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Original Article

Effectiveness of Group Psychosexual Training for Marital Adjustment and Sexual Self-Efficacy of Infertile Women: A Randomized Controlled Trial

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Abstract

Objective: Infertility can be associated with unfavorable psychological consequences such as a sense of marital incompatibility and sexual inadequacy. To address these issues, this study aimed to assess the effectiveness of group psycho-sexual training in improving marital adjustment and sexual self-efficacy of infertile women.
Method: A randomized controlled clinical trial (RCT) study was conducted in Babol, Iran, with 72 infertile women, randomly assigned to either the intervention group (n = 36) or the control group (n = 36). The intervention group underwent psychosexual training, while the control group received routine care. The Dyadic Adjustment Scale (DAS) and Sexual Self-Efficacy Scale (SSES) were used to assess their marital adjustment and sexual self-efficacy. Data analysis was performed using various tests, including the independent t-test, Chi-squared test, paired t-test, ANCOVA, and MANCOVA.
Results: Most infertile women had moderate sexual self-efficacy (80%). The intervention group had a significantly better response to group psycho-sexual training compared to the control group. This intervention improved sexual self-efficacy and marital adjustment and its subscales including marital consensus, satisfaction, cohesion ($P < 0.0001$), and affectional expression ($P < 0.001$). The mean pre-to-post treatment scores of sexual self- efficacy, marital adjustment, and its subscales increased significantly in the intervention group, while no significant difference was observed in the control group ($P < 0.0001$).
Conclusion: Based on the findings, it is recommended to provide educational services alongside the infertility treatment process for enhancing the quality of marital adjustment and promoting sexual self-efficacy.

Key words: *Adjustment; Infertility; Marital Relationship; Sexual Health; Self Efficacy; Sex Education*

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Fertility and reproduction form the basis of life. They are integral to the principles of marriage (1). Despite changing attitudes towards sexual matters in recent decades, fertility has remained a crucial concern for human beings, and childbearing is a key factor in strengthening marital life (2). Numerous studies have indicated the negative impact of infertility on marital adjustment and the overall quality of marital life (3). These studies also suggest that infertility contributes to increased rates of depression, anxiety (4), and sexual dysfunction (5). Infertile people often experience a lower level of sexual activity, which reduces their chances of fertility (6), and the decrease in sexual activity can increase the number of childless persons every year (7). Helplessness, depression, anger, low self-esteem, lack of sexual self-efficacy, impaired quality of marital life (8), decreased intimacy, sexual dysfunction, and fear of a broken marital relationship, are all adverse consequences that are often experienced by infertile couples (9). A recent study reported the prevalence of sexual dysfunction to be 64.3% among infertile Iranian women (10). In addition, infertility can eliminate the voluntary nature of sexual function, as the pleasurable and optional aspects of sexual function are often limited to the goal of achieving pregnancy (11).

Marital adjustment, also known as marital quality and marital happiness, is defined as a person's mental evaluation of his/her spouse and their marital relationship (12). It is a changing process involving four aspects of a couple's cohabitation performance: 1) marital consensus, 2) marital satisfaction, 3) cohesion in marital life, and 4) expression of affection in the family environment (13). Marital adjustment and satisfaction are crucial for maintaining the foundation of a family and its growth over time. Marital adjustment is a variable that has been extensively studied in family and marriage studies. Satisfaction with marital life brings about more cheerful, happy, and healthy lives for couples. Additionally, marital life satisfaction contributes greatly to parental health, education of the next generation, and maintenance of marital life (14). The results of a study showed that satisfaction with marital life had a significant relationship with sexual satisfaction and that sexual problems of women had a great impact on marital relationships (15). Marital satisfaction is influenced by various cognitive, emotional, and physiological factors, as well as behavioral patterns, emotional support, models of compatibility with conflict, mode of emotional expression, stress, communication skills, intimacy, and self-esteem. Notably, sexual performance is one of the most vital factors affecting marital satisfaction as well as the quality of marital relationships (16). Sexual self-efficacy denotes "the ability of women to have a sexual relationship that can lead to reciprocal orgasm or sexual satisfaction." Sexual relationships, an appropriate level of sexual self-expression, the ability of women to manage their sexual response cycle, and having necessary skills to make an enjoyable sexual relationship are considered important items of women's sexual self-efficacy (17).

Basically, sexual behavior is an essential aspect of health and a major issue for the quality of life (18). Sexual health, which is one of the dimensions of health, becomes especially important during marriage and over the course of marital life (19). The purpose of sexual health is to enable individuals to have a conscious, enjoyable, and safe sex life (20). When couples engage in satisfactory, high-quality, and appropriate sexual relationships, it leads to greater marital satisfaction and better mental health. Further, when such relationships are responsible for the development and growth of a family, they contribute to the sustainability of the family and prevent the deterioration of this sacred institution (21). This increases the need for educational interventions to improve sexual health, sexual self-efficacy, communication, and marital adjustment. Sex skills training is one such intervention that addresses these aspects and teaches couples the necessary skills. However, different approaches have been adopted in previous investigations. For example, some studies have limited their training package to only one teaching method, such as sexual education, without using psychological methods or vice versa. These approaches differ in terms of perspective and form of implementation (16-22). The use of mixed interventions has particular importance given the impact of psychological issues on sexual self-efficacy and marital adjustment. Combined methods of education that address both psychological and sexual issues have been investigated in RCT studies and have proven to be highly effective. However, these methods have received relatively less attention from researchers. In the present study, we employed a mixed-method approach to psychosexual education programs, which include sexual skills training, Kegel exercises, and relaxation techniques focused on breathing that may be more effective in improving sexual self-efficacy and marital adjustment than one single method alone. Therefore, we conducted this study to determine the effectiveness of group psychosexual training in enhancing marital adjustment and sexual self-efficacy of infertile women.

Materials and Methods

Methodology

An RCT study was conducted in the Fatemeh Zahra Infertility and Reproductive Health Center of Babol University of Medical Sciences, Iran, from April to July 2019. The study recruited infertile women who met the following criteria: providing informed consent; not planning to undergo infertility treatment over the next two months; having a history of infertility lasting for more than one year; being under 40 years of age; being able to read and write; having a stable sexual activity (for at least four weeks before the study); having a

spouse; being in a permanent marriage; having no history of genital infections or physical problems (such as spinal cord injury and limb defects); having no history of physical illness (such as diabetes, cardiovascular disease, hypertension, thyroid disease, Addison, and Cushing); having no history of psychiatric problems under treatment; and not taking drugs or medications with known effects on sexual function such as benzodiazepines, barbiturates, antihypertensives, antidepressants. The exclusion criteria consisted of failure to complete the questionnaire, receiving psychological support (such as attending psychotherapy sessions, relaxation techniques, yoga, etc.), and experiencing a stressful event in the past three months (such as death or acute illness of close relatives and major changes in living conditions). Out of 141 infertile women referred to the Fatemeh Zahra Infertility and Reproductive Health Center of Babol University of Medical Sciences, six declined to participate, and 63 met the exclusion criteria. Ultimately, 72 infertile women agreed to participate in this project, and 70 participants stayed until the completion of the study. The flowchart in Figure 1 illustrates the participants at each stage of the protocol. Blinding was used for neither the researchers nor the participants. However, blinding was implemented for the analyzer to prevent bias, and by providing a code for each group, the nature of the groups remained unclear for the analyzer. The sample size of 30 was determined using the formula for comparing two means in two independent groups, with equal assignment to each group (23), yielding an 80% power with a 95% confidence interval, accuracy of 4.14, and approximate standard deviation (SD) of 5.7 for each group based on the previous studies (24-25). After considering the sample loss percentage of 20%, 72 eligible infertile women were selected and equally divided into two groups using computer-aid randomization, with 36 participants in each group (23).

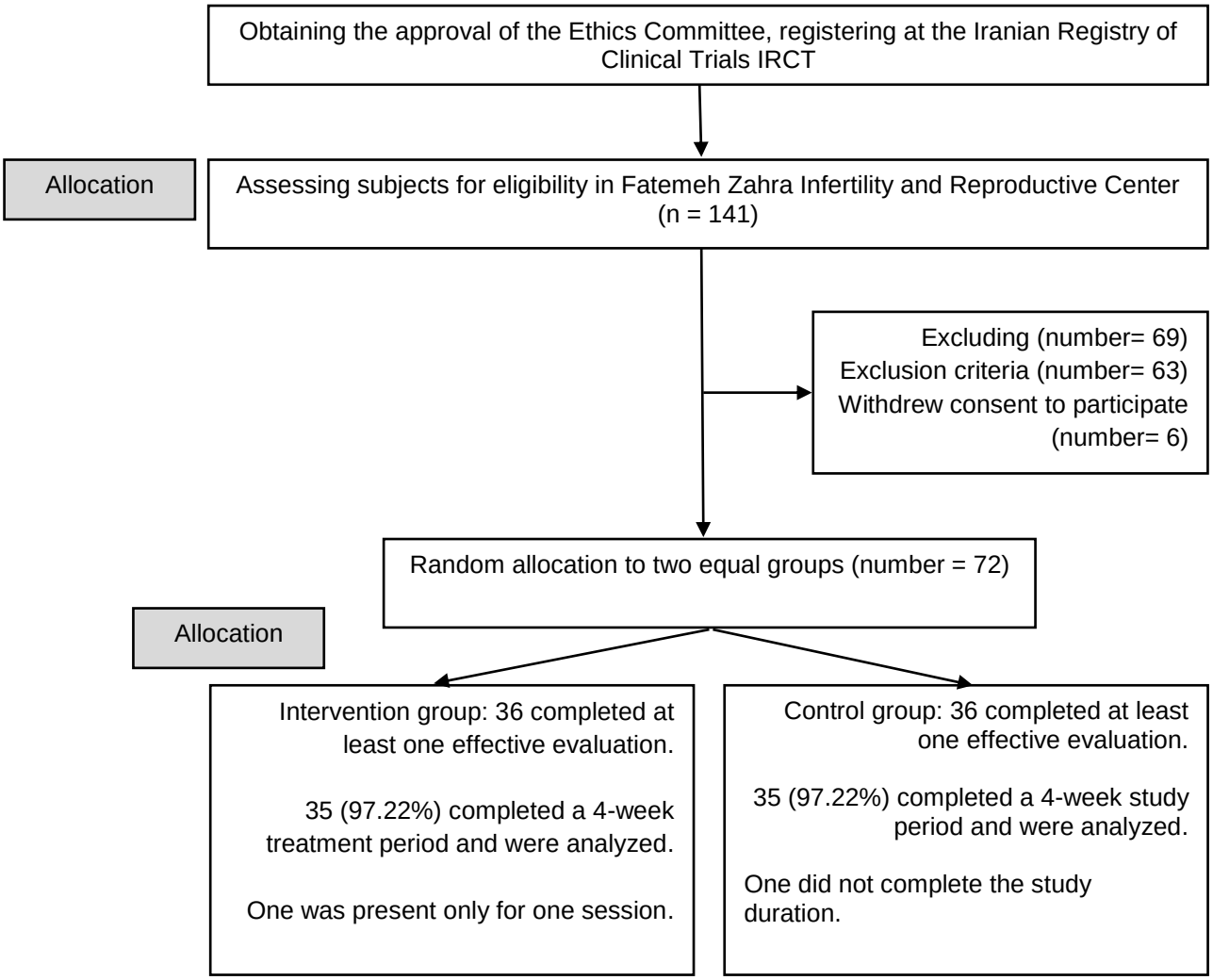

Figure 1. Flowchart of Recruited Infertile Women in Study Groups

The intervention group received four two-hour group sessions on sexual skills training and relaxation techniques with a focus on breathing, in the form of question-and-answer sessions, lectures, group discussions, CDs, and booklets (Table 1). Each group session consisted of 10 to 13 participants. The control group received routine counseling care. In order to comply with research ethics, participants in the control group were referred to a sex therapy clinic at the end of the study and provided with an educational package. The educational package was prepared based on valid and reliable sources (26-28) and articles (29, 6) which were approved by all members of the research team.

Table 1. Summary of Group Psycho-Sexual Training Sessions in Infertile Women

Session	Educational content titles	procedure
Session1	-Getting familiar with objectives, methods, and the structure of meetings -Getting familiar with the class rules (participating on time, being active, and confidentiality) -Getting familiar with each other in the group - Training infertility, its causes, and treatments - Training in anatomy and physiology of the female and male reproductive system - Getting familiar with the importance of sex education in married life and its effect on increasing sexual self-efficacy, and marital compatibility - Training relaxation techniques focused on breathing (1) - Training kegel exercises or perinatal muscle exercises - Presenting daily activities report assignment form to clients - Explaining the importance of practicing at home	- Booklets and CD - Lecture - Group discussion - Role playing - Doing practical exercises
Session2	- Revision of previous assignments - Description of clients' experiences from previous assignments. - Getting familiar with the sexual response cycle in men and women - Getting familiar with sexual dysfunctions - Training in foreplay - Training sensory focus exercises (1) - Training relaxation techniques focused on breathing (2) - Presenting daily activities report assignment form to clients - Explaining the importance of practicing at home	- Booklets and CD - Lecture - Group discussion - Answer to specific questions of participants - Role playing - Doing practical exercises
Session3	- Revision of previous assignments - Description of clients' experiences from previous assignments - Training massages technique - Training sexual positions - Training sensory focus exercises (2) - Training relaxation techniques focused on breathing (3) - Presenting daily activities report assignment form to clients - Explaining the importance of practicing at home	- Booklets and CD - Lecture - Group discussion - Answer to specific questions of participants - Role playing - Doing practical exercises
Session4	-Revision of previous assignments - Description of clients' experiences from previous assignments - Training relaxation techniques focused on breathing (4) - Training in sexually transmitted diseases (STD) and related care - Presenting daily activities report assignment form to clients - Explaining the importance of practicing at home - Review of the whole program	- Booklets and CD - Lecture - Answer to specific questions of participants - Group discussion - Role playing - Doing practical exercises

Research Tools

After assuring the patients regarding the confidentiality of their information and obtaining their consent to enter the study, the researchers administered a demographic characteristics questionnaire as well as two other questionnaires with acceptable validity and reliability - the Dyadic Adjustment Scale (DAS; Spanier, Graham B) and Sexual Self-Efficacy Scale (SSES) - in accordance with the objectives of the study. Both questionnaires were filled out by the participants at baseline and one week after the end of the study. The DAS, developed by Spanier in 1976, measures the compatibility of couples who live together and includes 32 self-report items and four subscales: marital consensus, marital satisfaction, marital cohesion, and affection expression. This tool can be employed to measure overall satisfaction in an intimate relationship using scores ranging from 0 to 151, with higher scores indicating greater levels of compatibility. The DAS also has an excellent level of internal consistency, with a Cronbach's alpha of 0.96. The internal consistencies of its subscales range from good to excellent: marital satisfaction (0.94), marital

cohesion (0.81), marital consensus (0.90), and affection expression (0.73). Regarding the validity of its Persian version, this scale was checked by logical methods of content validity for women in Iran. It is correlated with the Lock-Wallace Marital Satisfaction Scale (30-32). The SSES is a valid and reliable instrument that evaluates women's sexual self-efficacy. In Iran, the Persian version of the scale was validated by Vaziri and Lotfi Kashani. It is based on Schwartz's (1993) general self-efficacy questionnaire, with a Cronbach's alpha of 0.86. This questionnaire consists of 10 questions based on a Likert scale ranging from 0 (not correct at all) to 3 (completely correct). The scores on this scale range from 0 to 30, with higher scores indicating higher levels of sexual self-efficacy (33).

Data Analysis

To analyze the data, a number of statistical tests were applied, including the independent t-test, Chi-square, paired t-test, analysis of covariance (ANCOVA), and multivariate analysis of covariance (MANCOVA). For the paired-sample t-test, mean comparisons for marital adjustment were performed before and one week after the intervention within each study group. To compare the mean difference in marital adjustment between the intervention and control groups, ANCOVA was employed, considering the baseline score as a covariate. When the correlation between marital adjustment variables (marital consensus, marital satisfaction, marital cohesion, and affection expression) ranged from 0.3-0.7, MANCOVA was applied. The statistically significant level was considered to be a P value less than 0.05. All data were analyzed using SPSS software version 22.

Ethical Considerations

This randomized controlled clinical trial (RCT) received approval from the Ethics Committee of Babol University of Medical Sciences with the ethical code IR.MUBABOL.HRI.REC.1397.235 on 05/01/2019. It was also registered in the Iranian Registry of Clinical Trials (http://www.irct.ir/ with the identifier IRCT20190203042601N1).

Results

Demographics

According to the results, the mean ages (± SD) of the infertile women and their husbands were 30.30 ± 5.01 yr. (with a range of 20-39) and 34.10 ± 5.05 yr. (with a range of 25-48), respectively. The mean duration of infertility was 4.01 ± 2.78 yr. Most of the infertile women were housewives, while their husbands were self-employed. In addition, the majority of the infertile women had primary infertility. The use of statistical tests demonstrated no statistically significant difference between the two groups in terms of age, husband's age, occupation, husband's occupation, duration of infertility, and type of infertility (Table 2).

Table 2. Individual-Family and Fertility Characteristics of Infertile Women in the Two Intervention and Control Groups

Variable	Groups		
	Control	Intervention	Total
	N (%)	N (%)	N (%)
Occupation			
Housewives	30(85.7)	29(82.9)	59(84.3)
Employed	5(14.3)	6(17.1)	11(15.7)
Husband's occupation			
Unemployed	0(0)	2(5.7)	2(2.9)
Laborer	4(11.4)	3(8.6)	7(10)
Employee	4(11.4)	4(11.4)	8(11.4)
Self-employed	23(65.7)	22(62.9)	45(64.3)
Others	4(11.4)	4(11.4)	8(11.4)
Type of infertility			
Primary	24(68.6)	26(74.3)	50(71.4)
Secondary	11(31.4)	9(25.7)	20(28.6)

Marital Adjustment and Sexual Self-Efficacy Results

Throughout this study, there were changes in marital adjustment and its subscales. Upon analysis, it was found that the mean score for marital adjustment was 98.21 ± 12.39 among the participants at baseline. Following completion of the study, it rose to 107.11 ± 14.83. The mean score for the various subscales of marital adjustment, including consensus, satisfaction, cohesion, and affectional expression were 40.40 ± 8.00, 34.8 ± 4.47, 14.78 ± 3.07, and 8.23 ± 1.95 at baseline, respectively. Upon completion of the study, the scores for the subscales were 45.37 ± 8.48 for consensus, 36.64 ± 4.59 for satisfaction, 16.44 ± 3.58 cohesion, and 8.66 ± 2.01 for affection expression. Notably, the lowest mean score for marital adjustment subscales was related to affection expression, followed by cohesion. In addition,

the t-test results showed that there was no significant difference in the mean score for marital adjustment and its subscales between the intervention and control groups at the beginning of the study (P > 0.05).

After adjusting for baseline values in ANCOVA, the study yielded significant results for the difference in the mean score for marital adjustment between the two groups (P < 0 .0001). In particular, the intervention group demonstrated improvement in marital adjustment compared to the control group. The effect size indicates that 43.3% of the increase in the mean marital adjustment score at the end of the intervention was related to the group effect, as illustrated in Table 3. Further, after adjusting for the baseline values in MANCOVA, a significant difference was observed in the mean scores of marital adjustment subscales between the groups (consensus, P < 0.0001; satisfaction, P < 0.0001; cohesion, P < 0.0001; and affection expression, P < 0.001). Table 3 indicates the adjusted mean (± SD) and MANCOVA of the dependent variables, including consensus, satisfaction, cohesion, and affection expression. Furthermore, after adjusting for the baseline values, the intervention group exhibited improvement in the marital adjustment subscales compared to the control group. Based on the effect size, 32.3% of the increase in the average marital consensus score at the end of the intervention can be attributed to the effect of the group. The percentages for marital satisfaction, marital cohesion, and affection expression were 27.3%, 21.5%, and 15.5%, respectively.

To compare the mean scores of marital adjustment and its subscales between the pre- and post- tests for each group, a paired t-test was performed. The results demonstrated significant inter-individual changes for marital adjustment in the intervention group (P = 0.0001), indicating a significant improvement in marital adjustment at the conclusion of the study. Conversely, there were no significant inter-individual changes for marital adjustment in the control group (P = 0.802). Additionally, a paired t-test revealed significant inter-individual changes for marital adjustment subscales, including consensus (P = 0.0001), satisfaction (P = 0.0001), cohesion (P = 0.0001), and affection expression (P = 0 .01) in the intervention group. The mean scores for all subscales of marital adjustment increased significantly at the end of the study in the intervention group. In contrast, no significant inter-individual changes for marital adjustment subscales were observed in the control group (Table 3).

The results of the current study revealed that the majority of the infertile women (80%) had moderate sexual self-efficacy (80%), while 18.6% and 1.4% of them reported high and low levels of sexual efficacy, respectively. The mean scores for sexual self-efficacy were calculated for the entire participants, as well as separately for the intervention and control groups. The mean scores were found to be 18.30 ± 2.69 for the entire sample, 18.20 ± 2.55 for the intervention group, and 18.40 ± 2.85 for the control group. When adjusting for the baseline values, the mean sexual self-efficacy scores between the groups were found to be significant. Specifically, the intervention group demonstrated a significant increase in the mean sexual self-efficacy scores compared to the control group (P < 0.0001). In addition, the mean pre-to-post treatment scores of sexual self-efficacy increased significantly in the intervention group, while no significant difference was observed in the control group (P < 0.0001) (Table 3).

Table 3. The Analysis of Covariance (ANCOVA) Used for Total Marital Adjustment and Self-Efficacy; the Multivariate Analysis of Covariance (MANCOVA) Employed for the Marital Adjustment Subscale in the Two Study Groups (n = 72)

Variable	ANCOVA						
	Intervention		Control		F statistics	P Value	Effect size
	Pre-test	Post-test	Pre-test	Post-test			
Marital adjustment*	97.14(12.23)	115.46(12.41)	99.28(12.65)	98.77(12.20)	51.149	0.0001	0.433
Sexual self- efficacy*	18.20(2.55)	24.91(4.21)	18.40(2.85)	19.02(3.42)	56.287	0.0001	0.457
MANCOVA							
Marital Consensus**	39.68(7.37)	49.28(7.8)	41.11(8.64)	41.46(7.33)	30.57	0.0001	0.323
Marital Satisfaction**	34.31(3.79)	38.68(3.83)	35.28(5/06)	34.6(4.43)	23.97	0.0001	0.273
Marital Cohesion**	15(3.55)	18.03(3.35)	14.57(2.53)	14.86(3.1)	17.56	0.0001	0.215
Affectional Expression**	8.14(2.2)	9.46(1.72)	8.31(1.69)	7.86(1.97)	11.69	0.001	0.155

*Paired t tests were significant in intervention group, P < 0.0001; but no in Control group; **Paired t tests were significant for consensus, P < 0.0001; satisfaction, P < 0.0001; cohesion, P < 0.0001; and affection expression subscales, P < 0.01; but no in Control group.

The NNT (Number Needed to Treat) for marital adjustment was computed using an online psychometric software. The resulting value was one in 2.188 for marital adjustment, meaning that one in three infertile women benefited from this type of training, leading to a reduced possibility of experiencing marital adjustment problems. The mean difference in risk reduction was 0.200 between the two groups (with a 95% confidence

interval, .761-.5254 and P = 0 .001). Similarly, the value of NNT for sexual self-efficacy was one in 1.898, indicating that one in two infertile women benefited from this type of training, thereby reducing the possibility of their sexual self-efficacy problems. The mean difference in the risk reduction was 0.263 between the two groups (with a 95% confidence interval of 0.1239-0.5563 and P = 0.0005).

Discussion

This study aimed to investigate the effectiveness of group psychosexual training in improving marital adjustment and sexual self-efficacy among infertile women. Based on the results, there was a significant improvement in marital adjustment for women undergoing group psychosexual training compared to those in the control group.

The findings of the present study were consistent with the study conducted by Jalalian and Mokari (2017), which demonstrated that sexual skills training based on cognitive-behavioral methods ten-week group sessions was effective in enhancing marital adjustment among infertile women (34). Similar to the present study, their research was conducted in a group setting and targeted infertile women. However, the tool and type of intervention used in their study were different from the present one. In another study, consistent with the present one, Jalali Shahkooh *et al.* (2017) showed that enriching marital life in newlywed couples through eight group training sessions had a greater influence on promoting marital adjustment in the intervention group compared to the control group (30). The results of the present study regarding the positive effect of the group psychosexual training intervention on marital adjustment align with the studies conducted by Padash *et al.* (2021) and Behboodi Moghadam *et al.* (2015), which indicated that non-pharmacological interventions, such as sex education programs and cognitive-behavioral therapy, are associated with increased marital satisfaction and improved sex lives (35-36). These findings underscore the importance of providing educational services for enhancing sexual health, especially because many Iranian infertile women suffer from sexual problems (6), leading to marital incompatibility and increased conflicts. It is worth considering that marital incompatibility is an important determinant of divorce, marital separation, and mental or physical problems (37). Due to the rise in divorce rates over the last two decades in the country, it is crucial to provide effective educational programs to improve marital adjustment and prevent divorce (38). In explaining the cause behind the rise in marital adjustment among infertile women who underwent group psychosexual training, it can be posited that these women's psychosexual awareness and knowledge are closely linked to enhancement in emotional and marital contentment. This sexual intervention improves marital compatibility of couples by promoting effective communication and strengthening emotional bonding as well as identifying fears and beliefs of couples. In addition, this method trains women to express their needs and desires through verbal and non-verbal interactions and develop sexual self-expression, allowing them to cultivate greater physical intimacy with their spouses.

The present study demonstrated that the implementation of sexual skills training and relaxation techniques improved all the subscales of marital adjustment in the intervention group compared to the control group. A similar study also found that sexual skills training had a remarkable effect on the various subscales of marital adjustment, namely dyadic consensus, satisfaction, cohesion, and affection expression in the intervention group as opposed to the control group (34). Moreover, several studies have shown that sex education can positively and significantly influence various aspects of marital quality; this includes improvements in sexual and marital satisfaction, sexual intimacy, and a reduction in marital conflicts (22, 39). However, some researchers found that certain subscales of marital adjustment were not affected by educational programs (38). In this regard, Asghari *et al.* (2023) revealed that counseling based on sexual health is an effective approach for promoting sexual compatibility and enhancing the quality of marital relationships among women (39). Basically, a critical aspect of marital adjustment is the sexual dimension. Also, marital adjustment and satisfaction affect many aspects of individual and social life. Thus, neglecting the importance of sexual problems in married life severely damages couples' relationships. Any difference in this regard can lead to feelings of deprivation, failure, psychological insecurity, anxiety, depression, increased tension, hostility toward the spouse, violence, marital incompatibility, and eventually divorce (19, 40). Research has demonstrated that although sexual desires are innate and involuntary, sexual attitudes and behaviors can be learned (41). Therefore, given the crucial relationship between sexual satisfaction and marital life, it seems necessary to take measures to provide education and sexual counseling for men and women of nuptial age to improve their marital life through the collaborative efforts of the health care system (15). In light of these findings, it can be said that infertility, as a source of mental pressure, can endanger the mental health of infertile women, potentially leading to feelings of sadness and depression, anxiety, sexual dysfunction, and difficulties in marital compatibility. Nevertheless, improving sexual skills, especially through a mixed-method approach, may promote sexual satisfaction and the quality of marital life, which in turn can contribute to the enhancement of marital adjustment and its subscales (30). Sex education can play a pivotal role in enhancing marital satisfaction by promoting awareness and understanding (42). As such, various interventions, such as training for the sexual response cycle, exercise, relaxation, and behavioral techniques focusing on feelings of perception, can prove helpful,

thereby reducing anxiety and facilitating the experience of sexual pleasure (43).

The present study demonstrated a noteworthy increase in the mean scores of sexual self-efficacy in the intervention group compared to the control group. Our findings were in line with other studies (24, 44). Shekar *et al.* (2019) also revealed that a training program significantly increased sexual self-efficacy and improved sexual satisfaction. The program was effective in promoting individuals' confidence in their ability to solve their sexual problems, a result that is consistent with our study (45). According to the literature, self-efficacy plays a central role in strategies aiming at behavioral changes (33). Furthermore, optimal sexual function is a necessity for sexual self-efficacy (46), which may be effective in promoting couples' mental and social function. Individuals experiencing sexual problems may suffer from low self-esteem and unpleasant experiences (47). Notably, sex is one of the effective factors influencing sexual self-efficacy (48), and sexual satisfaction has a significant impact on women's perception of self-efficacy (49). Therefore, providing education on sexual relationships to couples and a timely detection of sexual problems can serve as a foundation for the prevention and treatment of associated complications (50), which can ultimately strengthen family relationships (46). It appears that enhancing the self-efficacy of infertile women improves their problem-solving skills, of overcoming problems and, as a result, generates a sense of well-being leading to the pursuit of infertility treatment. Therefore, considering the influence of psychological issues on sexual self-efficacy, the use of a combination of psychosexual education programs is of particular importance and warrants greater consideration.

Limitation

One limitation of this study is the absence of a follow-up period after treatment and lack of blinding. Although this study was conducted at the only government reference center for fertility and infertility in Mazandaran Province, the results may not be generalizable to all infertile women. To achieve more reliable outcomes, it is recommended to perform this project with the presence of both infertile couples, namely both husbands and wives, and compare the effectiveness of other educational packages for improving sexual self-efficacy and marital adjustment of infertile women. Moreover, it would be valuable to monitor the success rate of fertility treatments in the follow-up program for infertile women who underwent the educational intervention.

Conclusion

The results of this study indicate that group psychosexual training is effective in enhancing both marital adjustment and sexual self-efficacy in infertile women. This highlights the importance of sex education in promoting the stability of family systems, especially in the context of female infertility. Providing such training to couples may prevent many marital problems and conflicts.

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Conflict of Interest

None.

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