



VERIFYING THE EFFECTIVENESS OF CBT ON REDUCING THE DEPRESSION OF

DIABETIC PATIENTS OF TYPE TWO

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ABSTRACT

Back ground and aim: Diabetes is one of the metabolic diseases, which is accompanied with relative or absolute deficiency of insulin, increase of blood glucose and impaired metabolism of carbohydrate, fat and protein. Diabetes can cause physical and psychological effects and depression is considered to be, one of the symptoms. Therefore the aim of this study is to verify the effectiveness of cognitive behavioral therapy in reducing the symptoms of depression in patients with type two diabetes.

This research was kind of pretest-posttest design with group of inequality control. Statistical sample, was consisted of 20 patients with diabetes type two from SANANDAJ City, and were selected by access sampling method and divided in to the two groups, test group (10 persons) and control group (10 persons). Used instrument in this study was Beck depression questionnaire (second version). Experimental group faced 10 sessions of 60 minutes each to an independent variable (cognitive behavioral therapy).to analyze the data, we used the analyze method of single- variable covariance (ANCOVA).

Findings: the achieved results, showed that cognitive behavioral therapy can be effective in reducing symptoms of depression in patients with type two diabetes ($P < 0.001$).

Conclusion: cognitive behavioral therapy, can reduce emotional signs, physical and depression cognitive in patients with type two diabetes.

Keywords: CBT (cognitive-behavioral therapy) depression, diabetes type two

INTRODUCTION

Diabetes is a chronic illness, and is created by defect of hereditary or adventitious in insulin production or inappropriate influence of the produced insulin. This sufficiency causes the increases in density of blood sugar and makes lot of damages to different parts of the body (1). Number of the people who suffered from diabetes in 1995 were 118 million and in 2010, it reached to 220 million. And it has been predicted that in 2025, number of diabetes patients will reach to 300 million (2). 14 to 23 percent of Iranians who are above 30, are diabetics or affected with glucose control, out of these people, 25 percent will suffer from diabetes in the future, 60 -70 percent of diabetics will suffer from nerve damage, which may possibly lead to spinal cord cut (3).

Physical illnesses may influence on emotional states of man and depresses the person. Depression is the collection of different mental cases which starts from slight feeling of boredom until silence and leaving routine activities. depression is consisted of feeling sad, discouragement or hopelessness, atleast for a period of two weeks at often days and often hours (4). Suffering danger to depression in diabetics, is more than other people of the society, as outbreak of this

illness in this kind of patients is double of others (5).

the most common methods for treatment of depression are: drug therapy, ECT (electroconvulsive therapy), surgery and mental treatment methods like Gestalt therapy, Interpersonal Therapy, Psychological Therapy, Acceptance and Commitment Therapy (ACT), Meta-Cognitive Therapy, Behavioral Activation (BA) and Cognitive Behavioral Therapy (CBT). The most effective treatment on the basis of researches for depression treatment is cognitive behavioral therapy (6). CBT is a treatment method, which has been figured on the basis of general imagination of behaviors and negative thought patterns and inefficient, which helps to diagnosis, analyze and negative thought change. method of this treatment is to talk to the sick fellow, in the first phase, mental therapist, tries to receive the patient's way of thinking about himself, surrounding area and others. In the second phase, mental therapist tries to find out the problems which created mental disorders in patient. In this treatment method, mental therapist, insists only on present time problems (this place and now), and the cause which made the patient to be in discomfort and anxiety (7).

One of the metabolic disorders which human may stricken the man is diabetes (8). Diabetes may show itself as diabetes type one or diabetes type two. diabetes type one's appearance (dependent to insulin) is lesser than diabetes type two. Its appearance in person below 30 years of age is 3 to 35 in every one hundred thousand. The most age outbreak of illness in both the genders is between 11 to 14. Outbreak of diabetes type II (nondependent to insulin) is gradual and mostly happens midlife and old age, often it is slight and slowly leads to deterioration. Outbreak rate of this kind of diabetes in total population is between 1 and 4 percent and in individuals above 40 years is between 5 to 10 percent (9). In addition to physical complications, this illness has mental complications too. It has been reported that, at least, 1/3 of the diabetes patients are suffering from depression (10)

In a research by TAZIKI and colleagues (2001), they reached to this result that, there is a direct and significant relation between diabetes and depression. Depression is mental-nervous disease and its most important characteristic is visible changes in mood and emotion which is accompanied with feeling sorrow. depression has countless complications on person, symptoms like, suicide, withdrawing from friends and family,

difficulty in completing assignments, disorder in education and profession works, decrease of motivation to perform new plans, anxiety creation in 90 percent of patients, menstrual dysfunction and decreased libido and sexual performance, various changes in food consumption and rest balance will lead to illness deterioration, blood pressure, heart disease, vascular disease and chronic lung disease (3).

Different therapeutic methods on the basis of biological views, psychology, social and cultural have been designed (11). Some of the treatments, especially psychology treatments, emphasis on reduction and change in complications of mental depression (12). These approaches are trying to reduce the complications of mental and physical diseases, just like complications of diabetes illness, and make him compatible to life, so he increases his social and individual abilities. One of the mental cognitive treatments which have assigned, most of the researches regarding mental and behavioral disorders to its own is the CBT treatment (13).

Organized cognitive behavioral therapy is based on cooperation, Socratic, experiment and in case of time, is limited. In this method, emphasis on current positions or present time and will be paid attention to beliefs role or false recognizing and maladaptive. This

treatment method is based on this basic assumption that, thoughts, emotions, activities and behaviors are related to each other and cognitive distortions will be created by the result of learning. And through learning, we can vanish them (14). with attention to what we mentioned and also because of negative complications which diabetes and depression, create in case of individual, social and physical, it is essential to do a research to decrease the depression which comes out of diabetes. so we have done the present study with effectiveness target of CBT on decreasing the depression out of diabetes.

Research necessity:

Depression is one of the wide spread illnesses of medical therapy, and it has created lot of expenditures and pain for families in various parts of the society. Depression creates different problems like physical complications and also makes problems for family, job and social issues too. Physical signs of depression are consisted of: headache, back pain, constipation, muscle numbness, dizziness and Etc. the man who is suffering from depression, is discriminated in his job, in view of society, he is outcast and even unpopular for his own family. Sometimes, isolation along with depression, will lead the patients toward death and suicide (15). In a research which was conducted by

Cogan and colleagues (2007), the result showed that patients with type II diabetes, experience high levels of depression.

Among treatments, current treatment of mental cognitive, cognitive-behavioral treatment, is not only specific approach, but it is a part of all comments, and itself is considered to be an approach, automatically (2).

This approach is made especially, when the depression is the main problem of the patient and it is the most effective treatment method for average and high depressions. even though other treatments of mental therapy just like: psychodynamic therapy, Gestalt therapy, interpersonal therapy, meta-cognitive therapy, acceptance and commitment therapy, behavioral activation therapy are used for the treatment of depression, but considering many other researches, which have been applied on different treatments, the effectiveness of cognitive-behavioral treatment for decreasing the depression, is more than other treatments (16).

With attention to outbreak of depression in those who are suffering from diabetes, and also outbreak of diabetes type II in elders and inappropriate way of living and social-personal difficulties, which these people are experiencing, it is very necessary to do researches about treatment of behavioral

disorder and method to decrease the signs and its complications. because, depression will lead some of the diabetics to suicide and takes the man to death and decreases the quality of man`s life. So in this research, we verified the effectiveness of cognitive-behavioral treatment on reduction of depression signs in diabetics type II.

Literature of research:

It has been specified that in diabetes type II, genetic factors, overweight and less activity, have important role in persons` suffering. In this type of diabetes, speed and ability of body in use and total metabolic of glucose will decrease. Therefore, rate of blood sugar will increase. The said illness in persons above 45 will have more appearance. World health organization, predicted that, diabetes outbreak in globe from 1/4 percent in 1995 will reach to 4/5 in 2025. And 75 percent of diabetics will be in countries of in progress (9).

symptoms of this disorder are: severe thirst, weight reduction, urine frequency (polyuria), extreme fatigue, boredom and lack of concentration, tingling and itching, numbness in hands and feet, blurred vision, frequency infection, late recovery of wounds, sex disability in men (ENTEZARI, 2009). In creation of diabetes type II, genetic talent and environmental factors like lack of physical

activity, inappropriate nutrition, overweight and high blood pressure are having role (8).

Diabetes can cause many complications, just like mental complications and physical complication. Diabetes can cause physical complications like cardio-vascular illness, blood pressure, chronic insufficiency of kidney, damage of retinal eye, nervous damage and microscopic nerve damage that could cause sterility and disorder in restoration of wound. And mental complications of diabetes are: depression, stress, decrease of self-esteem.

factors that increase the developing possibility of diabetes are: being in hidden phase of diabetes, additional weight and overweight, especially in abdomen area, age over 40 years, hypertension of blood, high fat blood, high blood pressure, there are many treatments for the diabetes type II, which will be done through: A-testing blood sugar before breakfast, B-drug treatments: just like inhibitors a, Metformin drugs, BOFORMIN, FENFORMIN, DIPTIDIL PITIDAZ inhibitors, stimulating insulin secretion drugs, TIYAZOLIDNIDIYONS, B-treatment through regime therapy, and weight reduction (17).

Definition of depression:

Depression illness is a kind of mental-nervous sickness, its first and most important

specifications is the mood disorder, which is accompanied with sorrow feeling. And this sad and grief feeling, may change to extremely severe depression case. Patient may declare that he is feeling, sorrow, sadness, vanity and valueless. For patient, depressed mood has certain quality, which is different with simple sadness. Average age to start this basic depressed disorder is 40 and in 50 percent of patients, starting age is between 20 to 50.

Causes and outbreak reasons for depression are:

1-biological reasons, which is consisted of: A-genetic, B-Serotonins and other NORTRAPINS, C-drugs, D-illnesses

2-social-mental reasons, which is consisted of: A- stress, B- social factors, C-character, D- failure in life (110)

Different viewpoints regarding depression:

A-biological viewpoints about depression: biological factors have important relationship with mood disorders. Mood disorders are the cause in simplest level for physical change, just like disorders in appetite and sleep patterns. More complex than that are biological processes, upon depress and delight feelings.

B- chemical-environmental factors of depression: oldest theory regarding this matter was the theory of KATE KOLAMIN which

declared that lack of Norepinephrine is the cause for depression, substitute for the theory of KATE KOLAMIN, is the theory of INDOL AMIN, which declares that lack of Serotonin has interference in signs of behavioral depression.

In addition, it has been declared that, changes in Neurotransmitter GABA, has effect on depression. In the brain of depressed diabetics, decreased level of GABA was found. These observations with the relevant which declares that, some Anticonvulsants drugs, stimulate the GABA, and have effect on depression, were reinforced. Cortisol Hormone was produced more in basic depressed people (18).

Viewpoints of mental cognitive:

Cognitive and behavioral theories:

One of the oldest theories regarding depressed behavioral states that is because of reduction in positive reinforcements. According to this idea, the depressed people leave the life with others, because they don't have any encouragement to be active. Another old behavioral subject says: defective social skill has interference in depression. The person who has defective interpersonal relation, loses the reinforcement, when others get them by attention and interest. Therefore this person will be depressed and will remain depressed. Sometimes, depressed fellow may get

secondary profit. Scape from responsibility, for example, from job duties or family commitments, may encourage him to remain in depression.

According to behavioral models, stressed life events, are the third factors that interfere the depression, because they disturb the abilities of the person in performing the important and rather automatic patterns. These patterns are called as Scenario, and are consisted of repeated works, which people do it every day, just like: wearing cloth in the morning and going to work. Changes in Scenario, which are different events of the life, will interfere in depression. The important factor which determines that the person will be depressed, is how much these conditions will disorder his scenario? As rate of disorder goes up, distress will be more. however, only headaches of this kind of disorders are not the depression interferers, when person, loses the repeated works and surrounding`s conditions, will feel more self-consciousness, by increasing self-consciousness, the said person will do more self-reproach, and accepts the potential adverse consequences, and withdraws from others (19).

D-social-cultural viewpoints and interpersonal:

Some of the depressed fellows have permanent difficulties in interactions with

others. The theory of interpersonal depression is performed from interpersonal approaches of Adolf Meyer and Harry Stack Sullivan and theory of John Bowlby. Meyer was famous for his theory of biological-psycho approach to misconduct behavior. He was insisting that mental problems can show the wrong efforts of the person to be compatible with social-mental environment. He believed that physical signs can be created in relationship with mental distress. Sullivan was believing that abnormal behavior is a product of defective interpersonal relationship, and it is one of the insufficiencies in relationship.

The target of the research:

Determination of CBT effectiveness on reducing the depression symptoms in diabetic patients of type II in SANANDAJ City in 2014

Assumptions of the research:

1-CBT, is effective on reducing the depression symptoms of diabetic patients of type II.

2-CBT, is effective on reducing the emotional symptoms of depressed diabetic patients of type II.

3-CBT, is effective on reducing the cognitive symptoms of depressed diabetic patients of type II.

4-CBT, is effective on reducing the physical symptoms of depressed diabetic patients of type II.

Background of the research:

Several researches, in this field, have been conducted in Iran and abroad:

AHMADI and colleagues (2013), in a research by the title of effectiveness of behavior-cognitive treatment on depression therapy after childbirth, have reached to this decision that, depression after delivery, will be recovered, under influence of behavior-cognitive treatment, in design format of recent test and by using two recognized scales of Beck and Edinburg. Their research was significant for one of the three conflict scales that means, motherhood conflict. ESMAILI and coworkers (2013), in a study as verifying the effectiveness of behavior-cognitive therapy on improvement of life style in diabetic patients, have been concluded that, behavior-cognitive therapy, can change the life style of diabetic patients in the fields of self-actualization growth, accepting the responsibility, interpersonal relationship, nutrition, physical activities and stress management. in a study which have been conducted by SHAKENIA (2012), by the title of effectiveness of happiness training program on level of depression symptoms and children`s self-esteem of primary section in

Isfahan city. And results showed that, happiness program had significant effects on level of depression signs and its four dimensions (negative mood, interpersonal problems, lack of joy and negative self-esteem), and decreased the level of depression and its dimensions. But did not have significant effect on deficiency dimension.

In a study, which has been prepared by HASANZADEH (2012), as effectiveness of cognitive therapy, based on mindfulness on reduction of rumination in basic depressed persons, results are showing that, treatment, based on mindfulness on reducing rumination in basic depressed persons, had significant effects. in a research which has been made by SHIRALI NIA (1391), as effectiveness of advanced behavior-cognitive couple treatment and centralized couple treatment on excitement on depression reduction, excitement adjusting and intimacy of couple relationship, who approached to consultation centers of AHWAZ city, these results have been achieved: between couples of test group and control group, there is a significant difference in depression variables, excitement adjustment and relationship intimacy. and theories of research were confirmed which are based on effect of advanced behavior-cognitive couple treatment, centralized couple treatment on excitement on depression

reduction, improve in excitement adjusting and increase in intimacy of couple relationship. And also, result showed that two approaches of couple treatment had approximately same effectiveness on reduction of depression symptoms, excitement adjusting and intimacy of couple relationship in pretest and posttest phases.

In a survey conducted by REZAEI (2011), under the name of effectiveness of behavior-cognitive treatment group on depression reduction of positive HIV prisoners, findings showed that behavior-cognitive treatment group had significant effects on depression reduction of positive HIV prisoners.

In a study arranged by NAJAFI (2005), by the title of, verifying the effectiveness of behavior-cognitive on self-perception and depression on girls of 15-18 years old and residents of Tehran boarding houses, results of the survey, showed that, there is no significant difference between results of pretest and first consistency of self-depression perception in both the groups. Three months after the first consistency, the second consistency was started, the result of the second consistency, showed that, there was significant difference in category of self-object in dimension of self-social. There was a significant difference between second consist of both the groups in category of self-

subject in dimension of will and option. And also, between second consist of depression in both the groups, there was a significant difference. After performing the posttest of applied CBT in this research, on changing the condition of some girls and dimension of self-understanding and decrease in depression was effective.

in a survey, which was conducted by TOWET and colleagues (2014), as treatment based on mind awareness and behavior-cognitive for treatment of depression symptoms in diabetics patients, results showed that those who received the treatment on the basis of mind awareness and CBT, had significantly decrease in symptoms in compare with those who did not have any kind of the treatment. And also both the interventions, had significant positive effects in distress and depression with diabetes, too. Both the treatments, were effective to cure a wide range of mental signs in diabetics of type one and type two.

SINGER, EDDINGTON, DOBSON and WRIGHT (2013), in a research, under the name of a preliminary study about cognitive-behavior therapy of depression in early psychosis, reached to this conclusion that, those participants of test group, who were evaluated in the beginning of research and after the treatment, were examined again,

showed significant decrease in negative signs and mental pathology of depression. They were less in contact with despair, losing believes and inefficient attitudes. And their self-confidence increased. This result also showed that, CBT can be a practical treatment for mental disorders, just like depression, stress, anger and ETC. in a survey, which was performed by STRING, BITER HORN and WONDERGAJ (2013), by title of behavioral-cognitive treatment for negative symptoms (CBT-N) in mental disorders, results showed that CBT-N is effective in reducing the negative symptoms. And also patients, reported about their own cognitive abilities, performance, emotional experience, social exclusion and lesser dysfunctional belief. And this reduction, in some extent, is related to change in negative signs. This decrease in case of clinical was important. In a research, which was done by KIM and colleagues (2011), by the name of CBT treatment, based on website, to decrease the depression of diabetics type I and II, results showed, CBT treatment, based on website, was effective in decreasing the depression signs in diabetic patients of type one and two.

Method of research:

The present survey with the attention to goals of the research and nature of the subject is a

half test, from the kind of pretest-post-test with inequality control group.

In half test plans, the researcher, has limited ability in control of research conditions, and it will be used, when researcher, because of any reason, can't use the test plans (20). The independent variable in this research is behavior-cognitive therapy and dependent variable is depression.

Society, sample and method of sampling;

Statistical society in the present research is consisted of all the diabetic patients who approached to diabetes clinic in SANANDAJ city, during the first six month of the year in 2014.

Out of patients, who came to diabetes clinic, by the method of access sampling, 20 patients, who were eligible for research, were selected and assigned to two groups of 10 in test- group and control –group.

Entry conditions to sample of research are consisted of: A) diagnosis of diabetes type two, should be definitive for the candidates.

B) Persons who have major depression disorder.

C) Persons must voluntarily and willingly, participate in the said research

D) accepts the regulation of the study, which has been made by the investigator, and performs all the duties well.

E) Candidate, should have high school education or above to participate in this survey.

Tools of the research:

To collect the needed information for this survey, we used the depression questionnaire (BDI-II). This instrument was made as a self-report instrument by Beck and colleagues in 1960 and in 1996, Beck and colleagues, presented its second version, and in that some items were matching with DSM-IV. This questionnaire, is consisted of 21 sections in the format of 3 subscales. Each item, has 4 options, which has been numbered from 0 to 3 and determines, different degrees from mild to severe. The maximum score in this questionnaire is 63 and the minimum is zero, determining the degree of depression on its basis is like this: 1- minor depression (0-13), 2- mild depression (14-19), 3- medium depression (20-28), 4- severe depression (29-63).

Statistical method: in this research, in the level of descriptive statistics, we used from frequency, percentage of the frequency, average and standard derivation, and in the level of inferential statistics, we used from covariance analyze of single variable (ANCOVA).

Method of implementation:

After selecting the sample, the members of samples, who were 20 persons (10 males and 10 females), as substitutes, were kept in test group and control group. Pre-test was performed for both the groups. And in the end, again, the Beck depression test on exams was performed for both the groups. It should be noted that, test implementation and also, treatment sessions were conducted separately in diabetes clinic and diabetes association of SANANDAJ.

10 treatment sessions with CBT methods were conducted for test group members, which was performed for period of 60 minutes and individually in consultation room of diabetes association. After performing the CBT sessions for test group members, a post-test was conducted on both the groups and the results were analyzed.

Heading of treatment sessions content (CBT), based on treatment sessions of Beck as below: first session: implementation of the first session, diagnostic evaluation and assessment of the appropriateness of the treatment, creating relationship, giving hope to the patient, making patient familiar with goals and methods of the treatment.

Second session: presenting comments about depression and its definition by mentioning its clinical symptoms.

Third session: review of the previous session, explaining the patterns of the three systems of patient, familiarity with the three systems pattern of activator event A, beliefs and thoughts B, due excitement C and implementing samples by patients.

Fourth session: review of the previous session, identifying the automatic thoughts, thoughts related to the automatic thoughts and superficial, became deeper on main thoughts and core, attention to the relation between thoughts and emotions.

Fifth session: review of the previous session, exploring the thoughts and hurt feelings, verifying the examples of negative thoughts in depression, ocean analogy, reaching to core thoughts and schemes, implementation of real and practical samples in life, registration of core thoughts about events.

sixth session: review of the previous session's assignments, expressing the real examples and identifying the core believes, identifying a set of automatic thoughts that lead to a core belief.

seventh session: review of the previous session's assignments, presenting the cognitive and behavioral interventions, just like exercise and training the skills to solve the problems, perceptual change, self-reward and self-punishment.

Eighth session: review of the previous session: introducing the patient with some illogical thoughts, registering core beliefs and dysfunctional thoughts, and explaining these thoughts by creating depression and substituting logical thoughts instead of them and submitting homework.

Ninth session: review of the previous session, giving feedback to patient, giving the previous recorded sessions to the patients, continuing the registration and identifying the negative main thoughts and substituting them with modified thoughts.

Tenth session: overview of sessions one to ninth, taking feedback from the patient, discussion and conclusion from previous meetings, implementing the post-test (21).

Test of theories:

First theory: CBT is effective on reduction of depression symptoms in diabetic patients of type two.

To test as you can see from the results of table 2 and 3, there are significant differences between average of depression in control and experimental groups, and this means, the mentioned theory is acceptable, so we can observe, with the help of CBT method, level of depression in experimental group is less than control group, so, we come to know, CBT method, is effective on depression symptoms in diabetic patients of type two.

Second theory: CBT, is effective on emotional signs of diabetic depressed patients of type two.

the theories of this research, we used covariance analysis test.

As we can observe in results of table 4 and 5, there are significant differences between average of emotional signs in groups of experiment and control and this means, the

mentioned theory is acceptable. So, we can say, with the help of CBT method, the level of emotional signs in test group is less than control group. And this means, the CBT method, is effective on emotional signs of depressed diabetic patients of type two.

Third theory: CBT, is effective on cognitive symptoms of depressed diabetics patients of type two.

Table 2: Results of covariance analysis test, based on group in depression variable:

Significant	F	Mean square	Degrees of freedom	Sum of squares	Source of changes	Variable
0/039	5/022	102/558	1	102/558	Pretest	Depression
0/001	548/21	440/023	1	440/023	Group	
0/480	15/304	169/712	1	169/712	depression group pretest	
		20 /420	17	347/142	Error	

Table 3: Average of adjusted total depression (excluding the effect of the accessory random variable)

Group	Average	Standard deviation	95 percent Safety distance	
			Lower bound	Upper bound
Experiment	12/695	1/454	9/627	15/763
Control	22/405	1/454	19/337	25/473

Table 4: Test results of covariance analyze, based on group in variable emotional symptoms in depressed patients

Significant	F	Average of squares	Degree of freedom	Sum of squares	Source of changes	Variable
0/025	6/07	55/567	1	55/567	Pretest	Emotional symptoms
0/016	078/7/078	64/008	1	64/800	Group	
0/315	14/18	73/126	1	73/126	* Group Emotional signs of pre-test	
		9/15	17	155/63	Error	

Table 5- adjusted average of depression emotional signs (removing the effect of accessory random variable)

Group	Average	Standard deviation	Safety distance 95 percent	
			Lower bound	Upper bound
Experiment	5/200	0/957	3/181	7/219
Control	8/800	0/957	6/781	10/819

Table 6- test results of covariance analyze on the based on group in variable depression cognitive signs of depressed patients

Significant	F	Average of squares	Degrees of freedom	Sum of squares	Source of changes	Variable
0/002	12/856	54/256	1	54/256	Pretest	Emotional

0/001	16/125	68/053	1	68/053	Group	symptoms
0/519	23/21	42/486	1	42/486	* emotional signs group Pre-test	
		4/220	17	71/744	Error	

Table 7- adjusted average of cognitive symptoms (removing the effect of accessory random variable)

Group	Average	Standard deviation	Safety distance 95 percent	
			Lower bound	Upper bound
Experiment	4/092	0/679	2/660	5/525
Control	8/108	0/679	6/675	9/540

Fourth theory: CBT, is effective on physical symptoms of depressed diabetic patients of type two.

Table 8- test results of covariance analyze on the based on group in variable signs of physically depressed patients

Significant	F	Average of squares	Degrees of freedom	Sum of squares	Source of changes	Variable
0/027	5/881	26/858	1	26/858	Pretest	physical symptoms
0/009	8/711	39/784	1	39/784	Group	
0/215	5/96	21/085	1	21/085	* emotional signs group Pre-test	
		4/56	17	77/64	Error	

Table 9- adjusted average of physical symptoms (removing the effect of accessory random variable)

Group	Average	Standard deviation	Safety distance 95 percent	
			Lower bound	Upper bound
Experiment	2/126	0/703	0/642	3/611
Control	5/174	0/703	6/781	6/658

CONCLUSION

The recent survey, has been prepared, with the aim to verify the effectiveness of CBT on decreasing the depression signs of diabetics depressed patients of type two in SANANDAJ city. Results showed that, depression symptoms in general form as well as emotional dimension, cognitive and physically in experiment test, compare to control group, is decreased, significantly.

In this approach and in the process of treatment, the depressed fellow, instead of considering his failure and improprieties towards himself, he points them to area and

his surroundings. with behavioral-cognitive treatment, most effective way, has been made to decrease this type of thinking towards himself, area and the future, the results of the research also show that, we have reached to the goal, and showed the relative superiority of this method of treatment for depression disorder, in compare to other mental treatments.

Findings of the first theory, showed that behavioral-cognitive treatment, could significantly decrease the intensity of overall depression symptoms in experiment group, compare to the control group. The result of

this survey is same as the other studies, which have been done with other researchers like: NAJAFI (2005), ESMAILI and colleagues (2013), REZAEI (2011), AHMADI and colleagues (2013), DAVAZDA EMAMI and coworkers (2009), singer and coworkers (2013), string and companions (2013) and LIKHARD (2010). After interference of behavioral-cognitive treatment, depression symptoms of test group members were decreased and persons with rebuilding the cognitive and other techniques of cognitive, replaced the inefficient thoughts by efficient thoughts. Change in cognitions and plans of the depressed fellow in this research is very clear. Behavioral-cognitive is not accepting the depression as internal phenomena, and inherent for the depressed fellow. This treatment is considered to be the best for curing the depression disorder, and has special ability to decrease the signs of depression.

Findings of the second theory showed, behavioral-cognitive therapy, decreased significantly the intensity of the emotional signs in test group, compare to the control group. To explain the experience of this theory, with attention to previous studies, whether inside researches or foreign researches, we can't find the same survey, so we are not able to forward any finding which

can be corresponding and same. Behavioral-cognitive treatment, with attention to emotional dimension and active ideas of depressed mood, along with reinforcement of active and efficient behaviors of depressed fellow, will be converted to increase in self-efficacy and in the end, will change the depressed mood to stable mood.

when cognition will be changed, and consequently, feelings and emotions are changing, and this matter will take place with cognitive techniques, just like thought differentiation from feelings, grading the excitement, level of belief in thoughts, techniques of writing in relaxation and identifying the blind nodes.

Findings of the third theory showed, behavioral-cognitive therapy, decreased significantly the intensity of the emotional signs in test group, compare to the control group. To explain the experience of this theory, with attention to previous studies, whether inside researches or foreign researches, we can't find the same survey, so we are not able to forward any finding which can be corresponding and same. Apathy and low energy is the result of expectations of personal failure in all the fields, therefore will paralysis and will weakness, comes out of the pessimism of person and hopeless feeling. Cognition symptoms are: pessimism, defeat

feeling, punishment expectations, self-accusation, suicide thoughts, Indecisiveness and worthless. What makes people distracted are not the events, but are the thoughts about the events. In eastern philosophy tradition, cognition, is considered as primary force in determining the human's behavior. The depressed person, commits, three types of cognitive biases: self- negative view, negative view toward world, negative view toward future. In cognitive-behavioral therapy, therapists, are encouraging the shaping, consciously processes application, compatible thought such as logical thought and solving the problem. And also try to encourage the patients to recognize and change their own thoughts in two levels of information self-drives, approximately. These two levels are: own drive thought and designing.

Findings of the fourth theory showed, behavioral-cognitive therapy, decreased significantly the intensity of the emotional signs in test group, compare to the control group. To explain the experience of this theory, with attention to previous studies, whether inside researches or foreign researches, we can't find the same survey, so we are not able to forward any finding which can be corresponding and same. Depressed physical symptoms are difficulty in work, insomnia, fatigue, anorexia, preoccupation

about body, decrease or increase in weight and lack of libido and these symptoms will be reduced by interference of behavioral-cognitive treatment in experimental group. Unsuitable position, produces, bad thoughts and unhealthy feelings and subsequently, harmful physical changes will be made. Behavioral-cognitive therapy, helped to depressed persons of the experimental group. These persons by the influence of severe disturbing thoughts and feelings were insecurity affected in life cycle. Therapists, at first identified their faulty thought, by some techniques, and then challenging these thoughts, registering the thoughts, and finally graded them. At the end, their faulty thought cycle were recovered and people were freed from physical signs of depression disorder. Therefore cognition and behavior covers all aspects of life. Depressed fellow is tired and without energy, and behavioral-cognitive therapy with destroying the physical components, helps to reduce the depression of depressed diabetes patients.

Practical suggestions: we are advising to use cognitive therapy services, specially, this approach treatment in centers like: diabetes clinic and diabetes clinic. And also, use the result of this research in case of depressed diabetes patients of type one.

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