

## The effectiveness of the behavioral- cognitive therapy on the reduction of the rate of the depression and anxiety of the infertile women of the Rasht city

Javad Khalatbari<sup>1\*</sup>, Shohreh Ghorbanshirdi<sup>1</sup>, Mohammad Akhshabi<sup>2</sup>, Tahereh Hamzehpour<sup>1</sup> and Mina esmaeilpour<sup>1</sup>

<sup>1</sup>Department of Psychology, Islamic Azad University Tonekabon Branch, Tonekabon, Iran,

<sup>2</sup>Department of Management, Islamic Azad University Ramsar Branch, Ramsar, Iran  
m.akhshabi@toniau.ac.ir

### Abstract

The objective of this research is to study the effectiveness of the behavioral- cognitive therapy on the reduction of the rate of the depression and anxiety of the infertile women. In this research, the statistical society included 300 individuals of the infertile women who referred to the Mehr professional clinic. Out of which 128 Individuals acquired the high score in the depression and anxiety test and, then, 30 individuals of the women having the high depression and anxiety were selected randomly (and) in order to test the above hypothesis. They were divided into 2 groups of 15 individuals of which one group was placed under the behavioral - cognitive therapy for 8 ninety- minute sessions. The findings indicated that the behavioral cognitive therapy has positive influence over depression of the test group significantly compared to the control group which had received no therapeutic interference. Thus, the behavioral- cognitive therapy has been effective on the reduction and elimination of the depression and anxiety in the infertile women.

**Keywords:** Infertility, Cognitive therapy, Depression, Women, Iran

### Introduction

According to the report of the World Health Organization (WHO), almost 10-15 percent of the world people face with the infertility problem (Douglas & Barlipeter, 1994). The infertility is an individual and social problem (Karimi, 2001). The spouses who have been located in a critical step are exposed to the affliction with depression, anxiety, low self- confidence and dissatisfaction more than the others (Khosavi, 2001). The various researches have shown the existence of the depression and anxiety in the infertile couples (Rojuei, 1997). In the women having the infertility, the grief of the lack of the son afflicts them with the problem of the anxiety (Seibele, 1197). Anxiety produces an undesirable effect on the physiologic function of the body and influences on the result of the fertility. On the other hand, infertility by itself leads to the increase of the anxiety and creates the defective cycles which weaken the ability of the couple in the fertility more than past (Karimzadeh, 1996). The infertile women often consider the infertility as the most tension - generating event of the life and describe the repetitive and consecutive periods of the treatment as the repetitive periods of the crisis (Rojuei, 1997). By increasing the duration of the infertility, anxiety increases as well and the treatment will not have a good result (Lion Spiruf, 2002). By increasing the age and having diploma educations or lower, the anxiety of the infertile women is greater. The infertile women are example of the ones of the society who are disposed to the psychological and personality damages. The lack of the feeling of the capability in the fertility and the common responses in the society laid the basis of many psychological pressures for this group (Fateme Behdani *et al.*, 2004).

By the improvement of the science and technology and the invention of new methods of treating infertility,

including the internal- of the uterus insemination of the sperm (IVF) and the outside of the uterus insemination (IVF) and Micro- Injection, although a window of the hope has been opened towards the infertile women, it requires to spend cost, time and psychic energy of the patients so that the patients abandon these methods after some attempt (Rojuei, 1997).

The employment of the behavioral- cognitive therapy includes the various methods of breathing muscular relaxation, cognitive reconstruction, biological feed back, regular desensitization, behavioral exercise, thought stop and during training have been suggested as one of the methods of the confrontation with the psychological problems (Rojuei, 1997; Kit, 2008; Saeedeh Motamed *et al.*, 2011; Mohammad Sourizaei *et al.*, 2011).

Anxiety is a universal, unpleasant and obscure agitation which is often accompanied by the signs of the automatic system (autonom), including headache, perspiration, tachycardia, feeling of the asthma in the chest and a little discomfort in the chest (Virginia Saduck & Benjamin Saduk, 2008). The basic anxiety disorder occurs without a precedent of the periods of the mixed mania or hypomania. The basic depression period must be lasted at least 2 weeks. It must have at least 4 signs of the list, including changes of the appetite and weight, changes of the sleep and activity, lack of the energy, feeling of the sin, complexity in the thinking and the relapsing thought of the death or suicide (Virginia Saduck & Benjamin Saduk, 2008).

The purpose of the depression is a score which the infertile women receive (acquire) on the basis of the katel anxiety test and the meaning of the depression is a mark they obtain a high (long) based on the depression test. The skills applies in the treatment of the anxiety disorders include: 1) Regular desensitization (Learning a new conditioned response) (muscular relaxation) which is in



contradiction with the previous conditioned response (fear, anxiety and phobia). 2) Reciprocal conditioning (the new response replaces with the previous learned response through conditioning. 3) The disgusting conditioning (a relatively inefficient procedure in which a disgusting stimulus is accompanied by the unpleasant behaviors and thoughts repeatedly. 4) Taken economy (The desirable behaviors with the tokens which are to be exchanged with other rewards reinforcement). 5) Flooding (client is exposed to very anxious stimulus swiftly and immediately). 6) The real and imaginary confrontation (the past situations are reconstructed and the person can experience them without the anxiety). Beck (1985) believes that preoccupation or mental occupation of the anxious individual against the risk factor is to be familiarized as a result of the unconscious and continuous effect of the automatic thoughts which are in form of the mental images or the verbal self-expresses and the contents of them are the mental or physical damage. The depressed individual experiences thoughts which are in opposition to the voluntary thoughts and accompanied, ever, by the feeling of the hopelessness, ineptitude, sinfulness, feud against the self and the tendency to get retribution for one's deeds (Dadstan, 1884). The cognitive-therapy method of the Aron (2008) was invented mainly for the treatment of the depression. According to him, the depressed individuals having the other commotional disorders concerned with the wrong and illogical thoughts accounting for their own complexities. These illogical thoughts include: a) Selective abstraction, b) Arbitrary inference, c) Overgeneralization, e) Exaggerate or represent something in large scale or under estimate, f) Privatization of the affairs.

The cognitive-therapy deals with the methods by which the individuals make judgment and decision. This therapeutic procedure is an organized shape of the psycho-therapy which has been designed in order to reduce the signs of the disease and assist the patient to learn the effective methods for the purpose of the confrontation which the complexities which make him discomfort or worry. The cognitive therapy is a procedure of the psycho-therapy based on the theory of the emotional disorders (Beck, 1976), the clinical and empirical studies (Beck, 2008; Blackburn *et al.*, 1995) and, also, the specific therapeutic techniques.

The objective of the behavior therapy is to modify/correct a series of the particular observable behaviors, including isolation and withdrawal, timid and not being engaged in the enjoyable activities which are the signs of the depression disorder and the therapist tries to learn the person how he can change these behaviors. The therapeutic methods and techniques include:

1. A-B-C training (regarding the causes and factors of the conflicts for the individuals).
2. Problem solving (inability to make a decision is one of the main specifications of the individuals affected by the

anxious disorders. The problem solving is a process by which a number of the alternatives put the effective potential response at the individual's disposal in order to face with a problem-like situation and, therefore, it raises the possibility of selecting the most effective behavioral alternative.)

3. Method of the muscular relaxation (it includes a group of the physiological changes: Reduction of the heart beats, decrease of the breathing process, reduction of the blood pressure, decrease of the rate of the skeletal tension, reduction of the rate of the skeletal tension, reduction of the rate of metabolism, oxygen consumption, decrease of the analytical thoughts, increase of the skin resistance, increase of the activity of their waves in the brain.)

After that the therapist trains the clients or refers to create themselves a state of the calmness or relaxation and made (corrected) the hierarchy of the anxiety, the desensitization begins. The regular desensitization commands that the referrers go ahead with the least anxiety in all stages.

### Hypotheses of the research

The main hypothesis: The behavioral- cognitive therapy is effective in the reduction of the rate of the depression and anxiety of the women.

The subsidiary hypotheses: The behavioral cognitive therapy is effective in the reduction of the rate of the depression of the infertile women.

### Method of research

It is an experimental method. The statistical society includes the entire infertile women who have referred to the Mehr infertility clinic in Rasht city within 4 months in 2010-2011. The statistical sample of this research is 30 infertile women who are separated from the statistical society randomly and divided into two 15- individual groups (Experimental and control groups).

The data collection in this research is of the random sampling. It is in such a way that, out of the referred infertile women, the Beck Depression test and the cattell Anxiety Test were conducted only in 300 individuals and 128 individuals obtained the high score both in the depression test and anxiety test. Then, 30 infertile women with the high anxiety and depression were selected and placed in two different experimental groups. The method of the behavioral cognitive therapy was executed for two experimental groups, but the control group received no therapeutic or training method.

The period of the therapy began from the half of the July of 2010 and hold for 3 consecutive months, a 90-minute session per week. The training was offered in 8 sessions.

After the execution of the independent variable, again, the depression and anxiety questionnaires were given to all two groups and, in this way, the required data were collected. The design of the research is in form of Two-



group- design of the pretest and post test compared to the control group as given below:

Re: T1	X1	T2
Rc: T1	-	T2

Tools of the research collection includes: *cattell* Anxiety Questionnaire, Beck Depression Questionnaire and the behavioral cognitive skills in form of the training package.

These *cattell* Anxiety and beck Depression questionnaires can be an appropriate scale for the separation and screening of the women with high depression and anxiety compared to the women with the least rate of depression and anxiety, after scoring. These tests carry out for each 300 individuals in the desired statistical society. The training of subjects for behavioral - cognitive therapy method includes: explanation regarding how to get away from the anxiety and depression; the creation of the positive self- expression; training of the muscular relaxation; and discussion regarding the objective analysis of the anxious behaviors and interpersonal skills, self - controlling, thinking stoppage and, also, biological feedback, each session subjects deals with them. These tasks were performed in each session and each subject individual practiced these actions in the home too.

The collected data were tested by Ankowa method using SPSS 18 software. The method of the analysis of the data and information is of the type of the descriptive statistics and perceptive statistics. With the aid of the diagram, average and standard deviation, the descriptive statistics was conducted, and by using the covariance analysis and SPSS 16 software, the perceptive statistic was carried out.

### Findings

There exists the linear connection between the auxiliary random variables and the dependant variable. The relationship between the auxiliary random variable and the dependant variable are similar in each three groups (Homogeneity of the regression). Considering these two case, the statistical method of the covariance analysis can be used.

On the basis of the results obtained from the Table 1 and after moderation of the average scores of the pretest for the quantity of (20/73) for the depression variable, considering the calculated F ( $p < 0/0005$ ),  $F = 220/089$ ,  $df = 1$  and 27 and  $Eta = 0/891$ , the calculated F is thus

significant in the level of 0/01 statistically because the significance level is smaller than (0/0005) As a result, it shows that the behavioral- cognitive therapy is effective on the reduction of depression.

On the basis of the results obtained from the Table 2 and after moderation of the average scores of the pretest for the quantity of (48/67) for the anxiety variable, considering the calculated F ( $P < 0/0005$ ),  $F = 326/990$ ,  $df = 1$  and 27, and  $Eta = 0/924$ , the calculated F is thus significant in the level of 0/01. Because the significance level is smaller than (0/0005) and this shows that the behavioral - cognitive therapy is effective on the reduction of anxiety.

### Discussion and conclusion

The results of the covariance analysis show that there exists a significant difference between two test groups who received the behavioral- cognitive therapy and the control group who had no treatment or therapy. Haydari *et al.* (2002) studied the effect of the behavioral- cognitive therapy on the 110 in fertile women but with the IVI therapy which the results led to the reduction of the anxiety. The current research also showed that the behavioral therapy leads to the reduction of the anxiety and is agree with the statements of the Haydari *et al.* (2002). With 110 subjects (55 fertile individuals and 55 infertile individuals), Rabizadeh & Karam Nuri (2002) found that the cognitive therapeutic method is the best method of the treatment because it concentrates directly on the consciously and intelligently thoughts and imaginations of the individuals. Also, the current research has reached to this point that the cognitive therapeutic method is the best method of the treatment in the depressed and anxious individuals (Rabizadeh, 2002). Our results also in tune with earlier report by Charaei (2004) who surveyed the role of the behavioral- cognitive trainings on the 60 ladies treated by the GIFT and ZIFT methods and found that the behavioral- cognitive therapy leads to the reduction of the stress in them which the result of the current research was the same one.

In a research, Manouchehri *et al.* (2006) dealt with the effectiveness of the behavioral- emotional cognitive group consultation on the mental health of the infertile ladies. The results have been suggestive of the efficiency of the therapeutic intervention on the decrease of the personality his order and thus the increase of the mental health of them which is in conformity with the current

Table 1. Covariance analysis between the rate of the anxiety on the basis of the behavioral cognitive therapy and control group

Source of changes	Total of square (ss)	Degree of freedom (df)	Average (MS)	F	Level of significance	Level of effect (Eta)	Test potency potential
Corrected model	743/412	2	364/117	110/174	0/000	0/891	1/000
Separator specific	23/558	1	23/558	7/128	0/103	0/209	0/730
Pretest	56/100	1	56/100	16/975	0/000	0/386	0/978
Groups	727/380	1	727/380	220/089	0/000	0/891	1/000
Error	89/233	27	3/305				
Total	7448	30					
Corrected total	817/467	29					

Table 2. Covariance analysis between the rate of the anxiety on the basis of the behavioral cognitive therapy and control group.

Source of changes	Total of square (ss)	Degree of freedom (df)	Average (MS)	F	Level of significance	Level of effect (Eta)	Test potency potential
Corrected model	2059/634	2	1029/817	117/4	0/000	0/929	1/000
Separator specific	28/110	1	28/110	4/844	0/000	0/152	0/565
Pretest	123/601	1	123/601	21/302	0/000	0/441	0/994
Groups	1897/337	1	1897/337	326/990	0/000	0/924	1/000
Error	156/666	27	5/802				
Total	51911	30					
Corrected total	2216/300	29					

research. Faramarzi (2007) compared the effects of the behavioral cognitive therapy with the effects of the Flokistin on the treatment of the reduction of the depression and anxiety of 89 infertile women. He indicated that behavioral - cognitive therapy is useful better than the Flokistin in the treatment.

Ramzanzadeh *et al.* (2008) expressed that the psychocognitive interventions is useful to reduce the depression of the infertile couples before receiving the treatment of the infertility which confirmed so in our study. With two separate studies Dumar (1990 & 1992) reported that the anxiety of the infertile ladies reduces significantly by IVF. Coikel *et al.* (2004) expressed that therapeutic-cognitive method in the infertile women causes that the bilateral relationships result from among the psychocognitive agents and infertility. Limence *et al.* (2004) expressed that the mind- body groups which are almost similar to the therapeutic cognitive methods which can reduce the tension and hope of having the child in the infertile women.

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