 5 for (desire domain and items 15-16 in satisfaction domain) and the score ranged from 0 to 5 for the domains (arousal, lubrication, orgasm, pain) and item 14 in satisfaction domain. The overall score was calculated by adding the scores of each of the six domains. The total score of the female sexual function index ranged from 4-95 with the higher score indicated better sexual function and the lower score indicated poor sexual function. Normal female sexual function was determined when the total score more than 25 and female sexual dysfunction was determined when the total score less than 25.

*Distribution of the sex domains of female sexual function index, the corresponding items, and score range.*

Domain	Item /Number	Score/ range	Minimum score	Maximum Score
Desire	1, 2	1- 5	2	10
Arousal	3, 4, 5, 6	0- 5	0	20
Lubrication	7, 8, 9, 10	0- 5	0	20
Orgasm	11, 12, 13	0- 5	0	15
Satisfaction	14, 15, 16	0 (or 1)- 5*	2	15
Pain	17, 18, 19	0- 5	0	15

\*- Range for item 14 = 0–5; range for items 15 and 16 = 1–5

**Tool III: ENRICH Marital Satisfaction Scale:** this scale was adopted from (*Fowers et al., 1993*) and was used to assess infertile women's level of marital satisfaction. The scale involved two dimensions, marital satisfaction and idealized distortion (ID). The scale consisted of 15 items which are given a score based on a Likert scale with five possible responses (1 being strongly disagree, 2 being moderately disagree, 3 being neither agree nor disagree, 4 being moderately agree, 5 being strongly agree). Total score was calculated by summing up the score of each item that ranged from 15-75 and verified into three categories:

- Satisfied  $\geq 75\%$  (score of 57-75)
- Partial satisfied 50-75% (score of 37-56)
- Unsatisfied  $< 50\%$  (score less than 37)

### Tools validity

Content validity was done to assure that the utilized tools measure what it was supposed to measure. Tools developed by the researchers were examined by a panel of three experts in the obstetrics and gynecology nursing specialty to ascertain relevance and completeness of tools. Opinions of experts on the tools' consistency, accuracy, and relevancy were obtained with no suggestive modifications.

### Reliability

The internal consistency of the tools was tested by administering the same tools to the same subjects under similar conditions on two or more occasions and scores from repeated testing have been compared. The Cronbach alpha coefficients for internal consistency of FSFI was 0.884 and ENRICH Marital Satisfaction Scale was 0.939, hence the questionnaires were found to be highly reliable.

### Ethical considerations:

An official approval was taken from the Scientific Research Ethical Committee of the Faculty of Nursing, Benha University. An informed consent was obtained from the women to take part in the study after the aim of the study was clearly stated to them. Strict confidentiality was safeguarded throughout the study. The women were assured that all data was used only for research purpose. All women's rights have been guaranteed; the study is free from physical, social and psychological risks to the women. It was made clear that they could withdraw from the study at any moment. A summary of the intervention was provided to each woman before volunteered to take part in the study. At the end of the study, corporate counseling was also provided to the control group to help them deal with their sexual issues.

### Administrative approval

This study was conducted after obtaining the approval from the Faculty of Nursing Ethical Committee, Benha University. Then, an official permission was obtained from the directors of the pre-mentioned setting (outpatient clinic of Obstetrics and Gynecology department in Benha University Hospital,) to conduct the study after explaining its purpose, study sample and timeframe of the study.

### Pilot Study

A pilot study was conducted prior to data collection; it was conducted on 10% of the total sample (9 women) to assess the clarity, objectivity, applicability and feasibility of the tools. As well to estimate the time needed for

data collection. Those women in pilot study were included in the main study sample as no modifications were done.

### Field work

This study was carried out over a twelve-month period, from the beginning of May 2022 to April 2023. Until the estimated sample size of women was reached, the researchers visited the previously mentioned setting three days a week from 9:00 am to 12:00 pm, mainly on Sunday, Tuesday, and Thursday. At the study setting, the researchers started by introducing themselves to medical and nursing staff in the setting described above. The nature as well as the aim of the study was explained clearly. The implementation of the study passed through five phases (preparatory phase, assessment phase, planning phase, implementation phase which included application of nursing counseling utilizing BETTER model and evaluation phase).

### Preparatory Phase

Research design as well as tools of data collection were prepared according to reviewing past and current, local and international related literature by using magazines, books, periodicals, journals and internet searching to develop tools of the current study. Also, the researchers prepared the counseling program based on BETTER model for infertile women.

### Assessment phase

After obtaining official permissions to conduct the study, the researchers interviewed each woman individually in both control and study groups. At the beginning of interview the researchers greeted each woman, introduced themselves, explained the purpose and procedures of the study, scheduled times and frequency of counseling sessions to all selected women to assure adherence to selected interventions. After obtaining oral consent to participate in the study, the women were interviewed to assess their general characteristics, infertility history and sexual history by using a structured interviewing sheet.

Then, the female sexual function index was completed by each woman and then calculated by the researchers to identify women whose sexual function scores  $\leq 28$  and involved them in the study as the maximum score for each domain is 6 and the total index is 36 and the appropriate cut-off point for the diagnosis of sexual dysfunction was identified as  $\leq 28$ . Eligible women were divided into the control and study groups. Control group was assessed first then study group to avoid cross contamination of information between both groups. Average time for the completion of

interview was around (20-30 minutes). The researchers interviewed 1-2 women per day.

### Planning Phase

Based on data that obtained from pretest assessment phase and review of related literatures, the researchers designed the sexual counseling contents guided by BETTER model, teaching methods were determined and the educational media (a brochure in Arabic language) was created with the following general objective: Improve infertile women's sexual function and marital satisfaction after application of nursing counseling guided by BETTER model.

At this phase the contents and framework of the counseling sessions were prepared by the researchers using the general principles of the BETTER model (Bring up, Explain, Tell, Time, Educate and Record) Appropriate teaching strategies were determined such as discussion, demonstration, re demonstration and role-playing with the use of Arabic language in simple manner. In addition to the Arabic brochure, educational media such as laptops, images, and videos were also prepared to provide information and promoting discussion. For all selected women, the researchers also established the times and frequency of counseling sessions to ensure their compliance with the selected interventions

### The implementation phase

**For control group:** Women allocated to this group received routine hospital care for infertility and counseling regarding the infertility care. At the end of the study, women were given the brochure used in the study.

### For study group

Women included in this group received routine infertility care in addition to nursing counseling utilizing BETTER model. The researchers conducted the counseling sessions at study setting. To avoid any feelings of embarrassment, individual counseling was provided to women during this phase. The researchers made sure that the meeting environment was quiet and comfortable. Based on the stages of the BETTER counseling model, four counseling sessions were conducted and the time of each session was around 25-30 minutes as follow:-

**The first session** consisted of introducing the researchers, discussion about the counseling sessions' contents and objectives and provide introduction about BETTER model to the women. Then, the researchers addressed sexual

concern with women and encouraged them to talk freely about sexual problems and express their concerns (**Stage 1 Bring up**). Additionally, researchers started open discussion with the women and explained that sexual activity is an integral part of their life; this helped the women's feel less embarrassed, also researchers taught women that sexual difficulties can have an impact on their psychological well-being and marital satisfaction (**Stage 2 Explain**).

**At the second session**, this session started with informing women about all resources available if the intervention was not effective in solving their main problem as referral to another professional to help them (**Stage 3 Tell**). Then the researchers made sure that the scheduled time of counseling sessions were suitable for women and if not, the sessions were postponed to another time (**stage 4 Time**).

**During the third session**, the researchers educated the women the following topics in accordance with their needs as identified during the assessment phase (**Stage 5 Educate**).

- Female reproductive system and the components of sexual response cycle.
- Sexual issues related to infertility
- Treatments of infertility and its effects on sexual activity
- Importance of regular exercise or walking
- Healthy nutrition or nutrition therapy
- Taking steps to enhance sexual activity such as sensation focus exercises, Kegel exercises and different technical positions during sexual intercourse.
- Relaxation techniques to reduce anxiety and stress related to infertility or its treatment such as breathing exercises, recreation and imagination.

**At the fourth session**, the counseling process was completed. All notes during previous sessions should be recorded as well as any intervention that was given for participated women (**Stage 6: Record**). It should be noted that an Arabic brochure was used to inform the women of the training sessions' contents.

**The evaluation phase:** After one month of the intervention based on the BETTER model, the women were contacted again through phone call or face to face interview and evaluated using the same tools which used previously, specifically the second and third tools (female sexual function index (FSFI) and ENRICH marital satisfaction scale)

**Follow up:** After two months of evaluation, the same tools used again to follow up improvement in sexual function and marital satisfaction to ensure the success of the intervention.

### Statistical design

The Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 21 and then the data were explored. To test the research hypotheses, descriptive statistics and correlation coefficients were used. Descriptive statistics (frequency, percentage, arithmetic mean, and standard deviation) were used to describe characteristics of the studied women. Paired (t) test was used to compare between mean differences before and after the intervention. The p-value is the degree of significance. A statistically significant difference was considered at  $p\text{-value} \leq 0.05$  and high significant difference was considered at  $p\text{-value} \leq 0.001$ .

### Results

**Table (1)** represents that mean age of study and control groups were  $30.61 \pm 3.22$  and  $31.77 \pm 3.38$  years respectively. Concerning residence, 59.1 % and 52.3% of the study and control groups respectively live in urban places. As regards level of education, 54.5% of study group and 50% of control group had secondary education. Moreover, 72.7% of the study group and 59.1% of the control group were employee. As regard income, 75% of study group and 68.2% of control group hadn't enough income. Also, there was no statistically significant difference among both groups concerning general characteristics ( $p > 0.05$ ).

**Table (2)** illustrates that the mean weight of study and control groups were  $(86.18 \pm 8.99$  and  $83.04 \pm 11.49)$  kg respectively, and the mean height of both study and control groups were  $(161.1 \pm 4.58$  and  $160.88 \pm 6.24)$  cm respectively. Also, the mean BMI of study and control groups were  $(30.91 \pm 3.30$  and  $32.55 \pm 4.97)$  kg/m<sup>2</sup> respectively. Also, there was no statistically significant difference among both groups concerning weight, height and BMI ( $p > 0.05$ ).

**Table (3)** shows that mean duration of marriage of study and control groups were  $10.79 \pm 4.28$  and  $10.93 \pm 3.77$  years respectively. As regards duration of infertility, 54.5% of the study group and 38.6% of control group didn't have pregnancy for  $\geq 4$  years and 54.5% and 56.8 % of study and control groups respectively attempted to initiate pregnancy for more than 3 years. Also, 40.9% of the study group had male

factors of infertility while, 47.7% of the control group had female factors. According to type of treatment 56.8 % of the study group used medications (fertility drugs) and 43.2 % of control group used assisted conception as (IUI) or (IVF) as type of treatment. Also, there was highly statistical significant difference among both groups concerning type of treatment.

**Table (4)** illustrates that 61.4% and 77.3% of study and control groups' partners respectively didn't have problems with erection. Also, 68.2% of study group and 50% of the control group didn't use lubricants during intercourse. Also, 77.3% of the study group and 43.2% of the control group practiced intercourse twice per week. Furthermore, a statistical significant difference was found among both groups concerning use of lubricants during intercourse, timing intercourse with evaluation and frequency of intercourse.

**Table (5)** reveals that no statistical significant difference was found in the mean scores of Female sexual functions among study and control groups before application of BETTER model ( $P > 0.05$ ). However, after application of BETTER model there was a statistical significant difference in the mean scores of total arousal and total pain also, a high statistical significant difference was found in the mean scores of the total Female sexual functions among the two groups at follow up phase of BETTER model application ( $P < 0.001$ ).

**Figure (1)** illustrates that 31.8% of the study group had positive sexual function pre application of BETTER model while 59.1% and 72.7% of them had positive sexual function post application of BETTER model and at follow up phase respectively. In contrast, 34.1% of the control group had positive sexual function pre application of BETTER model and 40.9% had positive sexual function post application of BETTER model and at follow up phase.

**Table (6)** reveals that there was no statistical significant difference between study and control groups concerning total mean score of marital satisfaction before BETTER model application ( $P > 0.05$ ). Although, after BETTER model application, there was a statistically significant difference between both groups in the total mean score of marital satisfaction ( $P \leq 0.05$ ). Moreover, through follow up phase the mean score of marital satisfaction of the study group had a high significance than the mean score of the control group ( $P < 0.001$ ).

**Figure (2)** Illustrates that 15.9%, 63.6% and 68.2% of study group were satisfied pre, post and during follow up phases of BETTER model application respectively compared to 13.6%, 20.5% and 18.2% of the control group were satisfied pre, post and during follow up phases of BETTER model application respectively.

**Table (7)** shows that there was no statistical significant correlation between total female sexual function and total marital satisfaction between study and control groups pre intervention. Although, there was a statistical significant positive correlation between total female sexual function and total marital satisfaction score among study group post intervention ( $P \leq 0.05$ ). Moreover, a high statistical significant positive correlation was found between total female sexual function and total marital satisfaction score among study group during follow up ( $P < 0.001$ ).

**Table (8):** clarifies that there was no factors of the female sexual function domains affecting on marital satisfaction of the control group pre intervention while, post intervention it was found that total arousal, total orgasm and total satisfaction had a statistical significant effect on marital satisfaction. At follow up phase it was found that total lubrication had a high statistical significant effect on marital satisfaction of the control group.

**Table (9):** Illustrates that there was no factors of the female sexual function domains affecting on marital satisfaction of the study group pre intervention while, post intervention it was found that total desire, total arousal and total orgasm had a statistical significantly impact on marital satisfaction also, total lubrication and total satisfaction had a high statistical significant impact on marital satisfaction of study group. At follow up phase it was found that total desire, total arousal, total lubrication, total orgasm and total satisfaction had a significant impact on marital satisfaction of study group.

Table (1): Distribution of studied women (study and control groups) regarding their general characteristics (n=88).

Group	Study group (n=44)		Control group (n=44)		X <sup>2</sup>	P-value
	No	%	No	%		
<b>General characteristics</b>						
<b>Age (years)</b>						
• less than 30	18	40.9	13	29.5	1.265	0.531
• 30 < 35	18	40.9	22	50.0		
• 35 < 40	8	18.2	9	20.5		
<b>Min –Max</b>	25-36		25-38			
<b>Mean ±SD</b>	30.61±3.22		31.77±3.38			
<b>Residence</b>						
• rural	18	40.9	21	47.7	0.414	0.520
• urban	26	59.1	23	52.3		
<b>level of education</b>						
• Primary education	5	11.4	3	6.8	1.058	0.589
• Secondary education	24	54.5	22	50.0		
• University education	15	34.1	19	43.2		
<b>Occupation</b>						
• Housewife	12	27.3	18	40.9	1.821	0.177
• Employee	32	72.7	26	59.1		
<b>Income</b>						
• Enough	11	25.0	14	31.8	0.503	0.478
• Not enough	33	75.0	30	68.2		

No statistical significant difference ( $p > 0.05$ )

Table (2): Comparison between study and control group concerning their anthropometric measurement (n=88).

Items	Group	Study group (n=44)		Control group (n=44)		t test	p-value
		Mean	±SD	Mean	±SD		
Weight		86.18	8.99	83.04	11.49	1.425	0.158
Height		161.1	4.58	160.88	6.24	0.253	0.801
Body mass index		30.91	3.30	32.55	4.79	1.871	0.065

t= independent t test

No statistical significant difference ( $p > 0.05$ )



Table (3): Distribution of studied women (study and control groups) regarding their fertility history (n=88).

Group	Study group (n=44)		Control group (n=44)		X2 test	p-value
	No	%	No	%		
<b>Items</b>						
<b>Duration of marriage (years)</b>						
• 1<10	23	52.3	13	29.5	1.815	0.403
• 10 < 20	19	43.2	28	63.6		
• 20 ≤ 30	2	4.5	3	6.8		
<b>Mean ±SD</b>	<b>10.79±4.28</b>		<b>10.93±3.77</b>			
<b>Duration of infertility (years)</b>						
• 2 < 3	11	25.0	12	27.3	2.739	0.254
• 3 < 4	9	20.5	15	34.1		
• ≥ 4	24	54.5	17	38.6		
<b>Attempting to initiate pregnancy</b>						
• < 1 year	5	11.4	6	13.6	0.254	0.881
• 2 < 3 years	15	34.1	13	29.5		
• ≥ 3 years	24	54.5	25	56.8		
<b>Cause of infertility</b>						
• Female factors	15	34.1	21	47.7	2.007	0.367
• Male factors	18	40.9	16	36.4		
• Unknown cause	11	25.0	7	15.9		
<b>Cause of female infertility*</b>						
	<b>n=15</b>		<b>n=21</b>			
• An ovulation	10	66.6	7	33.3	15.601	0.004*
• Tubal or pelvic factor	12	80	8	38.1		
• Ovarian cysts	11	73.3	13	61.9		
• Myoma	3	20	6	28.5		
• Uterine anomaly	0	0	2	9.5		
<b>Cause of male infertility*</b>						
	<b>n=18</b>		<b>n=16</b>			
• Sperm production disorders	6	33.3	9	56.2	18.462	0.002*
• Sperm function anomaly	17	94.4	12	75		
• Primer testicular failure	10	55.5	9	56.2		
• Oligospermia	16	88.8	7	43.7		
• Azoospermia	3	16.6	8	50		
• Tumor	0	0	7	43.7		
<b>Previous evaluation for infertility</b>						
• Yes	31	70.5	25	56.8	1.768	0.184
• No	13	29.5	19	43.2		
<b>Method of evaluation *</b>						
	<b>n=31</b>		<b>n=25</b>			
• Basal Body Temperature (BBT)	10	22.7	11	25.0	4.719	0.194
• Ultrasound	12	27.3	17	38.6		
• Hysterosalpingogram	12	27.3	13	29.5		
• Endometrial biopsy	10	22.7	3	6.8		
<b>Type of treatment of infertility</b>						
• Medications (fertility drugs)	25	56.8	11	25.0	13.611	0.001**
• Surgical procedures	14	31.8	14	31.8		
• Assisted conception as (IUI) or (IVF).	5	11.4	19	43.2		

\*Results not mutually exclusive

No statistical significant difference (p &gt; 0 .05)

\*\*A high statistical significant difference (P ≤ 0.001)

Table (4): Distribution of studied women (study and control groups) concerning their sexual history (n=88).

Items	Study group (n=44)		Control group (n=44)		X <sup>2</sup> test	p-value
	No	%	No	%		
<b>Presence of problems related to erection</b>						
• Yes	17	38.6	10	22.7	2.618	0.106
• No	27	61.4	34	77.3		
<b>Types of problems related to erection *</b>						
	(n=17)		(n=10)		4.981	0.289
• Initiation	7	41.2	10	100.0		
• Rigidity	11	64.7	7	70.0		
• Curvature	15	88.2	10	100.0		
• Premature ejaculation	4	23.5	0	0.0		
• Duration	7	41.2	5	50.0		
<b>Use of lubricants during intercourse</b>						
• Oil-based lubricants	5	11.4	3	6.8	13.69	0.003*
• Water-based lubricants	8	18.2	5	11.4		
• Silicone-based lubricants	1	2.3	14	31.8		
• None	30	68.2	22	50.0		
<b>Timing intercourse with ovulation</b>						
• Yes	19	43.2	31	70.5	6.669	0.010*
• No	25	56.8	13	29.5		
<b>Frequency of intercourse</b>						
• Once per week	3	6.8	13	29.5	11.811	0.003*
• Twice per week	34	77.3	19	43.2		
• Three days per week	7	15.9	12	27.3		

\*Results not mutually exclusive

No statistical significant difference ( $p > 0.05$ )\*A Statistical significant difference ( $P \leq 0.05$ )

Table (5): Comparison between study and control groups regarding mean score of Female sexual functions scores pre, post and at follow up phases of BETTER model application (n=88).

Dimension	Group	Pre-intervention		Post-intervention		Follow-up	
		Mean	±SD	Mean	±SD	Mean	±SD
Total desire	Control	2.56	0.50	3.43	1.18	3.43	1.14
	Study	2.52	0.54	3.34	0.96	5.29	1.84
<b>t test/p-value</b>		0.406/0.686		0.394/0.694		5.676/0.000**	
Total arousal	Control	7.77	1.17	8.20	1.37	8.18	2.09
	Study	7.50	1.13	9.54	2.55	11.18	2.58
<b>t test/p-value</b>		1.108/0.271		3.065/0.003*		5.987/0.000**	
Total lubrication	Control	9.13	2.14	9.61	1.40	9.06	2.23
	Study	8.56	1.84	10.59	3.04	12.40	2.59
<b>t test/p-value</b>		1.333/0.186		1.934/0.056		6.464/0.000**	
Total orgasm	Control	5.02	1.26	6.29	1.67	5.61	1.85
	Study	5.63	1.39	6.72	2.00	8.29	2.13
<b>t test/p-value</b>		2.157/0.034		1.096/0.276		6.293/0.000**	
Total satisfaction	Control	5.68	1.55	6.52	1.43	5.88	1.83
	Study	5.65	1.69	6.65	2.29	8.84	2.76
<b>t test/p-value</b>		0.066/0.948		0.334/0.739		5.901/0.000**	
Total pain	Control	5.50	1.81	6.40	1.22	8.47	.79
	Study	5.04	1.47	5.02	1.32	4.97	1.37
<b>t test/p-value</b>		1.290/0.201		5.104/0.000**		14.652/0.000**	
Total female sexual functions	Control	35.68	5.20	40.47	5.45	40.65	7.63
	Study	34.93	5.75	41.88	10.01	51.00	10.95
<b>t test/p-value</b>		0.64/0.523		0.819/0.415		5.136/0.000**	

No statistical significant difference ( $P > 0.05$ ) \*A statistical significant difference ( $P \leq 0.05$ )\*\*A high statistical significant difference ( $P \leq 0.001$ )

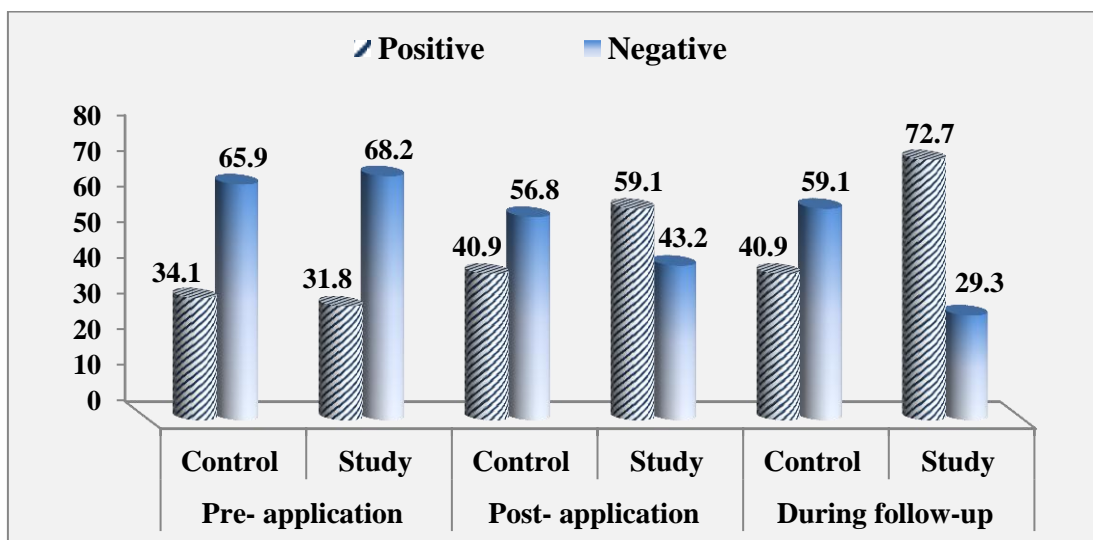


Figure (1): Distribution of studied women (study and control groups) regarding sexual function pre, post and at follow up phases of BETTER model application (n=88).

Table (6): Comparison between study and control groups concerning total marital satisfaction pre, post and at follow up phases of BETTER model application (n=88).

Group / Phase	Pre-intervention		Post-intervention		Follow-up	
	Mean	±SD	Mean	±SD	Mean	±SD
Control group	37.75	±14.42	36.95	±14.13	30.50	±2.89
Study group	32.86	±9.10	54.72	±10.33	70.34	±7.84
t test /p-value	1.900/0.061		2.086/0.002*		3.506/0.000**	

No statistical significant difference ( $P > 0.05$ ) \*A statistical significant difference ( $P \leq 0.05$ )  
 \*\*A high statistical significant difference ( $P \leq 0.001$ )

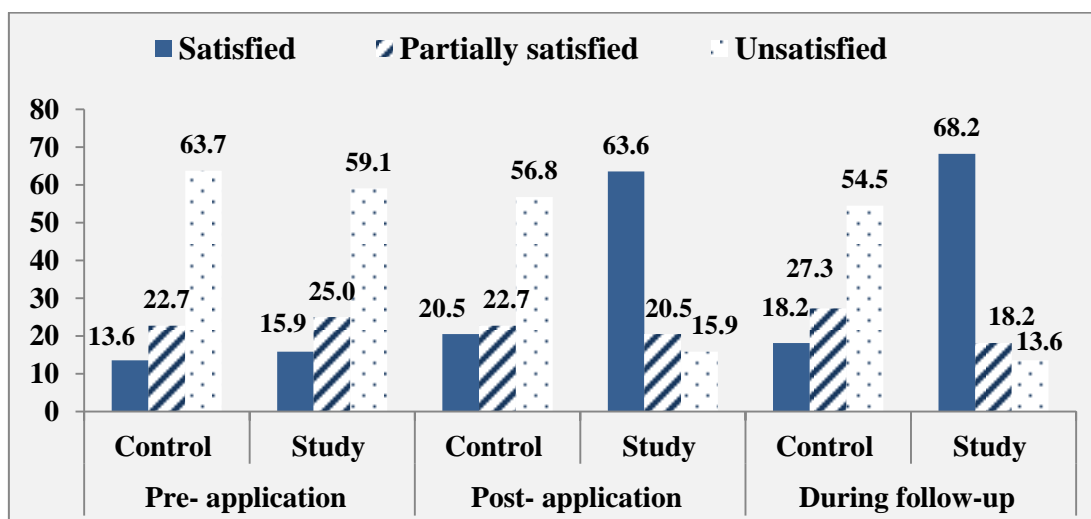


Figure (2): Distribution of studied women (study and control groups) regarding total marital satisfaction pre, post and at follow up phases of BETTER model application (n=88)

Table (7): Correlation between total female sexual function and total marital satisfaction among studied women (study and control groups) through program phases (n=88)

Item	Group	Total female sexual function					
		Pre intervention		Post-intervention		Follow-up	
		r	p-value	r	p-value	r	p-value
Total marital satisfaction	Control	0.227	0.863	0.146	0.343	0.202	0.189
	Study	0.253	0.098	0.628	0.002*	0.758	0.000**

No statistical significant difference ( $P > 0.05$ ) \*A statistical significant difference ( $P \leq 0.05$ )

\*\*A high statistical significant difference ( $P \leq 0.001$ )

Table (8): Linear regression between total female sexual function domains and total marital satisfaction among control group

Items	Pre intervention					Post intervention					Follow up				
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
(Constant)	29.879	10.671		2.800	0.008*	31.620	7.423		4.260	0.000**	26.779	5.157		5.192	0.000**
Total desire	1.677	3.434	0.101	0.488	0.628	-1.583-	2.795	-0.147	-0.567	0.574	1.031-	1.507	0.243-	-0.684-	0.498
Total arousal	1.453	2.161	0.180	0.672	0.505	-5.371-	1.943	1.328	2.765	0.009*	0.848	0.980	0.279	0.866	0.392
Total lubrication	1.992	1.955	0.306	1.019	0.315	-3.093-	1.558	-0.600	1.985	0.055	3.748	1.079	1.018	3.472	0.001**
Total orgasm	-0.511-	1.688	-0.095-	-0.303-	0.764	-3.495-	1.483	-0.775-	2.357	0.024*	-0.790-	0.954	-0.138-	-0.828-	0.413
Total satisfaction	-0.839-	1.623	-0.136-	-0.517-	0.608	-3.270-	1.449	-0.418-	2.257	0.030*	-0.681-	0.660	-0.952-	1.032-	0.309
Total pain	-0.465-	1.056	-0.294-	-0.440-	0.662	2.917	.840	2.826	1.028	0.410	1.138	0.890	0.377	1.280	0.209

Dependent Variable: Marital satisfaction

Table (9): Linear regression between total female sexual function domains and total marital satisfaction among study group

Items	Pre intervention					Post intervention					Follow up				
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
<b>(Constant)</b>	13.91	19.31		0.720	0.476	21.706	13.031		1.666	0.104	30.668	22.071		1.390-	0.173
<b>Total desire</b>	5.63	4.39	-0.196	1.282	0.208	-5.040	2.399	-0.424	2.101	0.043*	4.936	3.380	0.440-	2.401	0.033*
<b>Total arousal</b>	1.53	2.32	0.125	0.659	0.514	-6.082	2.010	-0.591	3.026	0.004*	1.910	-0.152	2.701	1.910	0.003*
<b>Total lubrication</b>	0.044	2.47	0.004	0.018	0.986	-8.517	2.200	-0.867	3.871	0.000* *	0.922	1.725	0.133	2.301	0.044*
<b>Total orgasm</b>	-3.26	2.45	-0.351	1.328	0.192	-5.064	2.198	-0.439	2.304	0.027*	0.245	1.338	0.145	2.101	0.043*
<b>Total satisfaction</b>	2.99	2.56	0.376	1.169	0.250	5.646	1.319	2.181	4.280	0.000* *	3.566	2.739	0.219	2.501	0.045*
<b>Total pain</b>	0.79	1.28	0.285	0.615	0.542	-1.528	3.486	2.588	0.566	1.347	0.715	2.294	0.102	0.312	0.757

Dependent Variable: Marital satisfaction

## Discussion

Pregnancy and motherhood play significant roles in shaping a woman's sense of identity. Experiencing difficulty in conceiving can generate significant stress for a woman, affecting emotional state and interpersonal relationships. The inability to have children poses a significant problem for couples who are eager to start a family, profoundly impacting their lives. In addition, the presence of negative attitudes and judgments concerning infertility within social settings can lead to significant emotional distress, ultimately damaging the relationship between married partners. Hence, maintaining a strong and healthy relationship is crucial for ensuring the cohesiveness of families (*Tabatabaee et al., 2022*).

Psychosexual counseling given by medical attendants encompasses a significant positive effect on marital concordance, sexual dysfunction and sexual issues. The nurse can communicate effectively with women and provide support to alleviate tensions about sexual issues. The nurse as a counselor and coach has an important role in identifying the mental issues regarding infertility problems and making a difference that helps the women to deal with such problems (*Shahin, 2021*).

The aim of the current study was to evaluate the effect of nursing counseling based on BETTER model on sexuality and marital satisfaction among infertile women. The current study results illustrated that a significant improvement of infertile women's sexual function and marital satisfaction was found after the application of BETTER model. So, the research hypotheses were achieved.

As regard general characteristics of the studied women, current research illustrated that the mean age of study and control groups were  $30.61 \pm 3.22$  and  $31.77 \pm 3.38$  years respectively, more than half of both groups live in urban places, more than half of the study and control groups had secondary education also, about three fourths of the study group and more than half of the control group were employee. Regarding income, three fourths of study group and more than two thirds of control group hadn't enough income. Also, there was no statistical significant difference among both groups concerning general characteristics that indicate homogeneity of both groups.

The findings of a study performed by *Yazdani et al., (2019)* agreed with our findings and found that the mean age of the control and

intervention groups was  $31.03 \pm 3.6$  and  $30.05 \pm 3.2$ , respectively and more than two thirds of both groups had diploma degree. Also, *Masoumi et al., (2017)* demonstrated that more than half of the intervention and control groups were employee and more than two thirds of study and control groups lived in urban places. In contrast, *Mohamed et al., (2020)* illustrated that only one quarter of the study group had secondary education, more than half of them were living in rural places and more than three quarters of them were housewife.

The current study showed that the mean weight of study and control groups were  $86.18 \pm 8.99$  and  $83.04 \pm 11.49$  kg respectively and the mean duration of marriage of study and control groups were  $10.79 \pm 4.28$  and  $10.93 \pm 3.77$  years respectively. In the same line *Marvi et al., (2019)* illustrated that the mean duration of marriage of intervention and control groups were  $8.52 \pm 4.65$  and  $8.77 \pm 4.76$  years respectively. The results of our study wasn't the same as *Shalamzari et al., (2022)* who illustrated that "the mean of the duration of marriage was  $18.8 \pm 6.8$  and  $19.8 \pm 6.8$  years in BETTER and PLISSIT groups, respectively and the mean weight was  $73.5 \pm 12.3$  and  $69.8 \pm 9.3$  Kg in BETTER and PLISSIT groups, respectively". The variation between the findings of both studies may be due to variation in study sample size and study groups.

As regard sexual history of both study and control groups, the findings of the current study represented that nearly one quarter of the studied groups' partners had premature ejaculation and more than three quarters of the study group and more than one third of the control group practiced intercourse twice per week. Moreover, more than half of the study group take fertility drugs and were infertile for more than 4 years. These findings agrees with *Mohamed et al., (2020)* who demonstrated that about one quarter of the study group's partners had premature ejaculation, more than half of study group practiced sexual intercourse from 3-4 times weekly, more than two thirds of them take Fertility drugs and more than half of them suffered from infertility from more than 3 years.

In spite of the fact that infertile couples are sincerely influenced, women show high stress, tension and elevated level of worry and gloominess. Through the management of infertility, 50%–60% of infertile couples show remarkable diminishes in sexual satisfaction.

Also, various studies demonstrated that infertility has significant influence on sexuality and eventually the sexual function of infertile women and men, particularly women. Hence, sexual activity is associated by sense of apprehension, insufficiency; lack of sexual desire, orgasm, and various sexual disarranges (*Shahbazi et al., 2020*).

The current research illustrated that no statistical significant difference in the mean scores of Female sexual functions domains was found between the study and control groups pre and post application of BETTER model. However, a high significant variation was found in the mean scores of the total Female sexual functions domains among the two groups at follow up phase of BETTER model application. Also, the present research results clarified that less than one third of the study group experience positive sexual function pre application of BETTER model while more than half and more than two thirds of them had positive sexual function post application of BETTER model and at follow up phase respectively. On the other hand, about one third of the control group had positive sexual function pre application of BETTER model and less than half had positive sexual function post application of BETTER model and at follow up phase.

The findings reflected the positive impact of counseling sessions utilizing BETTER model in improving infertile women's sexual function that considered very important issue for family strength, health and development also, the topic is considered vital to women as many women refuse to talk about sexual issues for many reasons as shame, religious beliefs, morals, embarrassment and discomfort. The result is agreed with *Mohammadzadeh et al., (2021)* who mentioned that all domains of female sexual function index in exception of pain had a significant elevation ( $p < 0.001$ ) post intervention and sexual counseling may be utilized to enhance infertile woman's sexuality.

Also, this result agrees with *Salim et al., (2023)* who showed that a significant improvement was found in the mean score of every items of the female sexual function index ( $p < 0.001$ ) post program application compared with preprogram. Also, *Dastaran et al., (2022)* who found that the mean scores for sexual function, sexual self-efficacy and marital satisfaction were improved among studied groups 4 and 8 weeks post intervention than pre intervention.

In numerous communities, women have troubles regarding sexual confidence, self-respect and difficulty to precise their concerns or keep up autonomy in marital connections. Subsequently, counseling models involving BETTER model was utilized to empower infertile women and men to talk about sexual matters with each other and with medical teams (*Shalamzari et al., 2022*). The World Health Organization (WHO) believes that it is important to understand and help with sexual problems and concerns. They also think it is important to educate couples about sexual problems so can be treated better. However, Sexual health is often ignored by doctors and nurses (*WHO, 2015*) and (*WHO, 2017*).

The findings of the present study also reveals that no statistical difference was found among study and control groups regarding total mean score of marital satisfaction pre application of BETTER model. However, after BETTER model application, a statistical significant difference was found between both groups in the total mean score of marital satisfaction. Moreover, through follow up phase the mean score of marital satisfaction of the study group had significant elevation than the mean score of the control group. In addition, less than one fifth of the study group was satisfied pre intervention, more than half and more than two thirds of them were satisfied post intervention and during follow up phases of BETTER model application respectively. on the other hand, less than one fifth of the control group were satisfied pre, post and during follow up phases of BETTER model application.

The lack of marital satisfaction between both groups pre intervention can be related to many factors as shame, embarrassment and lack of women's knowledge to discuss these issues with other people also, many people consider talking about such issues as taboo however, after attendance of the counseling sessions utilizing BETTER model application that involved different teaching methods and by using simple clear Arabic language a significant improvement in the study group's marital satisfaction had occurred and the improvement become more evident at follow up phase.

The results of *Masoumi et al., (2017)* agrees with our findings as showed that, the application of the Enrichment Program on Marital and sexual Satisfaction had improved marital and sexual satisfaction immediately post program and eight weeks after the

program ( $P < 0.001$ ). Also, *Shahin et al., (2021)* indicated that counseling based on BETTER model had significant effect in enhancing sexual health, satisfaction and psychosomatic state of women with breast cancer and declared that BETTER model can be utilized in chronic states as it is simple and stressed on sexual aspects.

Moreover, *Zamani et al., (2020)* demonstrated that education in addition to counseling of partners utilizing BETTER model had an effect in enhancing sexual satisfaction of grade 1 diabetic women and the effect was continued for three months after the intervention. *Karimi et al., (2021)* also distinguish between BETTER & PLISSIT counseling models, regarding the sexual assertiveness of woman who had sexual troubles following labor and illustrated that BETTER model had an effect than PLISSIT model in enhancing woman's sexual assurance and the results supported the findings of our study.

Concerning correlation between total female sexual function and total marital satisfaction among study and control groups over program stages, the present research findings demonstrated that no statistical significant correlation was found between total female sexual function and total marital satisfaction of both groups pre intervention. Although, a statistical significant positive correlation was found between total female sexual function and total marital satisfaction scores of study group post intervention. Moreover, a high statistical significant positive correlation was found between total female sexual function and total marital satisfaction scores of study group during follow up. This result highlight on the positive effect of nursing counseling utilizing BETTER Model application in enhancing infertile woman's sexual function that reflected on improving their marital satisfaction.

The findings of *Salim et al., (2023)* agrees with our results as mentioned that a positive correlation was found between overall female sexual function index scores and marital satisfaction and quality of life of the studied women ( $p = 0.011$ ). Also, *Karakas and Aslan, (2019)* found that sexual counseling guided by BETTER model had a significant effect in improving sexual function in addition to sexual satisfaction of infertile women.

As regards linear regression between total female sexual function domains and total

marital satisfaction among control group, the findings of the present study illustrated that no factors of the female sexual function domains affecting on marital satisfaction of the control group before intervention while, post intervention it was found that total arousal, total orgasm and total satisfaction had a statistical significant effect on marital satisfaction. At follow up phase it was found that total lubrication had a high statistical significant effect on marital satisfaction of the control group. The current results can be related to the fact that sexual relationship helps to stabilize marital life, but it may be difficult to practice intimacy with any imbalance in sexual desire, arousal, lubrication, orgasm, satisfaction or even pain. This certainly has implications for both couples, especially on their psychological health.

Concerning linear regression between total female sexual function domain and total marital satisfaction of study group, the findings of the research demonstrated that there was no factors of the female sexual function domains affecting on marital satisfaction of the study group pre intervention while, post intervention it was found that total desire, total arousal and total orgasm had a statistical significant effect on marital satisfaction also, total lubrication and total satisfaction had a high statistical significant effect on marital satisfaction of the study group. At follow up phase it was found that total desire, total arousal, total lubrication, total orgasm and total satisfaction had a significant impact on marital satisfaction of the study group. According to the researchers' opinion, the sexual relationship between any couple is instinctive and natural. This relationship may be a successful relationship or suffer from some problems. Therefore, it is natural that sexual desire, arousal, lubrication, orgasm and satisfaction affect marital satisfaction, either positively or negatively for both spouses.

## Conclusions

According to the findings of the current research, it could be concluded that the application of nursing counseling utilizing BETTER model had a positive effect on enhancing infertile women's sexual function and marital satisfaction. Also, a statistical significant positive correlation between total female sexual function and total marital satisfaction scores among study group after intervention was found. Moreover, there was a high statistical significant positive correlation between total female sexual function and total marital satisfaction scores among study group



during follow up phase. Hence, the present research supported the research hypotheses and fulfilled the aim of the research.

### Recommendations

1-Counseling of infertile couples should be established at every stages of diagnosis and treatment of infertility to enhance marital and sexual functions.

2-Husbands must be included during sexual counseling sessions with their wives to provide reassurance and express their problems.

3- In- service training programs that focus on sexual function and marital satisfaction should be created to help women learn and adopt new ideas and improve knowledge, practices and attitudes.

4-Training of health professionals to use BETTER model to enhance quality of life of infertile couples with regard to sexual activity

5- Sexual counseling clinics should be created in healthcare centers and include professionals such as sex therapists, psychiatrist, social workers and trained nurses to help with sexual counseling.

### Further studies to be performed

1-An educational program needs to be conducted to improve couples' awareness of their sexual relationship and marital satisfaction at early stage during frequent antenatal care.

2-A supportive sexual counseling program should be conducted to enhance quality of life among women with primary infertility.

3-More studies need to be conducted including large sample and in various settings to generalize the results of the study.

### Limitations of the study

- Absence of husbands during the counseling sessions affected on women's ability to talk about their sexual problems.
- The researchers faced certain limitations in recruiting the study sample because of cultural restrictions of talking about sexual activities but the researchers overcome this limitation through building trust relationship and illustrating the research objectives before the beginning of the counseling sessions.

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### Conflict of Interests

The researchers didn't disclose any potential conflict of interest regarding the research, authorship or publication of the research paper .

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