

The effectiveness of acceptance and commitment group therapy on sexual satisfaction and psychological capital of married women with type 2 diabetes

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Abstract

Diabetes Mellitus is one of the most common diseases in the world and the number of people suffering from diabetic complication is increasing. One of the most prominent problems faced by people with diabetes is psychological disturbances. The aim of this study was to investigate the effectiveness of acceptance and commitment therapy group on sexual satisfaction and psychological capital of married women with type 2 diabetes. This quasi-experimental study was a pretest-posttest with a control group. The statistical population of the study was all married women with type 2 diabetes who were selected to participate in this study based on the diagnosis of an endocrinologist and using blood sugar test and self-expression due to sexual dissatisfaction. Using the available sampling method, 24 patients were selected as the sample; twelve were in the experimental group and twelve were on the waiting list. Larson sexual satisfaction and Luthans psychological capital questionnaires were used in this study. Data analysis was performed by SPSS software using analysis of covariance. The results showed that there was a significant difference between the experimental and control groups in terms of sexual satisfaction and psychological capital. Therefore, acceptance and commitment therapy group can play a facilitating role in the treatment and health of patients with diabetes by improving sexual satisfaction and increasing psychological capital.

Keyword (s): Acceptance and Commitment, Diabetes, Sexual Satisfaction, Psychological Capital

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(Whiting et al. 2011). Type 2 diabetes, which affects 90 to 95 percent of people with diabetes (Egede and Dismuke 2012), refers to a group of metabolic disorders, that are characterized by increasing blood sugar levels, serum lipids elevation, increased plasma glycation end-products

Introduction

Diabetes Mellitus includes many metabolic disturbances that are caused by abnormal insulin secretion or insulin function, or both, and is characterized by elevated blood sugar. This disease is an increasingly important public health concern

brings cordiality and ardency to the couples but also protects them against many disorders and diseases (Paul 1998). Psychological capital is another subject that has been considered in recent decades, which is related to positive psychology and refers to the fact that man should spend his intellectual energy on the positive aspects of his experience (Luthans et al. 2010). In fact, psychological capital refers to the concept of "who you are" and "who you want to become" based on a developmental process (Luthans et al. 2007). Psychological capital is characterized with features such as assurance and effort to succeed in work and challenging tasks such as confidence / self-efficacy, positive attribution for present and future success (optimism), stability in the way of the goal and, if necessary changing the direction of reaching the goal to achieve success (hope) and resilience means perseverance in the face of difficulties and hardships to achieve success (Luthans et al. 2010). So far, various interventions such as cognitive-behavioral therapy (Barlow 2004), humanistic therapy, and treatment based on acceptance and commitment, have been performed to improve the mental condition of patients with diabetes (Gregg et al. 2007). Treatment based on acceptance and commitment is one of the most effective approaches in the field of marital problems which defines these challenging differently and display that the maintenance and spread of distress, conflict, and emotional distance between couples results from a combination of experimental control and avoidance strategies in the marital relationship and considering thoughts as reality, negative evaluations and acting according to them is the reason for maintaining the negative communication cycle of couples (Peterson et al. 2009). Therefore, the role of therapy group based on acceptance and commitment approach is important.

Schanter 2016). A review of various studies displays that little research has been done in this field in the world and especially in Iran on the effectiveness of acceptance and commitment therapy among women with type 2 diabetes. Considering women are influential people in society and many of them have diabetes and due to the family and social harms of this disease on people with diabetes, gaining the necessary

due to defect in insulin secretion, or a defect in its function, and or both and it is estimated that by 2030 the number of people with diabetes will reach more than 366 million (Jones et al.2014). The number of people with diabetes in Iran has been reported at 7.7% of population (Mansoori et al. 2004). The role of environmental factors is prominent in the etiology of type 2 diabetes (Egede and Dismuke 2012). Various studies have shown that long-term complications, especially cardiac, ocular, renal, psychological, personal, family, and social complications are common in diabetic patients (Ghazi et al. 2013). Psychological disorders are one of the most important complications, which have a negative impact on the patient's ability to perform and continue the recommended medical care (Arigo et al. 2015). Psychological stress can initiate or exacerbate hyperglycemia by activating the hypothalamic-pituitary-adrenal axis (Hakimi et al. 2014). At the beginning of the diagnosis, anxiety is a common emotional response, but as the disease progresses, psychological disorders become more pronounced (Das-Munshi et al. 2007). Psychological disorders are seen in more than a quarter of patients admitted to internal wards, and these disorders are more common in diabetics patients, while psychological disorders are often not noticed and diagnosed by physicians (Das-Munshi et al. 2007). Researches represent that there are sexual problems in people with diabetes (Lou et al. 2015) and sexual satisfaction is one of the components that is affected by diabetes, which means judging and analyzing each person's sexual behavior that they consider enjoyable (Jahan far and Molaei nejad 2001). Various studies represent that diabetes affects women's sexual function but the effect of sexual function on the quality of life of diabetic patients needs further investigation (Soltan ahmadi et al. 2013). Sexual satisfaction not only Due to the nature of chronic complications of diabetes and their effects on the body, mind, and upon individual and social functioning of individuals, considering that type 2 diabetes is one of the most common chronic diseases wich disrupts the regular flow of life and has important psychological consequences, the survey and evaluation of psychological issues in diabetic patients is of particular importance (Batais and

high sexual satisfaction. Cronbach's alpha reliability coefficient 0.70 is obtained (Larson et al. 1998). In the study of Shams Mofarahe et al. (2010), the validity and reliability of this questionnaire were reported to be 0.90 and 0.86, respectively (Shams Mofarahe et al. 2010).

Luthans Psychological Capital Questionnaire (PCQ)

This questionnaire has 24 questions and 4 factors of hope, resilience, optimism and self-efficacy. Answers receive a score of 1 to 6 by including: strongly disagree, disagree, somewhat disagree, somewhat agree, agree, strongly agree, respectively, with a minimum score of 20 and a maximum score of 120. A score between 24 and 40 indicates a low level of psychological capital, the score between 40 and 80 indicates moderate psychological capital and a score above 80 indicates high psychological capital (Bahadori Khosroshahi et al. 2012). Cronbach's alpha reliability coefficient 0.89 is obtained (Luthans et al. 2007). Also, the reliability of this test in the study of Neisi et al. (2011) using Cronbach's alpha method has been reported to be 0.89 (Neisi et al. 2011).

Procedure

After selecting the participants and randomly dividing them into two groups (each of 12), first the purpose of the research was explained to them and they were asked to answer the questions in the questionnaire honestly. Participants were assured that the questionnaires would be analyzed confidentially. After applying the pre-test for both groups, the intervention (9 sessions, 90 minutes) was performed for the experimental group. The control group (waiting list) did not receive any intervention. At the end of the sessions, post-test was taken again from both groups. A summary of therapy group sessions with the acceptance and commitment approach based on the Timurid study of optimism (2016) as follows: familiarization of group members with each other and introduction of norms and principles governing group counseling, introduction of the group and the number of sessions and commitment based on confidentiality, creating motivation, general assessment and evaluation of control methods, creating creative helplessness, exploring the world inside and outside of treatment, creating a tendency to leave

knowledge and understanding about effective treatments in order to improve the quality of life of this group is very important. The aim of this study was to evaluate the effectiveness of acceptance and commitment therapy group to improve sexual satisfaction and psychological capital of married women with type 2 diabetes.

Methods

The present study is applied in terms of purpose. This quasi-experimental study was performed using a pretest-posttest design with a control group. The study population in this study includes all married women with type 2 diabetes aged 30 to 50 years who in 2020 referred to Saadat Health Center in Mashhad to control blood sugar. In this study, 24 women were selected from the volunteers who had the conditions to participate based on the inclusion criteria and were randomly divided into two experimental and control groups (waiting list). Participants in the experimental group received acceptance and commitment therapy, and waiting list subjects (control group) were treated at the end of the study. Inclusion criteria included being married, age between 30 and 50 years, minimum education at least a diploma, no specific psychological and physical illnesses, not being treated at the same time, regular participation attendance at treatment sessions. In this study to describe the demographic information was used the frequency and the analysis of covariance with SPSS software version 22 was used to test the hypotheses. The default of normality of data distribution and homogeneity of regression coefficients were also examined. The data collection tools were as follows:

Larson Sexual Satisfaction Questionnaire (LSSQ)

This questionnaire has 25 questions and 4 factors (desire to have sexual relations, sexual attitudes, quality sex life, and sexual compatibility). The questionnaire is scored as a 5-point Likert scale and considered to be for the options "always", "most of the time", "sometimes", "rarely" and "never", respectively, 5, 4, 3, 2, 1. The minimum score is 25 and the maximum is 125, and a score between 25 and 41 indicates a low level of sexual satisfaction. A score between 42 and 84 indicates moderate sexual satisfaction and a score above 84 indicates

consanguineous marriages and other individuals had non-consanguineous marriages. The average duration of marriage in the control group was 9.25 ± 2.98 years and the duration of diabetes in them was 7.83 ± 3.12 years. In the current study, two variables of sexual satisfaction and psychological capital in the experimental and control groups were investigated and the mean and standard deviation of these two variables as follows. Mean and standard deviation of sexual satisfaction of the experimental group were obtained 36.02 ± 2.04 in the pre-test stage and in the post-test stage was 72.01 ± 4.55 . The mean and standard deviation of sexual satisfaction in the control group were 40.75 ± 3.48 in the pre-test stage and in the post-test stage was 42.58 ± 2.67 . Mean and standard deviation of psychological capital of the experimental group were obtained 62.25 ± 4.45 in the pre-test stage and in the post-test stage was 97.91 ± 9.22 . The mean and standard deviation of psychological capital in the control group were 59.08 ± 5.1 in the pre-test stage and in the post-test stage was 58.75 ± 3.72 .

In order to assess the research data, an analysis of covariance was used. For this purpose, first, the assumptions of using the analysis of covariance test were examined. Shapiro-Wilk test and Levene's test were used to investigate the assumptions of normality of data distribution and homogeneity of variance of variables. The results of the Shapiro-Wilk test were not significant for any of the variables ($P > 0.05$), so it was concluded that the variables have a normal distribution. Also, the results of Levene's test display that the variance of all variables was equal between the two groups and there was no significant difference between both groups ($P > 0.05$), and the assumption of equality of variances is accepted. The results of the default homogeneity of the slope of the regression line are presented in Table 1.

dysfunctional programs, changing and understanding that control is a problem, not a solution, introducing an alternative to control called desire, identifying the values of individuals, clarifying values, expressing goals, clarifying actions and explaining obstacles, examining the values of each person, deepening previous concepts, understanding fusion and defusion, doing exercises for defusion, understanding self-conceptualized fusion, teaching how to do defusion, understanding self-conceptualized fusion, teaching how to do defusion, mindfulness, the emphasis on being in the present, examining the story of life and committed action.

Results

The mean and standard deviation of age of the study participants in the experimental and control groups were 31.40 ± 4.56 and 33.07 ± 5.41 years, respectively. In the experimental group, 6.7% of the participants had a degree of diploma, 20% had an associate degree, 66.7% had a bachelor's degree and 6.7% had a master's degree. In the control group, 20% had a degree of diploma, 13.3% had an associate degree, 60% had a bachelor's degree and 6.7% had a master's degree. 46.7% of the participants in the experimental group had one child, 46.7% had two children and 6.7% had three children and in the control group 33.3% had one child, 40% had two children and 6.7% had three children. 73.3% of women in the experimental group were housewives and 26.7% were employed, and in the control group, 86.7% were housewives and 13.3% were employed.

Other data represent that 83.33% of the participants in the experimental group had a consanguineous marriage and other individuals had non-consanguineous marriages. The average duration of marriage in the experimental group was 12.16 ± 4.19 years and the duration of diabetes in them was 8.66 ± 5.05 years. In the control group, 75% had

Table 1: Results of the slope of the regression line for the sexual satisfaction and psychological capital

variable	Sum of squares	df	Mean squares	F	Sig.
sexual satisfaction	15.95	1	15.95	0.421	0.321

psychological capital	23.47	1	23.47	0.398	0.291
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Multivariate analysis of covariance is unobstructed. The results of the Wilks Lambda test to determine the effect of group variable on sexual satisfaction are shown in Table 2.

The results of Table 1 represent that the slope of the regression line for the groups in the dependent variables is the same ($P < 0.05$). The results of the analysis of covariance show that the use of

Table 2: Results of Wilks Lambda test to determine the effect of acceptance and commitment therapy group variable on sexual satisfaction

tests	value	degree of freedom	F	degree of freedom of error	Sig.
Pillais Trace	0.95	70.94	4	15	0.003
Wilks Lambda	0/050	70.94	4	15	0.001
Hotelling's Trace	18.92	70.94	4	15	0.002
Roy's Largest Root	18.92	70.94	4	15	0.001

to the results of the Wilks Lambda test, the analysis of the effects between the subjects was examined and the results are shown in Table 3.

The results of Wilks Lambda test show that there is a significant difference between the experimental and control groups in at least one of the factors of sexual satisfaction ($P < 0.05$, $F = 70.94$). According

Table 3: Results of multivariate analysis of covariance in the sexual satisfaction variable

Source of changes	Sum of squares	df	Mean squares	F	Sig.	Eta squared	
desire to have sexual relations	group	181.70	1	181.70	39.75	0.002	0.68
	error	82.27	18	4.57			
sexual attitudes	group	174.19	1	174.19	57.07	0.001	0.71
	error	54.93	18	3.05			
quality sex life	group	162.28	1	162.28	29.98	0.002	0.62
	error	97.40	18	5.41			
sexual compatibility	group	111.83	1	111.83	31.86	0.001	0.63
	error	17.63	18	3.51			
score of sexual satisfaction	group	2499.22	1	2499.22	166.88	0.001	0.77
	error	269.56	18	14.97			

166.88, Eta squared- 0.77). Also, the mean scores of the experimental group in all subscales of variable sexual satisfaction were significantly higher than the control group. This finding indicates

The results of Table 3 show that after controlling the effect of pre-test, the difference between pre test-post test scores of the two groups is significant for the variable of sexual satisfaction ($P < 0.05$, $F =$

effect of group variable on psychological capital are shown in Table 4.

Table 4: Results of Wilks Lambda test to determine the effect of acceptance and commitment therapy group variable on psychological capital

tests	value	F	degree of freedom hypotheses	Degree of freedom error	Sig.
Pillais Trace	0.944	63.48	4	15	0.001
Wilks Lambda	0/056	63.48	4	15	0.001
Hotelling's Trace	16.92	63.48	4	15	0.001
Roy's Largest Root	16.92	63.48	4	15	0.001

that the acceptance and commitment therapy group has significantly increased sexual satisfaction among married women with type 2 diabetes in the experimental group compared to the control group. The results of Wilks Lambda test to determine the

least one of the factors of psychological capital. The results of the multivariate analysis of covariance are shown in Table 5.

The results of Wilks Lambda test show that the overall effect of the group is significant ($p < 0.05$, $F = 63.48$). Therefore, there is a significant difference between the experimental and control groups in at

Table 5: Results of multivariate analysis of covariance in the psychological capital variable

Source of changes		Sum of squares	df	Mean squares	F	Sig.	Eta squared
hope	group	578.57	1	578.57	22.60	0.003	0.55
	error	460.76	18	25.59			
resilience	group	323.57	1	323.57	31.37	0.001	0.63
	error	185.63	18	31.37			
optimism	group	142.38	1	142.38	23.86	0.002	0.57
	error	107.39	18	23.86			
self-efficacy	group	1357.08	1	1357.08	234.19	0.001	0.61
	error	104.30	18	234.19			
score of psychological capital	group	8246.94	1	8246.94	174.37	0.001	0.72
	error	851.30	18	174.37			

engage in sexual activity are largely influenced by diabetes; therefore, the quality of life and marital satisfaction of the patient reduces. On the other hand, early marital satisfaction is essential to enjoy a satisfying sexual relationship with the spouse, especially in women; this relationship is two-way, this means that with increased marital satisfaction, sexual satisfaction increases, and with increasing sexual satisfaction, satisfaction with cohabitation increases (Wenner 2010). Techniques of acceptance and commitment therapy emphasize the reduction of cognitive fusion. When cognitive fusion decreases, cognitive defusion occurs, and the person is detached from the content of the thoughts. This means that a person has been able to consider a thought as just a thought (acceptance) and not the truth, and therefore does not act according to that thought (defusion), which increases the behavioral treasury and can ultimately lead to a change in person's attitudes toward their sexual satisfaction and marital adjustment, as well as feeling happy and the joy of life and improve the quality of life of the couple (Johnson et al. 2018). Generally, acceptance and commitment therapy help the person to change wrong behaviors and thoughts with a conscious mind; as a result, the couple can be satisfied completely with their married life, and live well and solve their own issues and difficulties in a favorable way and reach a common agreement on the problems (Kalal ghouchan and Saraie 2016). Another result of the present study displayed that acceptance and commitment therapy significantly improved the psychological capital of married women with type 2 diabetes in the experimental group compared to the control group. This finding is consistent with the research of Baghban Baghestan et al. (2017) who represented that acceptance and commitment therapy is an effective treatment to improve psychological capital in patients with type 2 diabetes (Baghban Baghestan et al. 2017). In expressing the above result, we can refer to the findings of Friedn et al. (2016) who believe that by using acceptance and commitment therapy, couples are empowered in communication skills, emotionally recognize their feelings well, understand the concepts of their relationship with their spouse, express their emotional states more effectively to their spouse, show better adaptation

The results of Table 5 represent that after controlling the effect of pre-test, the difference between pre test-post test scores of the two groups is significant for the psychological capital variable ($P < 0.05$, $F = 174.37$, $\eta^2 = 0.72$). Also, the mean score of the experimental group in all factors of psychological capital was significantly higher than the control group. This finding indicates that the acceptance and commitment therapy group has significantly increased psychological capital among married women with type 2 diabetes in the experimental group compared to the control group.

Discussion

The aim of this study was to evaluate the effectiveness of acceptance and commitment therapy group on sexual satisfaction and psychological capital of married women with type 2 diabetes. The results of this study displayed that there is a significant difference between the pre-test and post-test scores of the experimental and control groups in terms of influence on sexual satisfaction and psychological capital of married women with type 2 diabetes. According to the results of statistical analysis of data, acceptance and commitment therapy group could significantly increase the sexual satisfaction of married women with type 2 diabetes in the experimental group compared to the control group. These results are consistent with the findings of similar research in this field; Safakozturk and Arkar (2017) have shown that acceptance and commitment therapy can improve the orgasm process in women with diabetes (Safakozturk and Arkar 2017). Schulz et al. (2017) in a study of diabetic women, demonstrated that third-wave therapies such as acceptance and commitment are effective in improving the quality of marital and sexual satisfaction (Schulz et al. 2017). Sexual disorders in diabetic women are divided into two main groups of psychological and physical causes (gynecological causes, hormonal disorders, autonomic neuropathy, atherosclerosis and vascular insufficiency). In diabetic women, vascular and neurological disorders, and psychological problems are the main causes of decreased libido, decreased vaginal Secretions and lubrication, impaired irritability and orgasm, and dyspareunia (Jaberi et al. 2015). In diabetic women, their level of interest, satisfaction, and ability to

to acceptance mechanisms, increasing awareness, presence in the present moment, observation without judgment, commitment based on values, and refrain from experiential avoidance that make them aware of their emotions when they have unpleasant and threatening emotional, and have more control over them and regulate them constructively. In fact, people who participate in acceptance and commitment therapy are less likely to be affected by negatively stressful situations because of the creation of values and meaning in their lives and they become more empowered to regulate and manage their emotions (Goodarzi et al. 2017).

Conclusion

In summary, it can be concluded that acceptance and commitment therapy group approach can bring sexual satisfaction and psychological capital to married women with type 2 diabetes to a high level of satisfaction. However, due to the fact that the present study was performed on married women aged 30 to 50 years, so the use of this approach in other groups requires separate studies.

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in relation to their spouse, and these events increase happiness and hope, which is one of the most important components of psychological capital. This treatment helps to act according to human values and improve their quality of life by improving their psychological capital. Psychological capital means that the person is fully in touch with the present moments and, according to the requirements in which it is located, changes or continues his behaviors based on the values he has chosen (Friedn et al. 2016). Acceptance and commitment therapy helps people become aware of their emotions and cognitions through education and abandon their previous maladaptive strategies in order to achieve better and more consistent goals. Thus, this treatment rescues the person from self-destructive struggles that may lead him to hurt himself and others and to resort to emotional solutions such as risky behaviors and improves psychological adjustment and promotes mental and social health (Hayes and Strosahl 2005). Acceptance and commitment therapy can equip individuals with beliefs, behaviors, and values due

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