



The Effect of Cognitive-Behavioral Interventions on Sexual Satisfaction in Type II Diabetic Patients

Rahimi Abbas¹, Tofighi B², Khezri Leila^{3*}

¹Instructor, Department of Clinical Psychology, Amir Almomenin Hospital, Bushehr, Iran

²Instructor, Department of Clinical Psychology, Bushehr Azad University, Bushehr, Iran

³Instructor, Department of Nursing, Amir Almomenin Hospital, Bushehr, Iran

DOI: 10.24896/jrmds.20186146

ABSTRACT

Diabetes mellitus is a metabolic disorder that leads to many problems including psychological problems such as depression, anxiety and reduced sexual satisfaction. The purpose of this study was to determine the effectiveness of cognitive-behavioral interventions on sexual satisfaction in type 2 diabetic patients referred to Bushehr medical centers in 1394. The aim of this study was to determine the effect of cognitive-behavioral interventions on the sexual satisfaction of type II diabetic patients referred to Bushehr clinics in 1394. This is a quasi-experimental study and this research was done as a pre and post test with a control group. The statistical population included all type II diabetic patients referred to the medical centers of Bushehr city. Of these, 40 subjects were selected by simple random sampling and assigned to two groups of intervention (20 subjects) and control (20 persons). In the intervention group, ten sessions and each session were treated cognitive-behavioral group therapy for one hour in a week. Data collection was done using the Hudson Sexual Satisfaction Questionnaire. Data were analyzed by SPSS software version 18, descriptive statistics (frequency, mean, standard deviation) and ancova analysis at a significant level of $P < 0.05$. The mean sexual satisfaction of the intervention and control groups after intervention was 95.00 and 75.74, respectively. The mean of sexual satisfaction score in the intervention group was significantly more than the control group ($p=0/048$) and, in other hand, cognitive behavioral intervention was effective in increasing the sexual satisfaction of patients with type 2 diabetes. Using psychological treatments beside drug therapy can be effective in increasing the sexual satisfaction of type 2 diabetic patients.

Keywords: Cognitive-Behavioral Intervention, Sexual Satisfaction, Diabetic Patients

HOW TO CITE THIS ARTICLE: Rahimi Abbas, Tofighi B, Khezri Leila, The Effect of Cognitive-Behavioral Interventions on Sexual Satisfaction in Type II Diabetic Patients, J Res Med Dent Sci, 2018, 6 (1): 279-284, DOI: 10.24896/jrmds.20186146

Corresponding author: Khezri Leila

e-mail ✉ khezryli@yahoo.com

Received: 15/08/2017

Accepted: 10/12/2017

INTRODUCTION

Diabetes is a metabolic disorder that results from disruption of the secretion or function of insulin, or both, and people who have this condition are experiencing various problems for their own affairs and need special care such as: insulin injections, diet, blood glucose self-monitoring and other responsibilities [1]. The least characteristic of diabetes mellitus is the sustained hyperglycemia, which is essential in identifying diabetes, mental and behavioral problems, and its

effects. Diabetes has doubled in the last 10 years worldwide, with about 200 million people affected, and the global prevalence of diabetes in the world is increasing by about 6% every year. In an Iranian study, 7.7% of adults aged 25-64 years old, about 2 million people, have diabetes and 16.8% of adults are equivalent to 4 million people in glucose intolerance [2]. In this regard, long-term complications of diabetes can be referred to as a neurological disorder, because sexual dysfunction is a neurological disorder, which leads to sexual dissatisfaction among these patients. Of course, vascular disease and mental health problems caused by diabetes also contribute to sexual dysfunction and sexual dissatisfaction [3]. Many studies in California and Washington have

shown that the presence of diabetes increases the likelihood of depression in a person, and those with diabetes are simultaneously experiencing sexual dissatisfaction, and significantly more complications for diabetes will occur. Other studies also show high degrees of problems, including sexual dissatisfaction in diabetic patients [4,5]. Research findings suggest that anxiety is associated with diabetes, and the nature of diabetes is a progressive disease, with blood glucose in this disease rising, even if patients with type 2 diabetes, in particular, have a good control of diabetes, it may be in the long term, due to environmental and genetic factors, they will develop complications of diabetes. Diabetes also affects the cardiovascular system, and in the next stage, it is a complication of sexual dysfunction and sexual dissatisfaction. In this case, it can be concluded that it is necessary to carefully examine the patient and to take the necessary treatment because of the occurrence of stressful events in life causes anxiety and depression, resulting in weakness in one's sexual function and causes problems in effective diabetes control and management in diabetic patients [2,6]. Studies have shown that depression, anxiety and panic are one of the symptoms associated with diabetes, and it seems that psychological factors play a role in metabolic control, and it can be concluded that most of the illnesses associated with diabetes are sexual dysfunction, anxiety, depression that affect the function of the individual in marital life, also depression is one of the negative consequences of undesirable glycemic control and is, in fact, the sexual dissatisfaction of people with diabetes, and the nature of diabetes is a progressive disease, with blood glucose in this disease rising [7]. In another study on diabetic patients, it was found that many of these patients benefited from emotional reactions (mostly grief) that included denial, anger, suspicion, distress, depression and scarring, and exacerbated their diabetes causing a lifestyle to be dissatisfied [8, 9]. On the other hand, the family is a local whose members spend most of their time together, so sexual disorders may create inappropriate conditions for spending time together [10]. People with diabetes are more likely to have sexual problems than healthy people and may have less tendency to have a marital relationship. People with diabetes who do not have good sexual function may not have enough sexual dysfunctions, resulting in a lack of satisfaction and happiness in marriage, leading to multiple conflicts between couples. Relaxation in

marital life is due to a healthy sexual relationship. Combating his sexual identity, reducing sexual desire and unhealthy mental imagery of sexual relationships is a disorder that endangers the peace of mind and diabetes can also greatly affect the patient's performance [11]. Therefore, it can be concluded that mental health in the family can lead to the formation of a healthy society, and thus lack of mental health in the family, costs and consequences can impose on the community, including satisfaction Marriage is one of the most important issues in the formation of a healthy family and mental health of the family, which is dependent on several factors, and one of the most important factors in marital satisfaction, can be having healthy sexual relations, are welcome and responsible [12]. The purpose of this study was to investigate the effectiveness of cognitive-behavioral interventions in increasing sexual satisfaction in type II diabetic patients referred to Bushehr medical centers in 1394.

MATERIALS AND METHODS

This is a quasi-experimental study and its design is a post-test pretest with a control group. The statistical population included all type II diabetic patients referred to the medical centers of Bushehr city. Of these, 40 subjects were selected by simple random sampling and assigned to two groups of intervention (20 subjects) and control (20 persons) that they entered the study and trained for 6 months. Be married and age between 18 and 32 years of age, at least having diploma education, lack of psychiatric problems and not receive any other educational program during behavioral observational interventions, were the criteria for entering these subjects into research. After explaining the importance and necessity of the research and obtaining patient satisfaction, the intervention group was asked to participate in all training sessions. All necessary care for the intervention group for weekly homework was given to the participants as educational pamphlet. After the completion of the research, it was decided that the control group would benefit from these training. In this study, the Hudson Sexual Satisfaction Questionnaire was used. The questionnaire was designed to measure sexual satisfaction and includes 25 questions that examine sexual satisfaction at three levels: low, moderate, and high. The internal correlation of this scale was calculated by designers and Cronbach's alpha was 0.91. The validity of the

scale was also calculated by a one week interval test, which was 0.93 [13]. Data were described using descriptive statistics methods such as two-dimensional tables (agreement) frequency distribution, percentage, mean, standard deviation and individual characteristics of the subjects. The research hypothesis was analyzed using inferential statistics such as Co-variance analysis.

RESULTS

80% of participants were male. The mean age of the subjects in the intervention group was 26.1 and 25.5 in the control group. The mean post-test score of sexual satisfaction in the intervention group was 95 and control group was 75.64. The intervention group had a higher score than the control group after cognitive-behavioral interventions (Table 1).

Table 1: The mean post-test score for sexual satisfaction in the experimental and control group

Group	Mean	Standard Deviation(SD)
Intervention	95	9.33
Control	64.75	14.67
Total	79.87	14.71

After controlling the effect of pre-test on the difference between sexual satisfaction score in the control group, the covariance analysis method F was calculated for sexual dysfunctions in the subjects of the intervention and control group equal to 1584/009 at the level ($p = 0.048$) that was meaningful.

The effect of cognitive behavioral interventions on reducing sexual dysfunctions is 0.870, which shows that 87% of the variance of sexual disorders in subjects is explained by cognitive behavioral interventions (Table 2).

Table 2: Regression Analysis Results for Sexual Dysfunction of Type 2 Diabetics

	Sum of squares	df	Average squares	F value	P value	Squared
PRE-TEST	6146/050	16	348/28	1584/009	0/048	0/870
GROUP	67848/406	1	927/93	8/96	0/000	0/870

DISCUSSION

The mean of sexual satisfaction score in the subjects in the post test group was more than that of the control group. The results of this test showed that after controlling the effect of pre-test

on the difference between sexual satisfaction score in the subjects, the intervention and control groups were analyzed using covariance analysis, F calculated for sexual disorders in the intervention and control group equal to 8/968 at the level ($P = 0.000$) is significant. Therefore, it can be concluded that cognitive-behavioral interventions have reduced sexual satisfaction in the case group in comparison with the control group. The effect of cognitive-behavioral interventions on reducing sexual dysfunctions is 0.870, which shows that 87.8% of the variance of sexual satisfaction in subjects is explained by cognitive behavioral interventions. Sexual relationships form part of the perception of couples from each other. Sexual perception is positively associated with behaviors that sustains marriage and is in fact a mirror of public relations [14]. Accordingly, the protocol used in this study aims to increase the mood and activities of the patient and to make patients aware of the disease and its complications and to identify the strengths and weaknesses of the patient about sexual and sexual relationships and how to deal with points The weaknesses and disabilities in this area and behavior change as well as the recognition of behavioral abilities for improving sexual performance have tried to reduce sexual dissatisfaction in patients. The results of this study that indicate the effectiveness of cognitive-behavioral therapy in increasing the sexual satisfaction of type 2 diabetic patients with portraying research on the effect of cognitive-behavioral training on marital satisfaction of student couples [15] and researcher and colleagues The psychological aspects of diabetic patients and the results of this study showed that the effect of diabetes on psychosocial aspects and the incidence of depression and anxiety followed by sexual dissatisfaction among diabetic patients was consistent with the present study [16], Also, a research done by Okhovat *et al.*, regarding the effectiveness of cognitive behavioral therapy on stress management in type 2 diabetic patients showed that the use of this treatment reduces stress in these patients, and this result suggests a coherence It was ahead of the research [17] and in the study of Rakhshandeh's research on the effect of educational interventions on metabolic control in diabetic individuals, the results also confirmed the positive effect of educational interventions on metabolic control of diabetes, which compared with the effect of the use of cognitive behavioral therapies in the form of cognitive behavioral

training Patients with type 2 diabetes who were trying to improve their sexual function and increase their sexual satisfaction [18]. The results of Esmaeili *et al.*, study that aimed to compare the frequency and factors associated with depression and its related disorders in diabetic patients showed that non-control of depression in these patients caused more depression-related disorders such as anxiety and subsequent dissatisfaction Marriage also comes [19]. Abdolkhodaie also investigated the efficacy of two methods of existential and cognitive-behavioral group therapy for improving the level of marital satisfaction and concluded that the application of their treatment method resulted in an increase in the level of marital satisfaction in these patients. Therefore, the results obtained from this research were consistent with the present study [20]. Etemadi *et al.*, examined the effect of cognitive-behavioral couple therapy on couples' infertility, and the results of this study revealed the effectiveness of this pair therapy in creating and enhancing intimacy among couples, we will find out the relation with the present study [21], although Falak also did his research on the impact of diabetes on depression that was consistent with this research [22]. Based on the above, we find that adaptation to chronic diabetes requires behavioral, cognitive and social changes, and cognitive-behavioral therapy, by challenging individual thoughts and reducing cognitive errors, attempts to change beliefs and attitudes of the individual [23]. Given that sexual disorders also have a specific range of disorders in the sexual cycle of individuals and each of which in turn causes maladaptation in each stage of a person's sexual cycle, it is necessary and necessary that the necessary prevention and appropriate treatments at the onset of the disease accepted to prevent more problems among patients [24]. In the present study, the effect of cognitive behavioral therapy on increasing sexual satisfaction of diabetic patients was investigated. After statistical analysis, it was determined that this treatment had a significant effect on increasing sexual satisfaction of these patients.

CONCLUSION

The use of cognitive behavioral therapy has been effective in increasing the sexual satisfaction of diabetic patients. It seems that the development of a comprehensive psychological program along with drug therapy programs for diabetic patients

is necessary because applying this treatment while changing its attitude and the relatives of the disease have a better and more satisfactory outcome than the treatment, and it increases the level of marital satisfaction.

Acknowledgments

This article is based on the researcher's dissertation Abbas Rahimi, a master's degree student of clinical psychology at Islamic Azad University, Bushehr Branch, on the effectiveness of cognitive behavioral therapy on the treatment of sexual dysfunction in patients with type 2 diabetes mellitus in Bushehr city, Code of ethics was 73041010932011. The authors thank and appreciate the all those who have collaborated in this research, especially patients.

REFERENCES

1. Hamdy O, Colberg SR. The Diabetes Breakthrough: Based on a Scientifically Proven Plan to Lose Weight and Cut Medications. United State of America: Harlequin, 2014.
2. Afshari A, Khalili A, Dehghani M, Beiramijam M, Lotf MD, Noodeh FA, Oshvandi K. Comparing the frequency of occupational injuries among medical emergency staff and nurses of Intensive Care Units in Hamadan. *Annals of Tropical Medicine and Public Health*. 2017; 10(3):646-50.
3. Ghaderpanahi M, Fakhrzadeh H, Sharifi F, Badamchizade Z, Mirarefin M, Ebrahim RP, Ghotbi S, Nouri M, Larijani B. Association of physical activity with risk of type 2 diabetes. *Iranian Journal of Public Health*. 2011; 40(1):86-93.
4. Norouzinia R, Ramezani Z, Khalili A, Dehghani M, Sharifis A. The effect of mindfulness based distress reduction training on stress and burnout of nurse. *Indo American Journal of Pharmaceutical Sciences*. 2107; 4(5):1296-1302.
5. Tanaka T, Tsu k Abe S, Lzawa K, ok ochi M, Lim TK, Watanabe S, et al. Electrochemical detection of Hb A1C, a marker [correction of marker] for diabetes, US ing a flow immunoassay system. *Biosens Bioelectron* 2007; 22(205):1-6.
6. Barnard et al. carl rogers on person: a therapist view of Anderson RJ, Freedland KE, Clouse RE and Lustman PJ: prevalence of co morbid depression and anxiety in adults with

- diabetes: a Meta analysis. *Diabetes care.* 2012; 24: 1069-78.
7. Masoumi SZ, Khalili A, Shayan A, Roshanaei G, Ahmadi S. Effects of Exclusive Breastfeeding Consultation for Mothers on Continuation of Breastfeeding and Weight-gaining of Late Preterm Infants Hospitalized in Fatemeh Hospital in Hamadan, 2016. *International Journal of Medical Research and Health Sciences.* 2016; 5(9):61-66.
 8. Johansson T, Keller S, Winkler H, Ostermann T, Weitgasser R, Sonnichsen AC. Effectiveness of a Peer Support Programme versus Usual Care in Disease Management of Diabetes Mellitus Type 2 regarding Improvement of Metabolic Control: A Cluster-Randomised Controlled Trial. *Journal of Diabetes Research.* 2016; 32(4):45-47.
 9. Li C, Barker L, Ford ES, Zhang X, Strine TW, Mokdad AH. Diabetes and anxiety in US adults: findings from the 2006 Behavioral Risk Factor Surveillance System. *Diabetic Medicine.* 2008; 25(7):878-81.
 10. Varaei S, Shamsizadeh M, Cheraghi MA, Talebi M, Dehghani A, Abbasi A. Effects of a peer education on cardiac self-efficacy and readmissions in patients undergoing coronary artery bypass graft surgery: a randomized-controlled trial. *Nursing in Critical Care.* 2017; 22(1):19-28.
 11. Por Dehghan M, Mohamadi SH, Mahmood Nia A. the relationship between self-esteem and marital satisfaction secondary-school teachers. *Journal of applied psychology* 2009; 8(4): 701-02.
 12. Floyd BD, Block JM, Buckingham BB, Ly T, Foster N, Wright R, et al. Stabilization of glycemic control and improved quality of life using a shared medical appointment model in adolescents with type 1 diabetes in suboptimal control. *Pediatric Diabetes.* 2017; 18(3):204-12.
 13. Homae R, KHayatan F, Salimi M .unaffected by marital sex. Summary congress of pathology martyr Beheshti University family 2009; 402-03. [Persian]
 14. Amiryan Zadeh M, Amiryan Zadeh M, Amiryan Zadeh M. Check some variables related to sexual pleasure in women shiraz abstract second congress of pathology martyr Beheshti University Beheshti University; 2008:55.
 15. Rafii BF, Nouranipour R. The effect of cognitive behavioral training on marital satisfaction in. married student couples based in Tehran university dormitory. Peugeot fresh and consulting hash magazine 2004; 14(4): 25-40.
 16. Shoushtari Hakim M, Arzaghi M. Psychological aspects of diabetes. *Vista: Tehran;* 2010: 68-109.
 17. Okhovvat H. Roshan R. Mehrabi A. The effectiveness of cognitive behavioral stress management training on glycemic control and depress in patients with type 2 diabetes. *Journal of Endocrinology and Metabolism Proper Task of Promoting Martyr Beheshti University of Medical Sciences and Health Services.* 2007; 11(4).
 18. Rakhshandeh Ro S, GHafari M, Heydarnia A, Rajab A. The effectiveness of educational interventions on metabolic control in diabetic patients referred to Iranian Diabetes Association, Diabetes and Metabolism journal (*Journal of Diabetes and Lipid Disorders, Supplement risk factors for diabetes and heart disease - an artery*). 2009; 9. [Persian]
 19. de Mutsert R, Sun Q, Willett WC, Hu FB, van Dam RM. Overweight in early adulthood, adult weight change, and risk of type 2 diabetes, cardiovascular diseases, and certain cancers in men: a cohort study. *American Journal of Epidemiology.* 2014; 179(11):1353-65.
 20. Carrico AR, Riemer M. Motivating energy conservation in the workplace: An evaluation of the use of group-level feedback and peer education. *Journal of Environmental Psychology.* 2011; 31(1):1-3.
 21. Eetemaedi E et al .efficacy of cognitive therapy intimacy couples referred to counseling centers in Esfahan. *Journal of Psychological Studies* 2005; 2(1-2):69-87.
 22. Rasouli D, Jafarizadeh H, Mohammadpour Y, Safaei Z. The effect of two methods of self-empowerment training program on quality of life of diabetic patients attending the diabetes clinic in urmia university of medical sciences, 2013. *The J Urmia Nurs Midwifery Fac.* 2016; 14(5):389-96.
 23. Armstrong L. barriers to intimate sexuality concern & meaning – based therapy approach. *Journal of the Humanistic Psychologist.* 2006; 34(3): 281-98.
 24. De Bruin W, Dijkkamp E, Post E, Van Brakel WH. Combining peer-led self-care interventions for people affected by leprosy or diabetes in leprosy-endemic countries. What do health care professionals think? *Lepr Rev.* 2013; 84(4):266-82.

25. Parker JD, Taylor RN, Eastabrook JM, Schell SL, Wood LM. Problem gambling in adolescence: Relationships with internet misuse, gaming abuse and emotional intelligence. *Personality and Individual Differences*. 2008; 45(2):174-80.