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Patient Satisfaction with Treatment Method: A Determinant of the Efficacy of Cognitive Behaviour Therapy Compared with Psycho-pharmacological Intervention Therapy

Abdollah Alizadeh[1*], Maryam Mokhtarzade[2] and Parastoo Damercheli[3]

[1]Department of Counselling and Psychology, Islamic Azad University, Islamshahr Branch, Islamshahr, Iran.
[2]Department of Counselling, Islamic Azad University, Khomein Branch, Khomein, Iran.
[3]Faculty of Education, Shahid Beheshti University, Iran.

Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

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Original Research Article

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ABSTRACT

The first aim of the research was to compare the Cognitive Behavior Therapy (CBT) with psychopharmacological intervention (PI) and to find out its effectiveness on Iranian women with Anxiety disorders (general anxiety disorder GAD, obsessive compulsive disorder OCD, social anxiety disorder SAD). The second one was to investigate which treatment satisfies the patients more. The sample consisted of 300 women from 18 to 45 who referred to counseling and mental health centers and private offices in Islamshahr city (Tehran state). They were divided into two groups: 1) One group with three disorders (GAD, OCD and SAD) referred to CBT. 2) The other group with the same disorders received PI. PI course lasted for at least 6 months and the total number of sessions for the CBT group was 12 to 16 (held every week). Primary diagnosis interview

**Corresponding author: E-mail: aa1347@live.com;*

was on the basis of DSM-4-TR 2000. Then the Symptom Checklist-90-Revised (SCL90-R) test and the Jones' irrational beliefs test (IBT) were performed in separate sessions. Research method was the quasi-experimental one with pre-test and post-test. The present study findings points out that the patients obtain more satisfaction from CBT than the other treatment. The patient' satisfaction on was measured by an inventory at the end of treatment course. As we saw in this research, those patients who received CBT tended to introduce this method of treatment to others more than the other group and they were very satisfied with this method.

Keywords: Cognitive behavior therapy; psychopharmacology; anxiety disorders.

1. INTRODUCTION

Anxiety disorders are the most common mental disorders in the world, affecting as many as 40 million people in the US. Also more than a quarter of the Australian population has experienced a kind of anxiety disorder in their lifetime, but less than 40% of individuals affected by these disorders have sought treatment for their symptoms. The most commonly occurring anxiety disorders include generalized anxiety disorder, panic disorder, specific phobia, social phobia (with or without agoraphobia), post-traumatic stress disorder, obsessive-compulsive disorder, and illness anxiety disorder. These disorders are marked by excessive fear, anxiety, and associated avoidance behaviors, but are distinguished from each other by the types of objects or situations that induce fear or avoidance. Anxiety disorders are marked by persistence, rather than transient fear or anxiety, and tend to have their onset in childhood or adolescence.

Anxiety disorders are often disabling and torturous, and the patients suffer tremendous difficulties in multiple life areas (e.g., occupational, social, interpersonal, academic). "Anxiety disorders cost the U.S. more than $42 billion a year, almost one-third of the country's $148 billion total mental health bill, according to "The Economic Burden of Anxiety Disorders," a study commissioned by ADAA (*The Journal of Clinical Psychiatry,* 60(7), July 1999)."

GAD is characterized by at least 6 months of prominent tension, worry, and feelings of apprehension surrounding Everyday events and problems coupled with symptoms and associated with autonomic arousal. Social phobia disorder (SAD)/SP is characterized by a persistent and debilitating fear of social situations in which the individual may be exposed to scrutiny by others. OCD, classified under the obsessive-compulsive and related disorders in DSM-5 is defined by unwanted and intrusive obsessions and/or compulsions aimed at preventing or reducing anxiety or distress, or averting feared events or situations.

Psychopharmacological intervention (PI) and cognitive behavioral therapy (CBT) are both effective in the treatment of anxiety disorders. Overall, PI and CBT are equivalent in terms of treatment outcomes, but adherence to CBT appears to be higher, possibly due to the unwanted side effects of PI. PI doesn't seem so effective because of its side effects and also some of patients consider it as stigma or something unpleasant. Sometimes the treatment period is so long that patients don't follow their drug prescription so seriously and fall into some kind of helplessness.

Whilst there are various other psychological treatments available for anxiety disorders, CBT has the strongest supporting evidence. As a result, CBT has emerged as the initial treatment of choice for patients with anxiety disorders. CBT is an umbrella term for various treatments that focus on challenging cognitive biases (through cognitive restructuring) and behaviors (i.e., through graded exposure and relaxation training) that perpetuate the anxiety cycle.

CBT represents an integration of schools of psychotherapy, most notably BT and CT. CBT maintains an empiricist tradition and strives for clinical sensitivity with empiric soundness. Depression*:* CBT has been shown to be effective in treating patients with dysthymia and chronic major depressive disorder, although responses have been somewhat smaller than when these modalities are used to treat patients with major depressive disorder [1]. In two decades since it was first evaluated as a treatment for major depressive disorder, CBT has been extensively studied in over 80 controlled trials and the effect sizes for CBT compared to no treatment or minimal treatment have been fairly robust [2]. Some Meta analyses have concluded that effect sizes for CBT are larger than pharmacotherapy

[3,4]. whereas others suggest that they are equally effective). In the NIMH – TDCR study, CBT was observed to be less effective than imipramine plus clinical management among individuals with severe depression and CBT was also found to be less effective than interpersonal therapy, (IPT).

Anxiety Disorders: Psychotherapies involving cognitive and Behavioral procedures have been established as EST's for anxiety disorders. *GAD:* Borkovec and Costello [5] found that CBT was significantly superior to non-directive therapy at post-test and one-year follow-up. Overall, meta-analytic literatures most strongly support the effectiveness of CBT for GAD [6]. *Panic Disorder:* Treatment using CBT have demonstrated efficacy in the treatment of panic disorder with or without agoraphobia [7] Seven meta analytic reviews of panic disorder studies have appeared in the past 10 years, and all of them support the efficacy of CBT [8]. Obsessive Compulsive Disorder: Numerous studies conducted in various centers around the world have established Exposure & Response Prevention (ERP) as highly efficacious therapy for OCD (Franklin et al, 2000). Fals– Stewart, Marks and Schafer, [9] found that both a group and individual version of ERP outperformed a relaxation training control. Abramowitz et al. [10], conducted an updated Meta analytic study that focus exclusively cognitive Behavioral therapy for OCD and found that ERP was a stronger treatment than *CT* in comparison to no treatment. Substance Use Disorders: There is abundant evidence that CBT aimed at improving self-control and social skills consistently lead to reduced drinking [11]. Motivational enhancement therapy, based on cognitive behavioral, client centered systems and social - psychological persuasion techniques, was shown to have positive effects in eight of nine controlled studies [12]. Schizophrenia*:* Controlled studies of CBT have reported benefits in reducing positive symptom severity in schizophrenia [13]. In a review of three studies, Rector and Beck [14], reported a large aggregated effect size favoring CBT over supportive therapy. for reducing negative symptoms in schizophrenia patients.

The gained changes as the result of CBT in patients were associated with a positive attitude and satisfaction of the treatment in comparison to those of PI. These findings are in accordance with other researches findings with the same issue. Kat and his colleagues showed that drug therapy for high blood pressure is not just sufficient to improve the patients' life quality and the use of psychological approaches is necessary. The reason to such claim is that most patients with major hypertension that don't have the clear illness symptoms and long-term and even life-long taking of anti – hypertensive drugs such as Atenolol, Cilazapril, Verapamil, Propranolol in a long time makes the patients' attitude to themselves negative. Therefore, drug therapy just has a positive effect on decreasing hypertension and could not change patients' negative attitude to their own illness and remove the negative role of the illness; but CBT could have a positive effect on improving the patients' life quality beside drug therapy. One of the things that predict the success of the treatment and decrease the severity and negative effects of the illness is to implement the therapeutic recommendations and it could be only achieved through CBT.

Although people and doctors spend a lot of energy and time on diagnosing the illness, most of the patients with chronic illnesses don't follow the recommended therapeutic diet and ignore it. The reason is that they become exhausted of long-term therapy and get disappointed of the certain treatment. In Najmi [15] and his colleagues investigated the effectiveness of the CBT on the observation of medical recommendation in one of the chronic illnesses (the effectiveness of the multifaceted psychological treatment on the diabetic- type I - patients' recommendation implement) The research results showed that psychological actions have positive effect on the process of the use of medical services such as decreasing treatment charges, increasing the patients' collaboration and improving their implement of the doctors' recommendation. The result also showed that performing psychological intervention by focusing on the attribution styles reform, challenge with IB_S, relaxation, teaching problem solving, meditation, bio-feedback, conducted mental imagination and teaching confrontation skills is one of the therapeutic approaches based on the CBT. It could help not only relieve the negative emotional effects of the chronic illnesses, but also increase the patients' recommendation implement.

1.1 The Aim of Research

The first aim of the research was to compare the Cognitive Behavior Therapy (CBT) with psychopharmacological intervention (PI) and to find out its effectiveness on Iranian women with

Anxiety disorders (general anxiety disorder GAD, obsessive compulsive disorder OCD, social anxiety disorder SAD). The researcher's purpose was to look for the relationship between the irrational beliefs and anxiety disorder and to see if PI has the favorite effect on decreasing them in comparison to CBT.

1.2 Object of Research

Object of the research was Iranian women with anxiety disorders, especially GAD, ASD&OCD who referred to mental health center, and private office to be treated with CBT and PI in 2010 and 2011. The total number of the sample was 300 women: 100 of them with OCD, 100 with GAD and 100 with SAD. It is appropriate to mention that each of these groups was divided into two groups: one of them received CBT by a psychologist and the other one received PI by a psychiatrist. The individuals' ages were between 18-45. Their education Varied from diploma to Bachelor of Science. Almost all of the patients were married. Their social class was almost the same.

1.3 Hypotheses

There will be a statistically significant effect of satisfaction with treatment on the result of the treatment methods.

2. METHODS OF RESEARCH

The study was quasi – experimental method with pre-test and post-test. Participants were tested by the SCL90-R, IBT before the start of treatment, and also at the end of the treatment, *satisfaction inventory of treatment* was answered by each of them in addition to tests (SCL90-R & IBT). Then, each group separately and individually was exposed to the independent variables. PI Group (150 people) referred to the psychiatrist to take the medicine (every month for a year) while CBT group (150 people) received each week one-hour session of therapy. The number of treatment sessions for the CBT group was 12 to 16 sessions. Different techniques were used in CBT according to diagnosis of the therapist. Theoretical background of the therapy of anxiety disorders, especially SAD, OCD, GAD, was straight from the findings of experimental psychology and behavioral therapy techniques, especially Wolpe and Lang's work on a systematic desensitization. This treatment is based on the premise that most abnormal behaviors are learned, so the learned behaviors could be for gotten. Every patient was asked to have a frequent contact with scary situations and objects, and continue the exposure till the reduction of the fear becomes transparent. The exposure breaks the vicious circle that preserves the symptoms of the disorders, and facilitates a new learning.

For example, treatment for SAD included exposure and response prevention, systematic desensitization, modeling, or an active participation, and Ellis' REBT method like attack to shame.

For OCD these methods were used: response prevention, interrupting thoughts "stop it", habituation, exposure with fear situations, refusing of the performance of rituals, aversion therapy and also we appointed a member of family as a co-therapist.

For GAD these methods were used: cognitive restructuring techniques, relaxation, positive self-talk, and metaphor.

They could know their irrational beliefs during the first sessions and identify the activating events (A), then discover the reaction and beliefs in response to these beliefs (B) and in the end imagine the consequences(C). After this process, the clients learned the dispute method with the irrational beliefs (D). Eventually, they could make questions about their irrational beliefs in an effective way (E). We worked with these three groups with the same method. In general, these sessions lasted for approximately 6 to 8 sessions.

2.1 Medication Dosage

Inscribed drug for OCD was (Fluoxetine 20 mg/day).

Inscribed drug for SAD was Paroxetine, at a dose of 20 mg was started, and after at least two weekly 10 mg was increased up to 50-60 mg daily.

Inscribed drugs for GAD was Paroxetine, a starting dose of 20 mg daily, with weekly increases of 10 mg and the maximum dose was 50 mg.

Finally, the results of the research were analyzed through the descriptive statistics and inferential analysis with SPSS software.

The used instruments tools in the research and their validity and reliability:

Mentioned before, two tests and an inventory were used, one of them was Jones' IBT which assessed irrational beliefs and thoughts and the other one wasSCL90-R which used to assess the patients' mental health.

The SCL-90 is one of the most used tests in diagnosing psychological problems. It is a self-report questionnaire originally oriented towards symptomatic behavior of psychiatric outpatients and it is reviewed on the clinical experiment of psychometric analysis and its final form was provided in 1976. It is intended to measure symptom intensity on ten different subscales that are as follow:

1. Somatization (12 questions)
2. Obsessive compulsive (10 questions)
3. Interpersonal sensitivity (9 questions)
4. Depression (13 questions)
5. Anxiety (10 questions)
6. Hostility /aggression (6 questions)
7. Phobic anxiety (7 questions)
8. Paranoid ideation (6 questions)
9. Psychoticism (10 questions)

And a category of "additional items" (Table 1) helped clinicians in their assessment of other symptoms such as poor appetite, sleep disorder, thoughts about death and feeling guilty. After performing the test, their scores were assessed in one of the subscales and then their profile was drawn based on their scores and was interpreted by a psychologist. The 90 items of the questionnaire were scored on a five-point Likert scale, indicating the rate of occurrence of the symptoms during the time of reference (0=not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, 4 = extremely). The SCL-90 normally requires between 12 and 20 minutes to complete [16]. A lot of research has been done to find normality.

Table 1. Additional questions

Question number	Symptom
19	poor appetite
60	over eating
59	thoughts of death or dying
44	troubles falling asleep
64	awaking early in the morning
66	sleep that is restless or disturbed
89	feeling of guilt

Additional Questions: There are 7 questions in this test that are not categorized under any of the 9 items. These questions have clinical importance and the tendency toward them is that they are used collectively.

3. RESULTS

Three indices can be obtained

1. GSI the global severity index is obtained by averaging the scores over the total number of answered items. It is the best sign of the depth or intensity of the distress at the present and we should use it whenever we need a brief measurement. It also shows the number and the intensity of a distress.
2. PST, the Positive Symptom Total, is the total number of items with non-zero responses. Simply, it is the number of the symptoms that a patient report positively, those symptoms that a patient knows that he / she has them.
3. PSDI the Positive Symptom Distress Index is the sum of the non-zero scores divided by the PST. A pure measurement of the intensity of distress. It is a corrected measurement for the number of the symptoms.

Reliability measures on SCL-90 are of two types, internal consistency and test retest.

Internal consistency coefficients (Cronbach's α) have been reported for the SCL-90 subscales and global indices across such different populations as control groups, psychiatric in-patients, and substance abuse in-patients [17] as well as cancer patients [18]. The internal consistencies have been good for example, coefficient α in a study with 209 symptomatic volunteers ranged from 0.77 to 0.90.

Stability coefficients (test-retest reliability) for the SCL-90-R have generally been adequate across a range of patient groups and test-retest intervals. A study with a test-retest interval of 1 week for 94 mixed psychiatric out-patients had a range of 0.78–0.90 a second study with a 10-week interval between tests had correlation coefficients ranging from 0.68 to 0.80 [16].

Marashi [19] has reported a range of 0.80 -0.93 by using the dividing method and (Cronbach's α). Also, Rezapor (1990) has calculated a range of 0.68-0.81 by the use of the test-retest. Mosavi (1992) has also reported a range of 0.64-0.89 for

different aspects of this test with the use of dividing method and a range of 0.57-0.85 with the use of Cronbach's α [20].

The method of performing and scoring: This questionnaire could be performed by a psychiatrist or a clinical interviewer. It could be performed in 12 –15 minutes, but the meticulous people may complete it in 30 minutes or more. This test assesses an individual's status from a week before until now. The test scoring is so simple and includes the adding and dividing up to two decimal points. Each question gets a score from 0 to 4 depending on the given answer.

To score the 9 scales, first the obtained scores of a scale are added and then are divided into the number of the questions. For example, in the case of somatization complaints a patient can obtain a score from 0 to 48.

3.1 IBT (Test)

Irrational beliefs play a central role in cognitive theory and therapy; they have been shown to be related to variety of disorders such as depression and anxiety. Irrational beliefs, which can be accessed via clinical interviewing techniques, are frequently assessed by self-report measures; both clinically and for research purposes. Much of the research demonstrating the effects of irrational beliefs has utilized such measures.

Lohr and Parkinson reported that the IBT demonstrated positive correlations with measures of anxiety and depression. Woods argued that a modified IBT could be useful; he identified 47 IBT items that measured beliefs and found that those items were related to emotional distress, psychosomatic symptoms, and suicidal contemplation.

This test was developed by Jones in 1968. This test consists of ten scales in which each scale includes ten questions based on Likert 5- degree scale one the testees (subjects) checks off (sets) his agreement or disagreement according to determined scales. The total score of IBT lies in the range of 100 to 500; low scores suggest rational and effective beliefs and high scores show irrational and unreasonable beliefs of the subjects (testes). The amount of scores in each scale suggests the degree of irrational belief of the tastes; that is, the less the score, the less irrational beliefs and the more the person's score, the higher their irrational beliefs. To obtain the total score, finally the person's score was added up in various phrases (sentences)

4. DISCUSSION

4.1 The Reliability and Validity of IBT

Jones reported the reliability of test retest at 92%, one reliability of each of the its ten sub – scales was at 66% to 80%and reliability mean for all sub - scales was obtained at 84%. The validity of IBT test by its correlation with logical behavior test, equals - 71%. The correlation of this test with Beck Depression Interview Test was 77% which was significant at 99% [21], reported that the coefficient at reliability test on 106 samples of Allameh Tabatabaie (in Iran) students by using Cronbach's Alfa was 71%. Its context reliability has been approved by many psychologist professors, advisors and in various domestic studies.

The IBT was developed and designed by Jones to measure the amount of agreement respondents have with each of Ellis' ten irrational beliefs. The test consists of l00 Likert-type items, ten per each belief. Jones reported internal consistency estimates for the individual scales ranging from 66 to .80, a test-retest reliability coefficient of .92, and a concurrent validity coefficient of 6l obtained with ratings of psychiatric problem.

Statistical description of variables: In the next table the mean, the standard deviation and the quantity and quality of the research main variables have been shown for three groups of patients in two treatment methods. The total score range of irrational beliefs (IB_s) are in the spectrum of 100 to 500 and each of their subscales is in the spectrum of 10 to 50. The score range of SCL-90 R is in the spectrum of 0 to 360 and each of its subscales is on the range of 0 to 4.

4.2 Statistical Analysis

Table 2, statistics description of the pretest and posttest scores of the disorders symptoms for each group of disorders and treatments.

Regarding the above table, it is observable that IB_s mean of GAD for CBT group has decreased from 337 in the pretest to 220.10 in the post test. Also, the mean of SAD has decreased from 326.22 in the pretest to 208.84 in the posttest.

For OCD the mean of CBT group has decreased from 334.84 in the pretest to 208.84 in the posttest.

Also for PI group, IB_s mean of GAD has reached from 334.84 in the pretest to 327.84 in the posttest. The mean of the SAD patients has reached from 326.48 in pretest to 334.44 in the posttest. In the OCD the mean of IB_s has reached from 333.62 in the pretest to 337.68 in the posttest.

Descriptive statistics of the disorders symptoms in three groups of patients have been separately presented regarding the pretest and posttest in the Table 3.

The Table 2 shows that the mean of disorder symptoms for GAD patients has changed from 172.89 in pretest to 89.95 in the posttest. Also, the mean of the disorder symptoms for SAD patients has changed from 176.59 in the pretest to 86.37 in the posttest. The mean of the disorder symptoms for OCD patients has decreased to 86.37 in the posttest from 176.16 in the pretest.

Also, for the PI, the mean of the disorder symptoms for GAD patients has decreased from 169.77 in the pretest to 103.65 in the posttest. The mean of the disorder symptoms for SAD patients has decreased from 173.25 in the pretest to 101.49 in the posttest. The mean of the disorder symptom for OCD patients has decreased from 174.49 in the pretest to 105.90 in the posttest.

Table 2. Statistical description of pretest and posttest scores of IB_s for each disorder in two treatment methods

Groups	Anxiety disorders groups	Statistics	No	Mean	SD	MIN	MXI
CBT	GAD	Pretest	50	337.00	28.85	279	411
		Posttest	50	220.10	19.28	176	255
	SAD	Pretest	50	326.20	39.95	249	458
		Posttest	50	208.74	16.37	176	238
	OCD	Pretest	50	334.84	34.51	268	425
		Posttest	50	208.74	16.37	176	238
PI	GAD	Pretest	50	335.72	30.25	271	408
		Posttest	50	327.84	39.66	248	456
	SAD	Pretest	50	326.48	39.96	249	458
		Posttest	50	333.44	35.24	249	425
	OCD	Pretest	50	333.62	35.25	249	425
		Posttest	50	337.68	29.83	272	407

Table 3. Statistics description of the pretest and posttest scores of the disorders symptoms for each group of disorders and treatments

Groups	Anxiety disorders groups	Statistics	No	Mean	SD	MIN	MXI
CBT	GAD	Pretest	50	172.89	8.77	158.89	191.78
		Posttest	50	89.95	6.41	75.56	104.11
	SAD	Pretest	50	176.59	4.88	165.11	187.78
		Posttest	50	86.37	5.11	75.67	95.89
	OCD	Pretest	50	175.16	4.76	163.11	185.33
		Posttest	50	89.75	6.28	78.56	109.11
PI	GAD	Pretest	50	169.77	7.41	155.22	183.78
		Posttest	50	103.65	6.53	83.89	114.89
	SAD	Pretest	50	173.25	4.67	160.22	184.33
		Posttest	50	101.00	6.94	84.56	121.11
	OCD	Pretest	50	174.49	6.30	162.11	187.78
		Posttest	50	105.90	6.61	91.78	119.11

In Graph 1, the adjusted means for three groups of anxiety disorders and for two methods of treatment have been illustrated.

In Graph 2, the adjusted means of the disorder symptoms for three groups of anxiety disorder and two groups of treatment have been shown.

The Graph 2 shows that the adjusted mean for disorders symptoms in the CBT is lower than that of the PI and this difference is meaningful.

4.3 Treatment Satisfaction Questionnaire

Usually in our society, the patients who refer to the counseling and psychotherapy centers answer the satisfaction questionnaire. This questionnaire is performed to measure their satisfaction of the method of treatment. But it is not common for psychiatrists' patients and the decrease of the symptoms is enough for the psychiatrist. Opposed to the usual norm, we decided to measure their satisfaction of the method and compare it with the CBT group. This test has already been standardized by the scientific and statistical methods for the studied society. We had piloted the test before its performance on these two groups and analyzed the gained results by the appropriate statistical methods and the result is as follow.

This is a kind of questionnaire made by the researcher. It consists of 10 questions with 5 parts that pays attention to different aspects and its findings with three groups of treated patients.

In order to decrease the validity problems, we used a pilot test in our research. To achieve this goal, after making the initial questions, we asked 20 native Persian speakers who had the psychotherapy and psychopharmacological treatment background to read it and mention the probable ambiguity of the questions. They confirmed its fluency and coherence. And it was standardized by SPSS. At the end, it was performed on every client. In general, its goal was to measure the patients' attitude to the method of treatment and show their satisfaction and dissatisfaction of the treatment. It is clear that most people still are afraid of referring to the psychiatrist and psychologist; and in some societies their attitude is more negative especially when medical therapy is offered.

Sometimes people getting PI may face with social withdrawals such as employment difficulties in some special jobs, receiving driving license, or some other social problems like marriage. Psychological documents are the most major problem with these patients even if it is not about a serious disorder.

However, our sample was 300 people that 20 persons decreased (mortality experimental); but new patients were replaced because the treatment course was long and the research finished with the number of patients that was the researcher's goal.

In the following part the questionnaire aspects are offered.

1. Feeling satisfied of gaining the goals
2. Feeling satisfied of the treatment process
3. Selectivity of the treatment to disorder
4. Being active during treatment
5. Feeling satisfied of the factors
6. The fear of treatment
7. The patient's attitude toward the therapist's devotion of enough time to his problem
8. Introducing the treatment to others
9. Negative attitude toward the treatment aspects
10. Fear of social limitations in the future

Method of the scoring of treatment satisfaction inventory:

This questionnaire consists of ten questions in which each question has 5 scales based on Likert 5-degree scale, one the testes (subjects) check off. The total score of it lies in the range of 10 to 50; in some of questions, low scores suggest the more satisfaction and the low concern; while in some of them, high scores show the more satisfaction of the subjects (testes).

For example, in the following question, the high score (5) is the sign of more satisfaction.

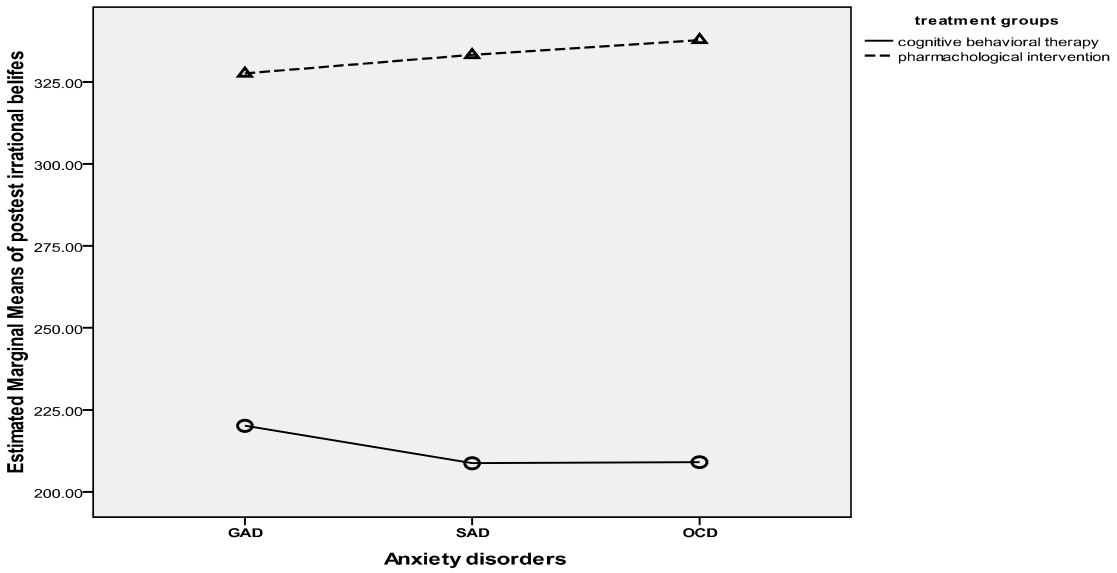
1) Have you achieved what you expected of the treatment as we are getting to the end of its course now?

Completely (5) Very much (4) partly (3) No (2) Not at all (1)

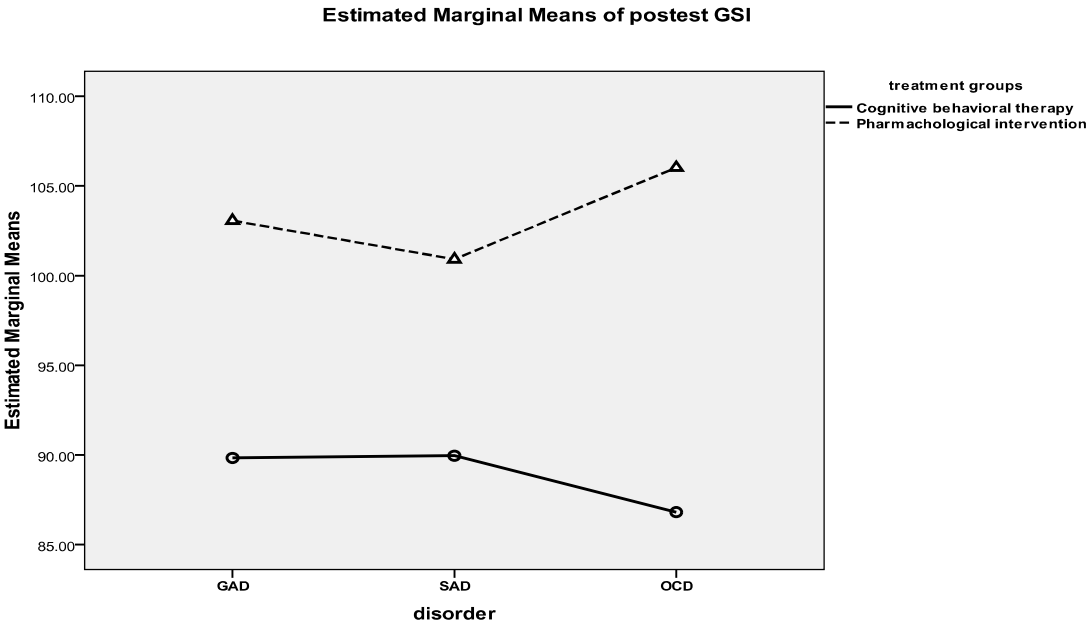
The goal of satisfaction of treatment questionnaire was to survey the reality and stability of the research results. Difference between the groups was investigated performing one-way and two-way covariance analysis test on two treatment groups, three groups of patients

with disorder and the interaction of treatment and disorder. At first, the mean and the standard deviation of 10 subscales of satisfaction of treatment for each group and then the graph of the subscales for each of three disorders and two treatment methods are presented.

Observing the Table 4 and Diagrams 1, 2 and 3 the means of three subscales of fear of treatment method, negative attitude toward treatment and fear of social limitation (negative aspects of a treatment method) in CBT group for OCD, SAD &GAD are lower than those of PI group.



Graph 1. The adjusted means of IB_S for each treatment method and for three groups of patients with anxiety disorder



Graph 2. The adjusted means of disorder symptoms for two groups of treatment and for three groups of patients with anxiety disorder

Table 4. The mean and standard deviation of subscales of satisfaction of treatment for each kind of treatments and disorders

		Satisfaction of the treatment method (inventory)																			
		1-Feeling of satisfaction of gaining the goals		2-Feeling of satisfaction of the treatment process		3-Selectivity of the treatment to disorder		4-Being active during treatment		5-Feeling of satisfaction of the factors treatment		6-The fear of treatment		7-The patient's attitude toward the therapist's devotion of enough time to his problem		8-Introducing the treatment to others by the patient		9-Negative attitude toward the treatment aspects		10-Fear of social limitations in the future	
	Group	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M
CBT	GAD	0.47	4.68	0.49	4.66	0.53	4.62	0.44	4.74	0.57	4.56	0.98	4.42	0.49	4.42	0.48	4.36	0.62	1.32	0.59	1.34
	SAD	0.79	4.24	0.77	4.12	0.53	4.60	0.71	4.52	0.79	4.46	0.79	4.42	0.49	4.42	0.48	4.36	0.63	1.32	0.59	1.34
	OCD	0.81	4.14	0.78	4.04	0.53	4.60	0.71	4.52	0.79	4.46	0.78	4.42	0.49	4.42	0.48	4.36	0.62	1.32	0.48	1.34
Pi	GAD	0.63	3.16	0.99	3.14	0.99	3.02	0.89	2.50	0.76	2.30	0.99	1.72	0.73	1.72	0.81	2.46	0.94	2.36	1.01	3.64
	SAD	0.74	2.94	0.99	3.14	0.99	3.04	0.88	2.44	0.71	2.22	0.99	1.70	0.71	1.70	0.81	2.46	0.97	2.32	1.07	3.70
	OCD	0.74	2.94	0.34	1.04	0.32	0.80	0.44	0.82	0.35	0.82	0.32	1.70	0.71	1.70	0.81	2.46	0.97	2.32	1.07	3.70

Table 5. One-way, two-way covariance analysis and F relations for interactional effect of treatment and disorder *p≤0.05, **p≤0.01

		MANOVA		ANOVA									
Groups		F	Eta^2	Feeling of satisfaction of gaining the goals F(1,96)	Feeling of satisfaction of the treatment process F(1,96)	Selectivity of the treatment to disorder F(1,96)	Being active during treatment F(1,96)	Feeling of satisfaction of the factors F(1,96)	The fear of treatment F(1,96)	The patient's attitude toward the therapist's devotion of enough time to his problem F(1,96)	Introducing the treatment to others by the patient F(1,96)	Negative attitude toward the treatment aspects F(1,96)	Fear of social limitations in the future F(1,96)
Type of treatment	treatment (CBT)a	417.77**	0.94	270.48**	198.99**	282.24**	577.66**	718.88**	236.19**	245.40**	603.86**	116.76**	596.89**
	PI b	2.66**	0.08	8.56**	14.96**	0.02	1.11	0.513	2.02	0.01	0.00	0.02	0.02
CBT*PI.PH		0.85	0.03	1.35	3.80*	0.02	0.36	0.01	2.44	0.01	0.00	0.02	.23

Attention: Multivariate F relations have been obtained from Wilks' lambda distribution MANOVA= multivariate covariance analysis, ANOVA=univariate covariance analysis, a= df (10285) = MANOVA

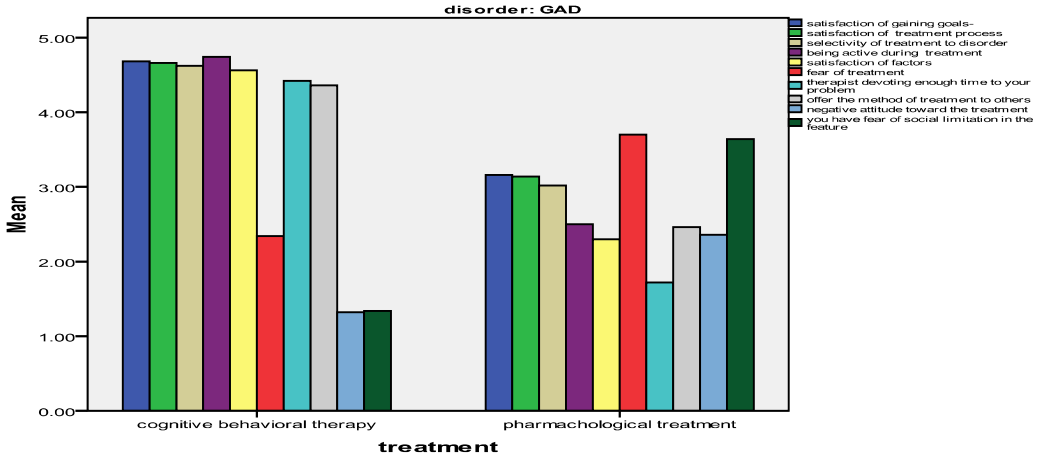


Diagram 1. The means of the subscales of satisfaction of treatment in GAD

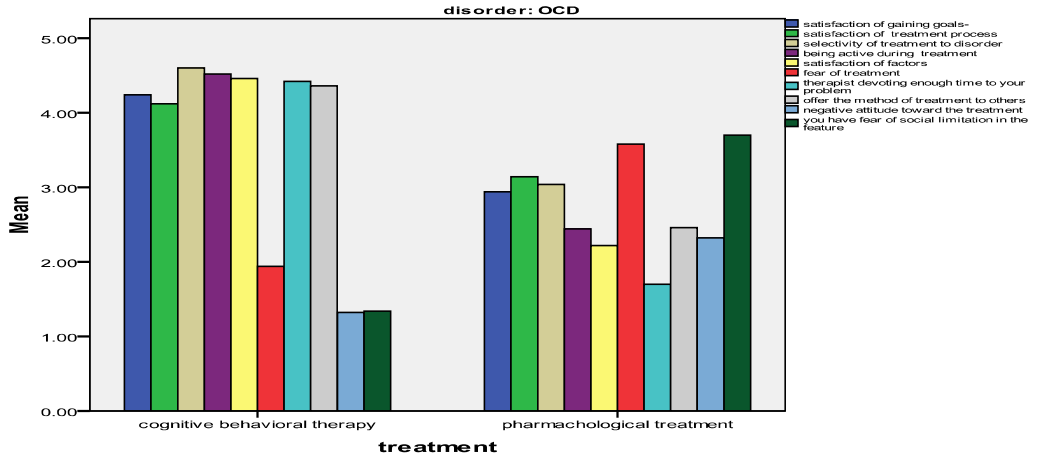


Diagram 2. The means of the subscales of satisfaction of treatment in OCD

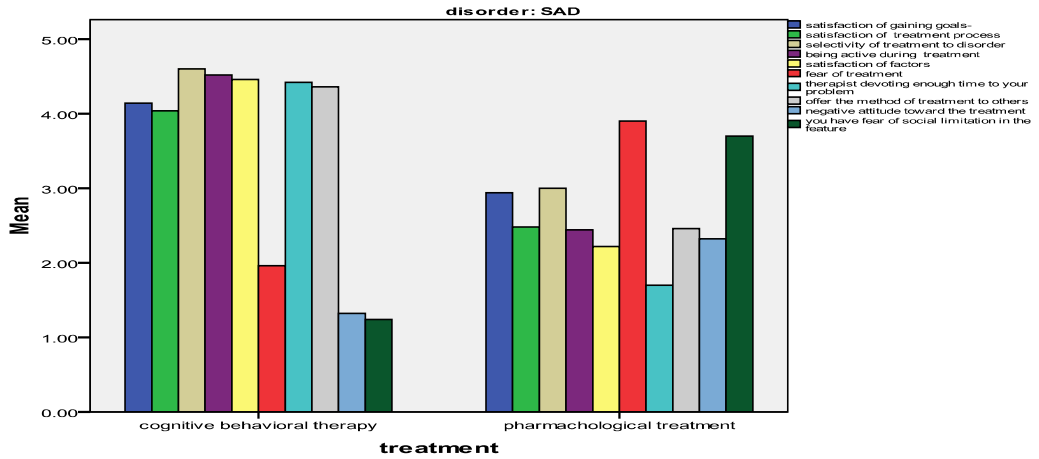


Diagram 3. The means of the subscales of satisfaction of treatment in SAD

5. SUMMARY

Main object of the study is reviewing the comparison between two methods of treatment (PI &CBT) on anxiety disorders (GAD, SAD & OCD) of the Iranian women. Also, we wanted to know which method associates with more satisfaction of the patients who participated in the study. And does it have a role in the effectiveness of the treatment method? The study has showed that satisfaction from the method of treatment can affect the result.

6. CONCLUSION

Table 5 shows that there is a significant difference between the means of total 10 subscales of satisfaction of treatment in two treatment groups. It could be seen that the means of gaining goals, satisfaction of treatment, selectivity of treatment to disorder, being active during treatment, satisfaction of factors, attitude to the devoted time and suggesting it to the others in CBT in 0.01 level is significantly high compared with the other treatment. In contrast, with 99% confidence the means of fear of treatment, negative attitude toward treatment and social limitations in PI group are higher than the CBT ($p<0.01$).

Table 4 shows that the means of two subscales (satisfaction of treatment process & satisfaction of gaining the treatment goals) for GAD are high compared with the means of the other disorders.

In contrast, generally the interaction of treatment method and disorder doesn't have a significant difference and just there is a significant difference in the subscale of satisfaction of treatment process between three groups of patients with anxiety who were treated with CBT and the other three groups of patients who were treated with PI ($p<0.05$). So the mean of satisfaction of treatment in GAD group that has undergone the CBT is greater than the patients in the PI. Therefore, the result of the satisfaction of treatment questionnaire confirms the result of posttests of irrational beliefs and symptoms.

In general, it could be said that PI has an effect on the patients' physical symptoms whereas CBT mainly affects the thoughts, beliefs, and anxiety impulses and disorders symptoms. Thus, these two treatment methods in many cases are necessary and interdependent. The second objective was to determine whether both treatment methods reduced the irrational beliefs and unhealthy thoughts or not? Statistical analyzes showed that PI does not have any effect on the reduction of irrational beliefs but instead CBT reduced the irrational beliefs.

The third aim, specially the main one was to find out which therapy is associated with great satisfaction and if the satisfaction of treatment affects the outcome or not? As the statistical findings (tables and graphs) showed CBT brings about more satisfaction than PI. This study confirms the hypothesis clearly.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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