

Original Article

The effect of educational intervention on sexual function of women referred to health center of south of Tehran

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ABSTRACT

Background & Aim: Sexual function is one of the most important factors in the continuation of marital life and the high prevalence of sexual dysfunction that threatens marital life. This study aimed to examine the impact of sexual education program on improving sexual behavior among married women in Southern Tehran.

Materials & Methods: This randomized controlled trial was conducted on 130 eligible women in two groups of intervention and control (each group was 65). The intervention group participated in two training sessions of each 90-minute session based on sexual function structures in a group discussion and face-to-face education. No control group received any intervention in the control group. Three months after intervention, both groups responded to post-test questionnaires. The data collection tool was a Personal Information Questionnaire (FSFI). Data were analyzed by descriptive and analytical tests (independent t-test and paired t-test).

Results: Totally 65 women took part with mean age of 35.6 ± 7.75 and 35.15 ± 6.85 in two groups of intervention and control respectively. At first, there were no significant differences between two groups in terms of demographic characteristics and score of sexual function scale. However, after three months the sexual behaviors of intervention group (28.14 ± 3.44) were significantly much better than control group (22.79 ± 6.60) ($p < 0.0001$). The sexual performance scores of the intervention group after each intervention in each of the dimensions of sexual desire (3.60 ± 0.87), Arousal (4.18 ± 0.69), lubrication (4.98 ± 0.88), orgasm (4.98 ± 0.62), satisfaction (5.11 ± 0.874) and pain (5.29 ± 0.79).

Conclusion: Sexual health education is effective in improving female sexual function. Hence, education of correct sexual behaviors is recommended as an effective and cost effective solution to improve the sexual health of women.

Introduction

Paying attention to the health of women in all its dimensions, and especially in the field of sexual health and fertility, is of particular importance (2 and 1). So, the quality of women's sexual and reproductive health has an important role in improving their sexual performance (3, 4).

Sexual relationships are part of the general relationship of couples (5) and a calming and joyful process. Many couples feel happy after a proper sex, and this healthy sexual activity during stress and mental stress helps men and women to adequately tackle and eliminate the stressors, or their

devastating effects (6). The success of a husband and wife in a sexual relationship is a sign of success in marital life, which has a profound effect on the relationship between the two sides (7).

As defined by the World Health Organization, sexual health refers to the harmony and adaptation of the physical, emotional, rational and social aspects of mankind, which leads to the promotion of personality, relationships and love (8). Sexual dysfunction, as defined by DSM5, is associated with any ineffectiveness in the stages of the sexual response cycle that is experienced as a lack of desire, sexual dysfunction, impairment in the quantity

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experience and quality of orgasm, and painful intercourse (9) due to multiple anatomical factors, Physiological is a medical and psychological one and can cause severe personal discomfort, affect quality of life and interpersonal communication (10).

Research shows that about one-third (27.3%) of women with reproductive age are afflicted with sexual dysfunction, and the likelihood of these disorders is higher in women who have not had a proper relationship with their husbands or who have been unable to express their sexual needs to their spouses(5). The statistics provided on the prevalence of sexual disorders are different in Iran. Various studies have reported sexual dysfunction in 89% of women in Qazvin (11), 31.5% in Teharn (12), 36.6% In Esfahan (12), between 28-43% in Khorramabad (13) and 63.2% in Sabzevar (14). Safari Nejad mentioned the extent of sexual dysfunctions in the provinces of the country between 2007 and 40% (15). In addition, sexual dysfunction is more common in females (43%) than males (31%) (16). However, looking at the statistics presented, sexual problems can be seen as a widespread health problem in Iranian women. The age of a woman, low age marriage, husband's financial dependence, low level of education, lower physical activity, and multiplicity are among the risk factors that increase their prevalence (15) and are necessary to prevent any disorder in each one of the stages of the sexual response cycle is thought to be an alternative.

One of the most important determinants of sexual health is the individual's thoughts or his knowledge of sexual activity or his ability to perform sexual function (17). Attitudes, fears or memories of individuals are the underlying causes of sexual problems (18), and many of the sexual problems of couples are due to a lack of knowledge and experience, misconceptions, or their inability to express sexual preferences (19). Lack of sexule knowledge or inaccurate information about sex with the increase in the vulnerability of the individual, causes the emergence of sexual problems (20).

Unconscious sexual activity can be a health hazard, causing sexual diseases, unwanted pregnancies, anxiety, sexual dissatisfaction and divorce (21). In addition, sexual activity interacts with interpersonal communication, the attitudes, needs, and reactions of couples, and can be changed with age, personal experiences and physical health of the individual (22).

The prevalence of sexual disorders is related to various demographic characteristics, such as age, as well as access to educational facilities (16). So that international sexual education programs and protocols on the effectiveness of the role of education in both healthy and sexually transmitted populations, the reduction of false information, increased knowledge of knowledge, the enhancement of positive values and attitude improvement, increased decision making skills and The action emphasizes them (22).

Improving sexual performance training, in addition to positive thinking that prevents some negative outcomes, can lead to positive outcomes such as proper relationship between couples, enjoyment of sexual relationships, self-confidence and self-esteem and informed decision making. Individual and interpersonal relationships (23). Official sex education programs increase the knowledge and awareness of people about marital problems and ways to prevent disorders and sexual problems. The World Health Organization (WHO) has reported that cognitive education based on cultural considerations and the challenges facing the Iranian society is a requirement for people who have not begun sexual activity or for those who have sexual activity (14). Regarding the importance of the issue and the existence of problems caused by sexual problems in women and the lack of a curriculum in the country (25), the question remains whether in our country education in the field of sexual orientation can improve sexual performance in married women? This question arouses the concern of scholars, despite the clinical and educational experience in the field of reproductive health,

when the culture of "sexual silence" of Iranian women provides grounds for pretending to know sexually explicit information. Therefore, the present study aimed to investigate the effect of educational intervention on improving the sexual function of married women referred to health centers affiliated to South Tehran Health Center.

Methods

This study was a randomized controlled trial. After obtaining a work permit from Tehran Health Center, Tehran University of Medical Sciences, and approval of the Tarbiat Modarres University Research Council (TMU-ERC-1392607), the information was collected. The research population consisted of married women referred to the family planning unit in selected health centers affiliated to the southern health center in Tehran. The research sample consisted of 130 married women referring to the department for the provision of healthy reproductive services of these centers that had criteria for entering the study.

In this study, cluster sampling was used. First, 14 randomly selected centers were selected from random numbers from 31 health centers covered by the South Health Center and randomly were divided to the control group centers and intervention group centers. Then registration of eligible people for inclusion in the study was conducted among women referring to family planning units of these health centers. In each of the centers, about 10 qualified individuals were entered into the sample, respectively, and finally 65 samples were selected from each group. The sample size was calculated by the sample size formula to test the difference between the two ratios. Therefore, according to the previous study (22), the relative frequency of sexual dysfunction was 43%, with 95% confidence interval and 80% test power, and with the assumption that educational intervention can be reducing this figure by 59% with a sample of 10%, the

sample was estimated to be 65 in each group. Criteria for entering the study were married women and living with their husbands, age below 50 years old, or not satisfied, and were satisfied to participate in the study. Other criteria, lack of specific disease (depression, diabetes, cardiovascular disease), lack of use Special medications (antidepressants), non-pregnancy and breastfeeding, and reading and writing literacy. Individuals with a history of specific illness, age-related illness, history of specific drugs, sexual dysfunction, self-reported referral and lack of interest in participating in the study.

Data collection was done by a questionnaire containing two parts. Section 1 of the questionnaire of the research units included personal and family information. The FSFI (Female Gender Function Index) questionnaire (FSFI), designed by Rosen et al. For assessing sexual function in women over the past four weeks, has been designed and validated in Iran (26), containing 19 questions in six areas including sexual desire (2 questions with option 1 to 5 for every load of the operating factor 0.6/0 score of this tool 1.2-6 cutting point 3/3), stimulation (4 questions with option 0-5 for each load factor, 0.3 of the score range. This tool is a 6-point cut point of 3.4, (lubrication) (4 questions with 0-5 increments for every load factor of 0.3 scores of this tool 0-6 cut point 3.4), orgasms (3 questions with option 0-5 For each load, the operating factor is 0.3 scores Instrument 6-0 Cutting point 3/4), Satisfaction (3 questions with option 0-5 for every load of the operating factor of 0.4 each. Score of this tool (0.3-0.6) and pain (3 questions with option 0-5 for every load The total factor of 0.4 is the scoring of this tool, 6.4 cutting point is 3.8). These domains have a response spectrum of 0 to 5, with higher scores pointing to better sexual performance. The questionnaire was re-evaluated using content validity method. To assess the validity of the questionnaire, 10 experts were evaluated and its factual validity was assessed as acceptable. After the formal validity of the questionnaire was confirmed by experts, using Content Validity Index

(CVI) and Content Validity (CVR) Questionnaire for 10 experts, their comments were addressed to deficiencies. To eliminate possible cultural influences in society, the content validity index of the questionnaire was reassessment and was acceptable (0.76). After making the proposed amendments by experts, in order to make the questions clearer and smoother, a number of questionnaires were distributed among 10 married women and the questionnaire was piloted.

Then the comments of this group were made to moderate and simplify the questions and the final version of the questionnaire was prepared. To determine the reliability (reliability) of this questionnaire, test-retest method and Cronbach's alpha coefficient were used. The questionnaires were completed by 10 married women in a center affiliated to the health center of south Tehran. Ten days later, the questionnaires were completed again and the correlation coefficient for questions in various fields ranged from 0.93 to 0.97, which is a sign of good reliability. The results of the internal correlation test with Cronbach's alpha showed that sexual desire ($\alpha = 0.82$), sexual stimulation ($\alpha = 0.78$), lubrication ($\alpha = 0.85$), orgasm ($\alpha = 0.79$), satisfaction ($0.74 = \alpha$) and pain ($\alpha = 0.71$) had acceptable internal consensus. The internal consistency of the tool was confirmed by various Cronbach alpha methods for different structures.

The intervention group's women were invited to attend a pre-test week for a sexual enhancement class at the selected health center, one week after the pre-test. Educational intervention was conducted in two group sessions (90 minutes) by the first researcher in the intervention group, planning and in the same two days in two consecutive weeks. At all meetings, efforts were made to use the principles and techniques of communicating effectively with the audience, and the atmosphere of the training sessions, the atmosphere of respect and intimacy, and the strengthening of the spirit of trust and providing the ground for the participation of individuals in group

discussions. In the absence of attendance at the group training sessions, the first researcher held individual training sessions (face to face). Consultation sessions were designed in terms of learning curricula, learning objectives and learning areas. Session 1: General, Importance of the topic of successful and happy sex, with the aim of sensitizing and encouraging a cognitive-based audience. Second session: Physiology and genital education in both genders and familiarity with the sexual cycle of women based on the purpose of familiarizing with sexually transmitted diseases. Male and female contacts and acquaintance was designed with common sexual disorders in men and women Improvement of sexual function, based on the cognitive-psychological domain of motor. The chair was arranged in a panel discussion so that the instructor had sufficient control over the individuals, and the members of the group would be better able to share information and participate in the discussions. After completing the intervention, the educational package and the educational booklet (summary of topics taught along with the picture) were provided to the participants of both intervention groups. Three months after the intervention, the two groups were re-collected. In both groups, the women completed the post-test questionnaire 3 months after the pre-test. The collected data was analyzed by SPSS software. Descriptive statistics including mean and standard deviation was used to survey the characteristics of the research units. Independent t-test for quantitative and quantitative demographic variables was used for qualitative demographic variables in order to ensure that the test and control groups were identical. For comparison between the two groups, independent t-test and comparison before Then, paired t-test was used in each group. P value less than 0.05 was considered significant.

Results

The mean age in the intervention group was 35.67 ± 7.57 and in the control group

was 35.15 ± 5.85 the age and sex ($P=0.301$), the age of their spouses ($P=0.33$), marital age ($P=0.382$), duration of marriage ($P=0.679$), occupation ($P=0.554$), Education ($P=0.635$), spouse's job ($P=0.712$), spouse's education ($P=0.503$) and family income ($P=0.906$) were not statistically significant and the two groups were similar (Tables 1 and 2). Tables 3 and 4 show statistically significant mean and standard deviation in the areas of libido, sexual stimulation, lubrication, orgasm, satisfaction and pain in the studied groups before and after the intervention, respectively. Independent T-test in all six dimensions indicated that there was no significant difference in the control and intervention groups before the intervention. The results of paired t-test after intervention showed a significant difference in each of the six dimensions in the intervention group compared to the previous intervention. Independent t-test after intervention showed a significant difference in all domains between the control and intervention groups ($p < 0.0001$). According to Tables 2 and 3, the mean of total sexual function score in the groups before intervention was not significantly different with independent t-test ($P=0.956$) but after the intervention, the mean of total sexual function score in the control group was significantly different from the independent t-test ($P < 0.0001$). Also, in the intervention group, the mean of total sexual function score in the post-intervention period was significantly different from the one before, using the results of t-test. This indicated an increase in the mean of the overall score of sexual function ($p < 0.0001$).

Discussion

The present study aimed to investigate the effect of sexual education in group discussion on improving the sexual function of married women referred to health centers covered by the South Health Center of Tehran. In the area of sexual desire, the female libido scores of the intervention group showed a significant change from the

pre-intervention stage and increased from 3.18 to 3.60, the mean score after the intervention was higher than the cut-off point scale with 3/3 which represents a good performance in this area. However, there was no significant difference between the pre-test scores and the scoring point. It seems that this disparity is due to the fact that, in general, low sexual desire or sexual orientation is considered as the most common form of sexual dysfunction among women affected by external influences such as personal and occupational stress. However, sudden loss of libido, especially when it lasts for more than a month or is recurrent, is a sign of a problem in the individual, medicine or lifestyle. Also, the use of some medications, such as antidepressants, is also associated with decreased libido (27). Also, sexual desire in women with sex in a complex interaction is associated with many components of intimacy, including physical and psychological well-being, experiences, beliefs, lifestyles and current relationships with sexual partners (28). Hence, it seems that educational intervention with the cognitive nature of the multifaceted role of libido is not sufficient and requires the use of metacognitive training approaches, life skills training to improve the relationship between spouses (21) and problem solving Physical problems like thyroid problems, diabetes, high cholesterol and liver disorders, and psychiatric counseling (28). There was no significant difference between the mean orgasm score in the groups before intervention, but after the intervention, the rate of orgasm in the intervention group increased from 4.09 to 4.55 after training which was higher than the cut-off point. In a group discussion, students have asked a lot about how orgasms and their symptoms, and a complete discussion was done in this area that receiving education along with the changing attitude of the intervention group in the field of orgasm, the reason for increasing the peak pleasure rate was sexual. The increase in self-esteem in group discussions also justified increase. In the hairdressing research, with the increase in sex

information, orgasmic disorders significantly decreased (29).

Table 1. Determination and comparison of intervention and control groups in quantitative demographic variables

Group Variable	Intervention		Control		P value
	Mean	Standard deviation	Mean	Standard deviation	
Age	35.60	7.75	35.15	6.85	0.301
Spouse's age	40.73	8.47	40.70	7.07	0.103
The length of the marriage	2.46	0.79	2.43	0.84	0.679
Age at marriage	21.26	3.84	21.64	3.85	0.382

Table 2. Determination and comparison of intervention and control groups in variables demographic qualitative

Group variable	Intervention		Control		P value	Chi 2	
	Number	Percent	Number	Percent			
Female education level	Reading and writing	3	4.6	4	6.2	0.635	2.55
	High school	12	18.5	12	18.5		
	Diploma	36	55.4	31	47.7		
	Associate Degree	6	9.2	4	6.2		
	Bachelor's degree and higher	8	12.3	14	21.5		
Spouse education level	Reading and writing	2	3.1	7	10.8	0.503	3.337
	High school	16	24.6	13	20		
	Diploma	28	43.1	26	40		
	Associate degree	3	4.6	4	6.2		
	Bachelor's degree and higher	15	23.1	16	24.6		
Economic status (income in Rials)	400>	6	9.2	6	9.2	0.906	0.560
	400-600	21	32.3	24	36.9		
	600-1000	24	36.9	24	36.9		
	> 1000	14	21.5	11	16.9		
	Housewife	48	73.8	53	81.5		
Woman job	Employee	11	16.9	7	10.8	0.545	2.136
	Unemployment	5	7.7	5	7.7		
Spouse job	Unemployed	5	7.7	7	10.8	0.712	1.372
	Employee	23	35.4	18	27.7		
	Worker	9	13.8	12	18.5		
	Unemployment	28	43.1	28	43.1		

Table 3. Determine and comparison of the mean score of the six dimensions and the total score of the sexual function in the intervention and control group women before the study

Study group variable	The significance level	Witness standard deviation ± Average	Intervention standard deviation ± Average
desire	0.904	3.16±0.87	3.18 ± 0.86
arousal	0.775	3.33 ± 1.14	3.39 ± 1.05
lubrication	0.913	4.14 ± 1.38	4.17 ± 1.31
Orgasm	0.898	3.99 ± 1.05	4.02 ± 1.43
Satisfaction	0.913	4.14 ± 1.31	4.23 ± 1.02
Pain	0.891	4.26 ± 1.54	4.03± 1.51
Overall sexual function score	0.956	22.92 ± 6.45	22.98± 6.06

Table 4. Determination and comparison of the mean score of six dimensions and total score of sexual function in intervention and control group women after the study

Study group variable	The significance level	Witness Standard deviation ± Average	Intervention Standard deviation ± Average
desire	0.015	3.19± 1.00	3.60 ± 0.087
arousal	p < 0.0001	3.32 ± 1.20	4.18 ± 0.69
lubrication	p < 0.0001	4.06 ± 1.35	4.98 ± 0.78
Orgasm	p < 0.0001	3.49 ± 1.46	4.98 ± 0.62
Satisfaction	p < 0.0001	4.09 ± 1.12	5.11 ± 0.87
Pain	p < 0.0001	4.12± 1.39	5.29 ± 5.79
Overall sexual function score	p < 0.0001	22.79± 6.60	28.14 ± 3.44

The study by Kilman et al, resulted in significant improvements in orgasm and decreased sexual anxiety. The findings of this study indicate the important role of sexual education in contributing to positive changes in increasing the frequency of orgasm and improving sexual relationships in women (30). Moshki also concluded in his research that adequate knowledge of sexuality was one of the main causes of sexual pleasure (31). These results were consistent with the results of this study.

In the area of satisfaction, the mean of female sexual satisfaction score after intervention was greater than that of the control group and the sexual satisfaction of the women in the intervention group increased to 5.11 after the training, which increased to 4.36 before the training. This difference was statistically significant in the intervention group. The results of studies conducted by Dehghani (6), Moshk Bid Haghighi (32), Pak Gohar (33) and Shah Siah (34) showed that education can have a positive effect on reducing sexual dysfunction and increasing female sexual satisfaction. Some of these studies have also emphasized the need for the development of pre and post-marital counseling and counseling on sexual issues to combat sexual dysfunction and increase sexual satisfaction. In the study of Karimi et al, in the pretest, there was no significant difference between the level of sexual satisfaction of couples in the intervention and control groups and the two groups were similar in terms of sexual satisfaction at the beginning of the study, but after training, the degree of sexual satisfaction of couples in the group The intervention had a significant increase compared to the control group, indicating that sexual health education had an impact on the sexual satisfaction of couples in the intervention group (35).

The results of the study showed an increase in the overall score of sexual function in the intervention group after the educational intervention compared to the previous one. The average sexual performance score in the intervention group

before training was 22.98 which increased to 14.28 after training. The results of paired t-test revealed the significance of this difference. In the control group, the mean of overall sexual performance changed from 22.92 to 22.79, which was not significant. The mean of sexual performance in the case group in the post-test was slightly higher than the cut-off point in women's sexual function and showed good performance in sexual health. The results of this study showed improvement in the sexual function of the intervention group and it was proved that the training provided on the intervention group could increase group knowledge and positively change their attitude. Improving sexual function of the intervention group explained the role of increasing the awareness of individuals.

In the study of Mojhdde and Zeighami, the female sexual function score was 20.54. Of course, the results of the study showed that 31.5% of women had mild to moderate depression (36). In other words, one of the reasons for the difference in the rate of sexual function in the present study was the presence of depression in the population studied. In the study of Chidworthy et al., The overall female sexual function score of $20.1 + 12.4$ was reported, which is due to differences with the study of cultural differences in the studied populations (37). The results of this study, with Ebrahimi Pour et al., Showed that sexual education has been able to promote the sexual function of women in the intervention (38). Greenberg's study confirmed that sexual education reduces sexually transmitted diseases, promotes the health and well-being of individuals (39).

As a result of their research, Bayern and Barbon stated that sexual education or marital counseling in family health, reducing sexual violence in the family, preventing sexually transmitted diseases, positive attitudes towards sexual relations, sexual pleasure, reducing family inequality and gaining enjoyable experiences. Sex plays an important role (40). Love and colleagues observed in their study, providing knowledge

and sexual information has led to an improvement in abnormalities (41). Among the research constraints were the poor cooperation of some of the investigated units and the impossibility of reviewing and responding to the problems of all women studied.

Despite the strengths in this study, there were some limitations that may have contradicted the results of the study, including the fact that this study was self-report, and so the women may not have answered some of the questions clearly, although the emphasis has remained on confidentiality. Also, failure to take into account some of the underlying factors affecting sexual function in women such as the number of pregnancies and the type of delivery and the type of contraception is another deficiency in this study. However, the results of this study were in line with many other studies. It can be a reason for the accuracy of the study. Therefore, in view of the undeniable impact of sexual relations on the quality of marital relationships and the significant outbreak of sexual problems among women in Iran, education of women in the field of sexual issues can lead to the preservation of the family and the strengthening of the relationship between the spouses. Therefore, in order to promote women's sexual health, the inclusion of gender counseling and education as one of the women's health care services is recommended for women to be consulted and trained in the development of their relationships with their spouse and life skills. Regarding the overall score of sexual performance before intervention, which was lower than the cut-off point in sexual activity, indicating the existence of sexual problems in the population under study, the proposed extension of specialized gynecological clinics to provide counseling for the prevention of sexual problems as well as diagnosis and treatment of sexual dysfunction in couples.

Sexual health education can improve women's sexual performance. Therefore, considering the undesirable effects of sexual

problems on marital life, education is recommended as one of the most important strategies for improving women's sexual health promotion.

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