The Effect of Cognitive- Behavioral Counseling on the Sexual Compatibility of New Married Couples: A Clinical Trial Study

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Research

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Abstract

Objective: sexual desire is an integral part of an identity and character of a human being, that affect how to behave with spouse. This study aimed to study the effect of cognitive-behavioral counseling (CBT) on sexual compatibility of new married couples in Sanandaj City in 2018.

Method: This was a randomized clinical trial study and participants were 80 new married couples whose information was recorded at the premarital counseling centers that were randomly divided into intervention and control groups. Intervention group received 8 weekly 120-minute sessions of group consultation with cognitive-behavioral approach. Data were collected before the intervention, after 8 weeks of counseling, and two months after the last counseling session using the National Sexual Compatibility Scale. Data were analyzed using chi-square inferential statistics and independent t-test or nonparametric Mann-Whitney test. analysis of covariance was used to control of potential confounders.

Results: The mean values of sexual compatibility in two intervention and control groups before counseling were 94.20±3.30 and 93.41±6.84 respectively. These scores reached to 100.11±2.96 in the intervention group and 98.83±3.66 in the control group immediately after the intervention. Also two months after the end of counseling, this rate was 101.98±4.03 in the intervention group and 98.83±3.66 in the control group. The intra-group comparison of sexual adjustment scores before and after counseling and two months after the intervention, showed a statistically significant difference ($P < 0.001$). The trend of changes in the control group was not significant ($P > 0.05$). There was a significant difference between two groups in level of scores two months after the intervention ($P < 0.001$).

Conclusion: CBT was effective in improving the level of sexual compatibility between new married couples. It is recommended to use this method of counseling, along with other services provided at pre-marriage counseling centers, to continue and improve the quality of sex and vitality of couples.

Plain English Summary

Proper and pleasant sexual contact is one of the most effective ways to increase emotional relation and satisfaction with marriage and leads to the strengthening of the family, especially in the early stages of marriage. Therefore, in societies and cultures where sexual health education does not exist in reproductive health services, counseling approaches can help young couples to increase sexual adjustment.This clinical trial study applied the sex adjustment protocol using a cognitive-behavioral counseling approach for young couples.
The results of the study showed the effectiveness of this counseling by increasing the sexual compatibility of couples, so the authors suggest that this issue be added to the content of the programs in detail in premarital counseling sessions.

Introduction

Sexual satisfaction is a very important and complex aspect of a marital relationship and one of the important factors affecting women's health and one of the most important reason of life satisfaction. Many studies have indicated that one of the most important problematic factors between couple is the relationship problems, and more than 90 percent of disturbed couples consider this as a major problem in their relationship [1,2]. Another factor affecting couples' satisfaction with sex is the quality of sex. Sex is often a part of the primary attraction, and sexual desire can be a keeper force of couple's relationship. However, good sex may depend on the quality of the relationship, and many relationship problems can damage the sex and thus family stability [1, 2]. Reports indicate that divorce has been increasing worldwide over the past two decades [3]. Studies in Iran have indicated that 40% of divorces of couples were due to the lack of sexual satisfaction [4]. Sexual compatibility seems to improve sexual satisfaction and enhance the quality of couple's relationship.

Sexual compatibility is a very important factor in forming sexual function in an intimate relationship. In fact, researchers have found that sexual compatibility has a significant relationship with sexual satisfaction [5] and sexual desire [6], and enhances the sustainability of marriage [7]. Sexual compatibility indicates how the couple's beliefs, preferences, desires, and sexual needs are consonant with each other, and also indicates the degree of coordination at the start and stop of sexual action of each spouse emotionally, cognitively, and behaviorally[8]. Sexual compatibility does not necessarily mean similarity, because throughout marital life, sexual differences are inevitable. However, compatible couple face such conditions based on understanding, agreement, and love [7]. It seems with increasing divorce rates due to sexual dissatisfaction on one hand and the tendency to avoid divorce and having a successful marriage among couples on the other hand, couples are more interested in consultation with specialists [9]. A variety of in-person and not in-person counseling approaches have been used to improve sexual function or to raise awareness of sexual function, indicating the necessity usage of counseling methods in accountability to the needs of the sexual domain [10,11], including the cognitive-behavioral counseling [12]. Cognitive-behavioral counseling has an empirical basis [10], and utilizes a framework for collaborative dynamics with standard cognitive-behavioral techniques to change incompatible and dysfunctional beliefs, interpretations, behaviors, and attitudes [11, 13, 14, 15, 16].

So far, this approach has not been used as a preventive approach to promote sexual compatibility. Young people in marriage age need proper education and needed information about their sexual desires and acts. The lack of such groundwork programs makes them unprepared to have proper sexual relation after marriage and emergence the discrepancies and conflicts. Therefore, counseling interventions before or shortly after marriage may improve relationship and living together. In Iran, the current program of premarital counseling is not designed to provide this need. The content of these sessions is more educational and may not have much effect on couples' sexual compatibility. Therefore, the aim of this study was to determine the effect of cognitive- behavioral counseling on the sexual compatibility for new married couples in Sanandaj City in 2018.

Materials And Methods

This study was a randomized clinical trial. Participants were 80 new married couples (not more than 6 to 12 months after their marriage), whose information was recorded at the premarital counseling centers, who were randomly (with simple randomization) divided into intervention and control groups. 80 consecutive numbers (one for each couple) were written on a separate piece of paper and placed in a container.Selected even numbers went to group A (control) and selected odd numbers to group B (intervention). To equalize the number of selections in the groups, the removed numbers were not returned to the container.

In order to perform concealment in the randomization process, the research colleague (one of the center midwives) was asked to cooperate to perform the group assignment, without knowing the nature of even or odd numbers in order to select individuals in the intervention or control group. Although the data analyst was unaware of the allocation of code to the groups, blinding was not possible in this study due to the researcher's knowledge of the groups and their implementation of the intervention. The consort diagram can be seen in Figure 1.

Cognitive behavioral counseling was done with a protocol adjusted by Ellis method's in 8 sessions (120 minuts) in intervention group [17-18]. The control group only had a history of attending premarital counseling session. The history of participating in this session were common to both groups. Also before starting the practical process of research, the validity of the content of sessions, both formal and logical, based on the viewpoints of experts, was evaluated by professors of Kermanshah and Kurdistan University of Medical Sciences.

The study sample size was calculated according to the formula. The sample size in each group of intervention and control, was set 80 ones (40 couples) with α=0.05 and β=0.20.

$$n = \frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2 [P_1(1-P_1) + P_2(1-P_2)]}{(P_1 - P_2)^2}$$

$$n = (1.96 + 0.85)^2 [0.4(1\text{-}0.4) + 0.2(1\text{-}0.2)] / (0.4 - 0.2)^2 = 80$$

Inclusion criteria included: age 20 to 35 years old from both genders, to have sexual medium compatibility with a score of 62 to 96 using National Sexual Compatibility Scale [19], married for at least 6 months and maximum one year, no history of drug, alcohol and sexual enhancement drugs use, no history of treatment by a psychologist or urologist or gynecologist for sexual dysfunction, no genetic abnormalities in anatomy and sexual function, no previous marriage, no infertility or diseases (like diabetes) and medications such as drugs that affect sexual function, minimum literacy (elementary) and not pregnancy. Exclusion criteria included unwillingness to continue in the study, failure to attend two or more sessions, incomplete answers or semi- completion of the questionnaire and adverse event in couples' lives (beloved ones' death, events with disability). Data were collected before the intervention, after 8 weeks of counseling, and two months after the last counseling session using National Sexual Compatibility Scale.

Research Tools

The National Sexual Compatibility Scale was prepared in Ph.D. thesis mentioned. The sexual compatibility scale is a 33-item tool that has been providing by Nekoolaltak to assess sexual compatibility [19]. This scale is completed by person himself and has 33 main items and 15 demographic items. The first 15 items are demographic information and the next 33 items are about the history and how to have sex which helps to understand the context of one's sex life. Scale scoring is according to the main items. The Likert scale is used to score each item, as follows: consistently (4), often (3), sometimes (2), and never (1)/ very much (4), much (3), low (2) and very low (1). About reverse items (28_27_26), the method of scoring was opposite the above items. Subjects in item numbers (15-14-13-12) could answer more than one option. Scale classification was as: poor (33-61), moderate (62-96) and desirable (97-132). Scale lower than 33 was no compatibility.

Reliability was measured by internal consistency using Cronbach's alpha and test-retest. Cronbach's alpha for the entire questionnaire was obtained 0.90. Correlation coefficient in the test-retest method was 0.91. Qualitative and quantitative content validity was evaluated with the participation of 16 experts (12 women and 4 men) from different fields, including 8 reproductive and sexual health experts, 2 psychologists, 1 psychiatrist, 2 sociologists, 2 gynecologists and 1 nurse. Five experts had a history of instrument construction. In quantitative content validity, the specialists scored the necessity of each item within 1 to 3 ranges and accordingly, content validity ratio (CVR) was calculated and compared with Lawshe's CVR table [19]. Then, the specialists scored the relevance of each item from 1 to 4 and content validity index (CVI) was calculated according to the formula presented by Waltz and Bausel [20]. The amount of CVR and CVI for each items were seen in table 5 of psychometric article of Nekoolaltak Sexual Compatibility Scale [19].

This study was approved by the Research Ethics Committee of Kermanshah University of Medical Sciences (IR.KUMS.REC.1397.516) and registered in the Iranian Registry of Clinical Trials (IRCT 20181006041254N1). Study participants were allowed to exit the study at any stage. The researcher explained the objectives of project to subjects and their satisfaction and cooperation and identified the volunteers who had the inclusion criteria. Signed written consent was obtained from the participants after the researcher's complete explanation. Data were analyzed using SPSS software version 19. To determine the descriptive purposes of study, the calculated frequency, mean and standard deviation according to the type of variable. Chi-square inferential-statistics tests and independent t-test or nonparametric equivalent namely Mann-Whitney tests were used for analytical purposes. analysis of covariance was also used to control the potential confounders.

Results

The age average in the intervention and control groups was respectively: 26.30± 4.68 and 30.30±3.89 years which was significantly different between two groups (P-value <0.001). A higher percentage of women in the control group were educated and employed. Men looking for job in the intervention group

were six times more than in control group and more couples in the intervention group were living in the suburb of Sanandaj City. There was a significant difference between women and men education, and women and men occupation in both intervention and control groups (P-value<0.001) (Table 1).

Table 1. Frequency distribution of study participant’s demographic variables

Frequency variable		Intervention group		control group		P-value*
		Frequency	percent	Frequency	percent	
Women's Education	middle school	22	55	7	17.5	<0.001
	diploma	14	35	12	30	
	College	4	10	21	52.5	
men's education	illiterate	0	0	1	2.5	<0.001
	elementary	1	2.5	4	10	
	junior high school	17	42.5	4	10	
	diploma	16	40	9	22.5	
	college	6	15	22	55	
Women job	Work at home	9	22.5	8	20	<0.004
	government job	1	2.5	6	15	
	housekeeper	28	70	22	55	
	Private sector	0	0	3	7.5	
	Other Jobs	2	5	1	2.5	
Men job	Employed	24	60	30	81.1	<0.001
	Income without work	2	5	5	13.5	
	student	2	5	0	0	
	Looking for job	12	30	5	5.4	
Place of living	Sanandaj, Central	50	62.5	62	77.5	<0.038
	Sanandaj, suburb	30	37.5	18	22.5	
How to meet spouse	stranger	34	42.5	38	47.5	0.398
	relative	18	22.5	16	20	
	Neighbor	8	10	4	5	
	friend	10	12.5	16	20	
Dating period	No familiarity	10	12.5	6	7.5	
	Under 6 months	66	82.5	44	55	

	6 months to 1 year	12	15	32	40	0.615
	1 to 2 years	0	0.00	4	5	
	More than 2 years	2	2.5	0	0.00	
Separate bedroom	they had	68	85	60	75	
	Did not have	12	15	20	25	0.114
The number of having sex in 1 month	no sex	6	7.3	1	1.1	
	1 to 4 times	8	10	12	15	
	5 to 8 times	13	16.3	36	45	
	9 to 12 times	17	21.3	13	16.3	<0.001
	13 to 16 times	11	13.8	10	12.5	
	17 to 20 times	13	16.3	3	3.8	
	More than 20 times	12	15	5	6.3	
Method of contraception	Withdrawal	33	41.8	44	55	
	condom	21	26.3	14	17.5	
	Pills	23	28.8	6	7.5	<0.001
	IUD	2	2.5	12	15	
	Others	1	1.3	4	5	
***:From chi-2 test**						

Frequency distribution of different levels of primary compatibility was similar in both intervention and control groups and no significant difference was found between two groups in terms of the primary compatibility (Table 2).

Table 2. Primary compatibility level in intervention and control groups (before intervention)

levels of primary compatibility	Intervention group		control group		P_value*
	Frequency	percent	Frequency	percent	
easily	35	43.8	36	45	0.625
A little hardly	31	38.8	40	50	
Hardly	6	7.5	2	2.5	
No compatibility	3	3.8	1	1.3	
*From chi-2 test					

The mean scores of couples' sexual compatibility increased after the intervention in the intervention group than the control group, although it was not statistically significant. Gender-based analysis indicated that the changes in sexual compatibility score in women was significant only two months after intervention (P<0.001). But changes in sexual compatibility score in men were significant both immediately after the intervention and at two months after the intervention (P <0.001), (Table 3).

Table 3. Comparison of sexual compatibility scores before, immediately and two months after the intervention

variable		groups		P value	P value (from ANCOVA
		control group	Intervention group		
women	Before intervention	7.68±94	3.33±94	0.7	-
	Immediately after intervention	3.70±98.73	2.96±100.23	0.05	<0.001
	2 months after intervention	3.70±98.73	4.17±102.15	<0.001	<0.001
men	Before intervention	5.82±92.43	3.30±94	0.07	-
	Immediately after intervention	3.42±96.93	2.99±100	<0.001	<0.001
	2 months after intervention	3.42±96.93	3.94±101.80	<0.001	<0.001
All participants	Before intervention	6.84±93.41	3.30±94.20	0.3	-
	Immediately after the intervention	3.66±98.83	2.96±100.11	0.1	<0.001
	2 months after intervention	3.66±98.83	4.03±101.98	0.9	<0.001

The analysis of covariance with regard to confounding factors was showed a significant difference between the mean scores of sexual compatibility immediately after the intervention between women, men, and all participants in both groups separately (P-value <0.001), (Table 4).

Table 4. Results of analysis of covariance gender-based for sexual compatibility immediately after intervention based on gender and all participants

	Sources of varieties	Sum of error squares	Degree of freedom	Mean error squares	number of Statistics	p-value
women	Last score	191.58	1	191.575	13.328	<0.001
	groups	51.52	1	51.52	191.921	
	error	683.38	77	8.88	21.59	
	Total	792542	80	-	5.81	
men	Last score	288.71	1	288.71	35.65	<0.001
	groups	98.85	1	98.85	109.06	
	error	516.06	77	6.70	43.08	
	Total	776583	80	-	14.75	
All participants	Last score	495.360	1	495.360	62.21	<0.001
	groups	163.613	1	163.613	20.55	
	error	1250.18	157	7.96	-	
	Total	1569125	160	-	-	

Mean ± standard deviation of sexual compatibility before the intervention in the control group was 93.41± 6.84 and in the intervention group was 94.20 ± 3.30. There was no significant difference between two groups in terms of primary compatibility (P-value = 0.355). The mean score of sexual compatibility had been increased two months after intervention in the control group to 97.82 ± 3.65 and in the intervention group to 101.97 ± 4.03 (Chart 1). This increase was significant in the intervention group (P-value <0.001), (Table 4). According to the results of independent sample t-test, there was a significant difference between control group and intervention group in terms of post-intervention sexual compatibility score (P-value <0.001).

The results of analysis of covariance showed that there was a significant difference between sexual compatibility score in two intervention and control groups (After adjusting for pre-intervention scores), (P-value <0.001) (Table 5).

Table 5. Results of analysis of covariance gender-based for sexual compatibility two months after intervention in individuals

	Sources of varieties	Sum of error squares	Degree of freedom	Mean Error squares	number of Statistics	p-value
women	Last score	174.50	1	174.50	12.96	<0.001
	groups	248.38	1	248.38	18.45	
	error	1036.58	77	13.46	-	
	Total	808461	80	-	-	
men	Last score	274.42	1	274.42	26.79	<0.001
	groups	32.63	1	32.63	31.30	
	error	788.75	77	10.24	-	
	Total	1538.488	80	-	-	
All participants	Last score	461.803	1	461.803	38.572	<0.001
	groups	604.921	1	604.921	50.53	
	error	1879.70	157	11.973	-	
	Total	1599832	160	-	-	

Discussion

The results showed that cognitive behavioral counseling significantly increased sexual compatibility in the intervention group compared to the control group. The techniques taught in this type of counseling seem to help one first identifies situations in which he/she is in trouble and then learns appropriate strategies to cope with these situations. Studies show that a variety of counseling and training has had an effect on improving relationship and marital intimacy [21-22]. It seems that teaching behavioral skills in marital relations context helps people to convey their message clearly and effectively. In addition, couples who learn how to effectively and efficiently resolve their conflicts, can better continue living together than couples who do not have such skills. In contrast, the most common problem raised by dissatisfied couples is failure to relate. In this regard, the study among Iranian students shows that the highest need of reproductive health education from the participants' point of view is the need to train appropriate behavior with future spouse [23], which seems to be considered appropriate in the curriculum of this group of people from school to university.

However, the purpose of this study was not to evaluate the factors related to level of sexual compatibility and marriage. But the primary results of the study showed that the couples in study likely to have relatively undesirable sexual compatibility, because the majority of couples had separate bedrooms,

about one-third of them had sex less than 5 to 8 times per month, and less than half of them had easily access to sexual compatibility with their spouse. According to the results of a number of studies in Iran, many couples suffer from dissatisfaction with sex which has led to inconstancy in their lives[24]. Therefore, according to the results of the present study and comparison with the other studies, it is necessary to intervene to prevent this problem, and young people should receive sex education in ways that are appropriate to their culture and by the right trustees till they have been prepared for a compatible relationship and right at the beginning of marriage. There was a significant difference between two groups in terms of education and frequency of sexual intercourse. In the control group, despite the higher number of couples with college education, the frequency of sexual intercourse was lower than the intervention group. In the study done by Barati et al. [25], as education increased, the rate of perceived benefits of having a proper sexual relationship increased. The study done by Sadat et al. [26] also indicated a significant relationship between sexual knowledge and the individuals' level of education before marriage. This difference in results may be due to more number of participants in the studies done by Barati and Sadat than the present study or to the cultural differences in the provinces studied; since the increased education is expected to increase awareness of barriers to right sexual relation [27-28].

Conclusions

The results of the study showed that cognitive behavioral counseling is effective on improving the level of sexual compatibility between new married couples. Regarding the role of sexual compatibility and sexual satisfaction in the continuation of couples' relationship and consequently the stability of a family, it is suggested that this method of counseling, along with the other services provided in the premarital counseling centers, be used as a preventive approach to continue and improve the quality of sexual relation and the vitality of couples. It is also suggested that the content of perceiving relationship and marital dimensions with themes such as the critical role of spouse support and understanding, relationship and marital facilitation strategies, and the experience of perceiving or not perceiving personality differences and similarities, are considered at the center of couples' sexual compatibility experience.

One of the limitations of this study was the low number of participants due to the interventional nature of the study, but doing such studies at different points and aggregating their results will help to improve the conclusions and decision-making for taking an overall approach for young couples. Considering the number of samples included in the study, practically it is impossible to obtain the intervention effect (by controlling the likely potential confounding factors) using regression models. Because in this study, the intervention and control groups had considerable differences in some of initial features, which seemed to be effective on the outcome of the consultative intervention. The strength of the study was the randomization of the intervention and control groups, which partly controlled the known and unknown confounders in the study.

Abbreviations

Cognitive-Behavioral Counseling (CBT)

Content Validity Ratio (CVR)

Content Validity Index (CVI)

Declarations

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Figures

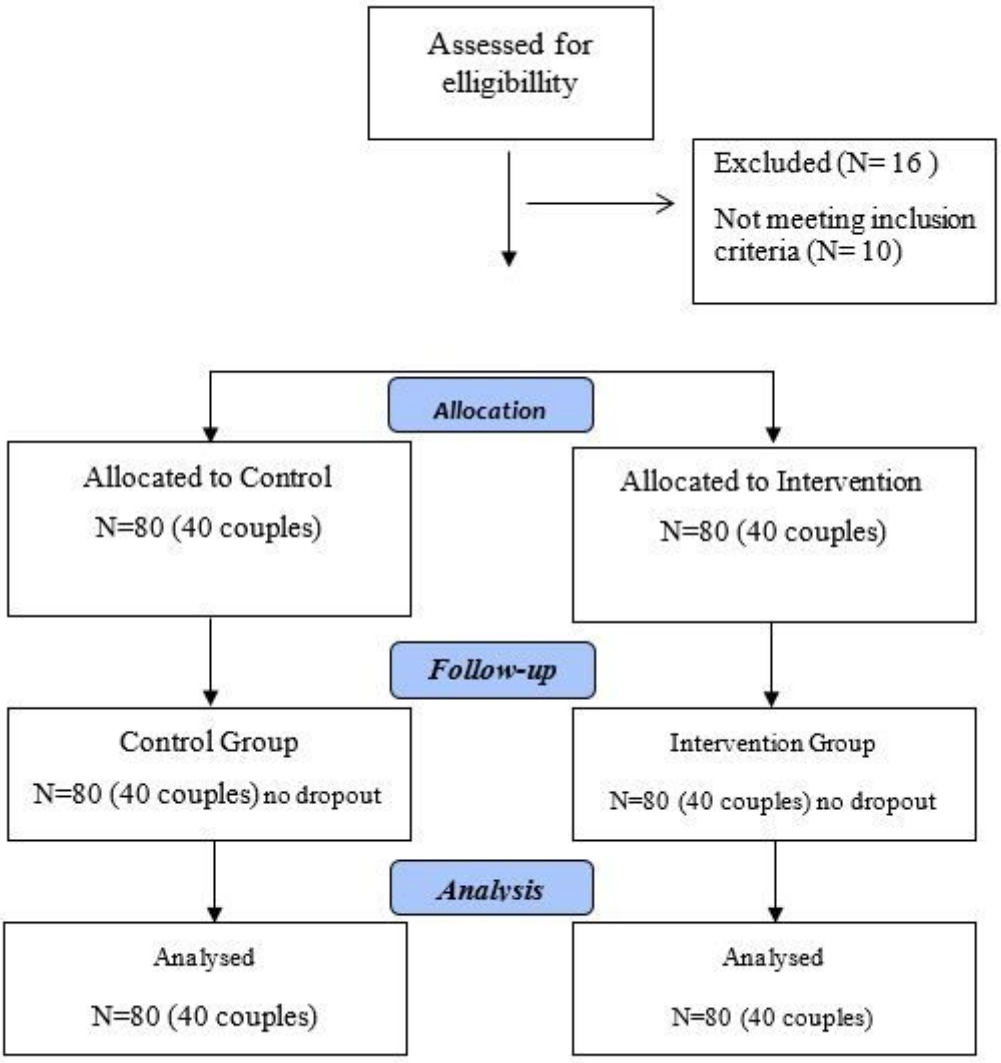

Figure 1

Flow diagram of the study