

# The effect of cognitive behavioral counseling on sexual knowledge, motivation to avoid risky sexual relationships, and sexual depression in female university students

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## Abstract

**Introduction:** Misunderstanding of different aspects of sex makes individuals vulnerable to sexual dysfunction, sexually transmitted diseases, mental disorders, and illegal relationships. This study aimed to determine the effect of cognitive behavioral counseling on the sexual self-concept of female students at Kerman University of Medical Sciences.

**Methods:** This study is an intervention conducted with female students living in dormitories at Kerman and Rafsanjan Universities of Medical Sciences. The sample size was estimated at 63 students from different fields of study; 31 students from Kerman University of Medical Sciences comprised the experimental group and 32 students from Rafsanjan University of Medical Sciences comprised the control group. Cognitive behavioral group counseling sessions were held every 3 days. The instrument used for collecting pre-test and post-test data was Snell's Multidimensional Sexual Self-concept Questionnaire. Data analysis was conducted using measures of central tendency, *t* tests and chi-square tests.

**Results:** The two groups were homogenous in terms of demographic factors. Analysis of the results of the intervention revealed significant differences in sexual self-consciousness and motivation to avoid high risk sexual relationships, but there was no significant difference in terms of sexual depression.

**Discussion:** Cognitive behavioral group counseling can improve sexual self-concept. Therefore, this type of counseling is recommended from younger ages or at enrollment at university, to help correct development of this important part of identity.

**Keywords:** Concept, sexual, cognitive behavioral counseling.

## Introduction

Social changes over recent years in Iran have gradually taken different dimensions. Change is not restricted to values, but the behavior of individuals is also subject to change. A similar shift has taken place in premarital sex also. Recent studies in Iran have shown that about 20-30% of young people have sexual

relations before marriage.<sup>1-3</sup> One of the most important issues that causes marital conflicts and even divorce in Iranian families is sexual differences and discord between couples, which also destroys the warmth of the family.<sup>4</sup>

Sexual self-concept is defined as an individual's feelings, and beliefs about sex. Self-assessment can be an important predictor of future sexual behaviors and

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so encouraging it can help people enhance their sexual and psychological well-being.<sup>5,6</sup>

The first stage of sexual self-concept begins in early adolescence and it continues to develop over the course of a person's lifetime. Snell et al.,<sup>5</sup> have defined 20 subcategories for sexual self-concept, including sexual anxiety, sexual self-efficacy, sexual awareness, motivation to avoid risky relationships, accidental control of sexual desires, sexual desire, sexual courage, sexual optimism, self-blaming in sexual problems, sexual monitoring, sexual excitability, sexual issue management, reliability and sexual value, sexual satisfaction, sexual control by influential people, individual sexual patterns, fear of sexual relations, prevention of sexual problems, sexual depression, and internal control of sexual issues.<sup>5</sup>

Sexual self-concept helps a person achieve knowledge, identity, and self-assessment in sexual life. It organizes and provides the structure and motivation to build relationships, behavior, self-esteem, and sexual anxiety in the present and in the future. Snell et al.<sup>5</sup> believe that sexual self-concept is a predictor of sexual health, sexual risk awareness, and sexual self-efficacy. In other words, low self-esteem and negative sexual self-concept are predictors of risky sexual behavior.<sup>5,6</sup> A proportion of sexual dysfunctions are associated with poor sexual self-concept.<sup>7,8</sup>

Studies have shown that factors such as age, sex, siblings, school, mass media, sexual education, sexually transmitted diseases, and social and cognitive changes impact sexual self-concept.<sup>9-13</sup> The pattern of sexual relations has many variations in the world and in Iran the values and beliefs of young people are undergoing extensive changes. Premarital sex and home-sharing among young people are on the rise.<sup>14</sup> Haghdoost et al.,<sup>15</sup> have claimed that the pattern of HIV transmission has changed from IV drug users to the general population, which is due to unsafe sexual contact.<sup>15</sup> In 2014, a study was conducted with 363 newlywed women in Sari, Iran, finding that 21.2% of the women had sexual dysfunction.<sup>16</sup> The sexual presentation of a person in the community is related to his/her sexual self-concept.<sup>17</sup> Lack of sex education and counseling for young people in schools, universities, and families has led to the creation of sexual myths and poor sexual self-concept among individuals.<sup>18</sup>

Since the World Health Organization has declared that sexual health is a correlation between physical, emotional, rational, and social aspects in beings with sexual instinct, and states that "sexual health increases the richness of personality, relationships and love", people of all ages and backgrounds are prone to sexual dangers, and need to be aware of and have access to services in the field of sexual health.<sup>19</sup>

Considering the importance of sexual self-concept, which can place people at different risks, this study aimed to investigate the effect of cognitive behavioral counseling on sexual self-concept in female university students.

## Methods

This clinical trial was designed to investigate the effect of counseling on sexual self-concept in female university students.

### Participants and procedures

The study population consisted of all female students at Kerman University of Medical Sciences. The sample size was calculated as 27 in each group, based on similar previous studies<sup>20</sup> and taking into account 80% ( $\beta$ ) test power and 5% ( $\alpha$ ) error probability. The 27 students in the intervention group were selected from Kerman University and 27 students were selected from Rafsanjan University for a control group. To account for expected missing data, 32 participants were selected for the control group and 31 students were selected for the intervention group.

Inclusion criteria were being single, being able to speak and understand Persian, being from Iran (due to differences in culture, customs, and lifestyle), not having a history of known psychiatric illnesses, and not taking psychiatric medications (self-declaration).

Using other relevant counseling services and not attending one of the counseling sessions were defined as exclusion criteria.

After selecting the samples and obtaining informed consent from all participants, the pretest was administered. The intervention group was then divided into three subgroups (maximum 10 participants in each group). These subgroups underwent 6 consecutive cognitive-behavioral counseling sessions once every 3 nights (educational materials are presented in Table 1).

**Table 1 - Sessions and Meeting Titles**

Sessions	Meeting titles
First session	Understanding needs of sex
Second session	How does excitement form?
Third session	Identifying negative schemas
Fourth session	Identifying damaging thoughts
Fifth session	Identifying intellectual patterns or intellectual errors
Sixth session	Elaborating on thinking patterns for dealing with problems

The duration of each session was one hour and thirty minutes. At the end of the last counseling session, participants who had attended all sessions were asked to complete a post-test. At the same time, the questionnaire was also completed by control group members. In order to uphold the principles of ethical conduct, a summary of the counseling sessions was presented in 2 sessions to control group members after they had completed the post-test.

### **Instruments**

Demographic and health characteristics were assessed using a questionnaire designed by the researchers. Sexual self-concept was measured using Snell's multi-dimensional questionnaire.

The demographic information analyzed included age, sex, marital status, religion, number of siblings, household income, and parents' educational levels. Additional questions covered present psychological problems and use of sedatives, anti-depressants, and anxiolytics. Snell's multifaceted self-concept questionnaire is an objective self-report tool that is designed to measure 20 psychological dimensions in the sexual sphere.<sup>6</sup> The questionnaire comprises 100 items with responses scored on a 5-point Likert scale from 0 ("this is by no means true about me") to 4 ("this is absolutely true about me"). Each dimension consists of 5 items, and the total score is evaluated separately for each dimension.

The validity and reliability of this questionnaire were estimated by Ziaei et al.,<sup>21</sup> using a content validity index (at 0.70 and 0.88, respectively).<sup>21</sup> Bearing in mind the socio-cultural aspects of conducting such a study in an Iranian community, three areas of sexual self-concept were selected for investigation (sexual awareness, motivation to avoid high-risk relationships, and sexual depression). The study was conducted after approval was granted by the Deputy of Research at Kerman University of Medical Sciences (2016. 272kmu. Rec.) and a clinical trial code was obtained (IRCT2017071624866N3).

### **Data analysis**

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 22 (SPSS, Inc., Chicago, IL, USA), running independent *t* tests, paired *t* tests, and chi-square tests. To ensure that demographic variables did not affect the results, intervention and control groups were matched in this regard before initiating the study. Nevertheless, the relationship between the two groups and each of the demographic variables were investigated using the chi-

square test. Shapiro-Wilk and Kolmogorov tests were used to determine the normality of the data and the level of significance was set at  $p < 0.05$ .

## **Results**

### **Demographic characteristics**

Although most of the participants in the control group were aged between 17 and 21 and those in the intervention group were aged between 21 and 25 years, this difference was not statistically significant ( $p = 0.09$ ). In terms of father's educational level, it was found that most of intervention group's fathers had a diploma, but most of control group's fathers were undergraduates. Nevertheless, the two groups did not differ significantly in this regard ( $p = 0.38$ ). In the intervention group, 32.3% of mothers had undergraduate education and 31.3% of control group mothers had postgraduate education. In the intervention group, 16 participants (51.6%) had one sister, and in the control group, 12 of the participants (37.5%) had no sisters. About 38.5% and 46.9% of the intervention group and the control group respectively had one brother (Table 2).

### **Sexual self-concept**

The differences between mean scores before and after counseling were not statistically significant for any of the three sexual self-concept dimensions in the control group ( $p < 0.05$ ).

In contrast, the analysis revealed significant statistical differences between the pre-test and post-test scores in the intervention group for all aspects of sexual self-concept ( $p \leq 0.05$ ).

Comparison of mean scores of sexual self-concept dimensions before counseling showed a significant difference between the two groups in terms of the avoidance of high-risk sexual relationships dimension only, and so the two groups did not match in this respect at study outset ( $p = 0.001$ ) (Table 3).

The difference between mean scores for high-risk sexual relationship avoidance before and after counseling was greater in the intervention group than in the control group and the mean score significantly increased in the intervention group ( $p < 0.05$ ).

There was no significant difference between intervention and control groups regarding mean pre-test and post-test scores for sexual depression ( $p > 0.05$ ).

Intervention increased the mean score for the sexual awareness dimension ( $p < 0.05$ ) (Table 4).

**Table 2** - Frequency distributions and percentages for demographic characteristics (intervention and control group)

Group	Intervention	Control	Result
Age			
17-21 years old	13 (41.9%)	20 (62.5%)	$\chi^2=4.80$ df=2 p=0.09
21-25 years old	15 (48.4%)	12 (37.5%)	
25-29 years old	3 (9.7%)	0 (0)	
Father's education			
None	1 (3.2%)	2 (6.3%)	$\chi^2=4.185$ df=4 p=0.38
High school	10 (32.3%)	6 (18.8%)	
Diploma	11 (35.5%)	9 (28.1%)	
Bachelor	7 (22.6%)	14 (43.8%)	
Masters and higher	2 (6.5%)	1 (3.1%)	
Mother's education			
None	2 (6.5%)	3 (9.4%)	$\chi^2=1.164$ df=4 p=0.88
High school	10 (32.3%)	10 (31.3%)	
Diploma	9 (29%)	7 (21.9%)	
Bachelor	7 (22.6%)	10 (31.3%)	
Masters and higher	3 (9.7%)	2 (6.3%)	
Sisters			
0	6 (19.4%)	12 (37.5%)	t=-0.05 df=61 p=0.96
1	16 (51.6%)	5 (15.6%)	
2	5 (16.1%)	7 (21.9%)	
3	2 (6.5%)	6 (18.8%)	
4-7	2 (6.4%)	2 (6.2%)	
Brothers			
0	11 (35.5%)	8 (25%)	t=0.87 df=61 p=0.39
1	12 (38.5%)	15 (46.9%)	
2	0 (0)	8 (25%)	
3	3 (9.7%)	1 (3.1%)	

**Table 3** - Comparison of mean scores of sexual self-concept dimensions before and after counseling between two groups

Dimension/time	Intervention	Control	Result
Sexual awareness			
Before intervention	10.48	12.78	t=-2.82 df=61 p=0.09
After intervention	13.48 t=6.22 df=31 p=0.00	12.06 t=-1.53 df=31 p=0.14	
Avoiding high-risk sexual relationships			
Before intervention	16.48	18.78	t=-2.843 df=61 p=0.001
After intervention	18.32 t=32.76 df=31 p=0.00	18.38 t=-1.26 df=31 p=0.22	
Sexual depression			
Before intervention	14.48	14.84	t=-0.56 df=60 p=0.40
After intervention	16.11 t=3.066 df=31 p=0.01	15.38 t=0.90 df=31 p=0.37	

**Table 4** - Comparison of the relative changes in the sexual self-concept scores in the intervention and control groups

Group	Intervention	Control	T-test
Sexual awareness	0.3521	-0.0404	t: 5.223 df=48.122 p=0.027
Avoiding high-risk sexual relationships	0.1433	-0.0179	t: 30.049 df=38.254 p=0.005
Sexual depression	0.1590	0.641	T: 1.331 df=61 p=0.803

## Discussion

The findings demonstrated that cognitive behavioral counseling led to an increase in female students' sexual knowledge. Snell et al. defined sexual knowledge as the tendency to think and react to sexual nature.<sup>5</sup> Sexual knowledge is understanding of one's sexual characteristics such as sexual shame, feeling nervous or uncomfortable during intercourse, and sexual self-esteem. One's awareness of the above issues and their elimination can be a factor in achieving sexual satisfaction. Understanding sexual aspects and recognizing sexual thoughts, attitudes, actions, and feelings leads to greater sexual satisfaction. On the other hand, a positive framework of sexual self-awareness can lead to a positive sexual identity.<sup>22</sup>

Given that in some countries talking about sex issues is taboo and that girls and boys nowadays reach puberty at a younger age all over the world, marry later, and engage in sexual acts before they get married, familiarity with sexual issues before marriage can reduce abnormal behaviors, as long as this information is free from false beliefs.<sup>23-26</sup>

Some studies have shown that cognitive behavioral training had effects on women's sexual knowledge, attitude, and self-confidence.<sup>19,27,28</sup> In the present study, female university students' sexual habits, thoughts, beliefs, myths, central beliefs, and self-awareness were studied, and it was revealed how these matters triggered individuals' emotions, behaviors, and reactions in different situations.

We also found that cognitive behavioral counseling affected the motivation to avoid high-risk relationships dimension, which is consistent with previous findings.<sup>20,29,30</sup>

The experience of having sex during adolescence and youth, without adequate awareness, can lead to the maintenance of high-risk relationships and can have consequences such as sexually transmitted diseases, unwanted pregnancy, or many other problems of

this nature. Preventive measures regarding high-risk relationships are among the most important interventions that can be employed to save a person from premarital sexual relationships. The fact that young people often have no experience in this field and only think about one aspect of it, is enough to demonstrate the need for such interventions.<sup>31</sup> In 2010, the United States' Centers for Disease Control and Prevention reported that 46% of high school students had sexual experience, and 34% of them had experienced sex during the previous three months. It was also found that among sexually active individuals, 39% had not used condoms during their last sexual contact and 14% of them had had sex with 4 or more people during their lifetimes.<sup>32</sup> Research about sexual behavior conducted in the United States is cited because there is a lack of this kind of study in Iran.

Rahmani et al.,<sup>33</sup> concluded that inability to terminate a relationship, to make the right decision, and to reject sex are factors that affect young girls' involvement in sexual relationships. They emphasized the need for prevention through counseling and training in this regard. They also mentioned that sexually active young people who did not use any method or means of contraception had a 90% chance of pregnancy during a one-year sexual relationship. More than 50 percent of new HIV infections occur in young people in the 25-30-year age range. In other words, young people are more likely to be exposed to this virus than any other age group.<sup>33</sup>

Merghati Khoei<sup>34</sup> states that in many girls, sexual intercourse is based on the awareness of virginity, and sexual intercourse in girls is the product of interactions with the opposite sex and creation of interest and dependency. It seems that dependence is caused by temporary emotions. In order to satisfy emotional needs and maintain the relationship with the opposite sex, girls resort to unconditional acceptance of sexual propositions, further exposing themselves to early and perilous sexual activities. The reason for agreeing to sexual intercourse by girls is to keep in touch with the

opposite sex and achieve marriage. Girls are more concerned about social dignity than boys; and do not have sufficient health information about complications of sexual relations, such as sexually transmitted diseases.<sup>33,34</sup>

Maladaptive thoughts act automatically and unknowingly in certain situations and can cause negative emotions. These thoughts also interfere with emotional and behavioral responses to sexual situations.<sup>35</sup> Cognitive behavioral counseling focuses on rebuilding irrational attitudes, beliefs, and behaviors in this regard.

When a person experiences feelings such as shame, embarrassment, and humiliation, he/she may confront sexual depression.<sup>6</sup>

In the present study, it was found that behavioral counseling did not have any significant effect on the sexual depression aspect of sexual self-concept, which is in line with findings of a study by Jaafarpour et al.,<sup>35</sup> but in contrast to those reported by Rahmani et al.<sup>24</sup> and Ghorbanshiroudi.<sup>36</sup> This discrepancy in findings may be due to the fact that in the study by Ghorbanshiroudi, sexual education was administered to married people, since people speak more comfortably about sexual problems after their marriage. Depression is a key factor in reducing self-esteem and sexual dignity.

Counseling was not able to exert a significant effect on sexual depression among our participants. This finding can be attributed to the fact that the issue of depression is highly specialized and sexual depression cannot be treated in a few group counseling sessions. It seems that overcoming sexual depression requires individual counseling or even medication in more severe cases. Depression reduces sexual desire, sexual arousal, frequency of sexual intercourse and achievement of orgasm, self-confidence, self-esteem, sexual performance, and sexual dysfunctions.<sup>5,37,38</sup> Many studies of sexual activity among patients suffering from depression have shown that depression and anti-depression drugs have numerous side-effects on the sexual activity of these patients and can endanger their sexual health. One reason for lack of counseling effect on sexual depression may be the brevity of the intervention. It seems that overcoming sexual depression requires a different type of counseling method or a longer duration intervention, which may be a limitation of this study.

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