

# The Study of the Effect of Cognitive-Behavioral Therapy (CBT) on Reducing Methadone Consumption and Increasing Self-Esteem in Drug Addicts

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## Abstract

The purpose of this study is to determine the effectiveness of cognitive behavioral therapy (CBT) in reducing methadone consumption and increasing self-belief in addicted to substance people. This study is in terms of the objective of applied research and from the developmental branch and in terms of nature and method it is a quasi\_experimental research. The study population of this study includes all clients of methadone clinic of razi hospital in qaemshahr. The sample consisted of 30 subjects selected through targeted sampling available were divided into control and experimental groups, who referred to methadone clinic at razi hospital in Qaem-shahr during the study period. Data collection tool was a standard and researcher-made questionnaire. Franken's Methadone Consumption Reduction Questionnaire (2002) and Self-confidence researcher-made questionnaire, which reliability was calculated to be 0.94 and 0.74 respectively, using Cronbach's Alpha. Spss22 software was used to analysis the research hypotheses and data from the questionnaire. The data analysis method has been descriptive and inferential statistics (Kolmogorov-Smirnov, Levine, T2 and covariance test). The result of this study has been shown that cognitive behavioral therapy (CBT) is effective in reducing the consumption of methadone addicts. Cognitive behavioral therapy (CBT) increases self-belief in addicted people.

**Keywords:** Cognitive behavioral therapy, methadone, self-belief

## Introduction

Addiction is a complex disease characterized by characteristics such as compulsive behaviors, irresistible temptations, drug-seeking behaviors, and persistent consumption even when there are many negative consequences for the individual. Continued use of substances over time and long-term toxic effects of its consumption on brain function have led to a wide range of behavioral, psychological, social and physiological abuses that prevent the behavior and normal behavior of addicts in the family, the workplace and at a wider level <sup>(1)</sup>.

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In society most addicts often leave the drug during adolescence, but after a while, they turn back to addiction. Addressing the psychological problems of addicts including self-esteem, self-esteem, accountability, and social and family problems is a direct link to the abandonment of addiction. Three-quarters of those who complete the course of relapse have relapsed within one year of completing the treatment. Therefore, it is essential to develop programs for treatment, reduction and prevention of it <sup>1</sup>. It should be noted that the provision of non-medical treatments, as well as lifestyle modifications and social support, are essential for comprehensive treatment and with sustainable outcomes. Clinics working in methadone-based therapies should also provide such support. The success rate of methadone depends on the number of supplements used in various clinics and ranges from 45% to 90% <sup>(2)</sup>.

The Cognitive Behavioral Therapy (CBT) approach has received high experimental support among various interventions for substance abuse treatment. The Psychiatric Association (1995) with the Public Assessment Organization (1996), although the risks of addiction to amphetamines have only been recognized in recent years.

Given the need for a thorough examination of the deficiencies of methadone treatment, which is the main treatment method currently in our country and most countries in the world, and the provision of non-pharmacological treatment is absolutely felt. These treatments and training can individually or collectively provide for the improvement of many of these problems, and, in parallel, holding private counseling sessions for the treatment and treatment of personal problems can help complete the treatment process and improve the references of the indicators. <sup>(3)</sup>

Therefore, its treatment has been very important. One of the most effective therapeutic treatments over the past years and now is the maintenance treatment program with methadone and buprenorphine. Opiate users, the dominant drug therapy, is the consumption of methadone which is currently in use in most countries of the world, and the results of studies have shown that this drug is a suitable alternative for opioids and has a beneficial effect on reducing drug intake, craving, Leak symptoms, psychiatric symptoms and dangerous behaviors of these patients during the course of treatment <sup>(4,5,6,7,8,9)</sup>. The purpose of this study was to investigate the effect of cognitive-behavioral therapy (CBT) on reducing methadone consumption and increase self-esteem among addicted people.

## Method

### Study population, sample, measurement method

This is a descriptive study performed by collecting data on all of the clients of methadone clinic at Razi hospital in Qaem-Shahr. The sample consisted of 30 patients who referred to the methadone clinic of Razi Hospital in Qaem-Shahr during the study period. The subjects were selected through targeted sampling (15 subjects and 15 controls) and assigned to control and experimental groups.

### (A) Franken's Methadone Consumption Reduction Questionnaire (2002)

This questionnaire has 14 questions and Likert 5 options. Also, this questionnaire was designed to reduce the consumption of methadone as a motivational state by Franken (2002) and measuring the reduction of methadone consumption at the moment.

That includes 3 factors (desire and intention to use drugs, desire for consumption and negative reinforcement, pleasure and severity of lack of control). The original form of the questionnaire was designed by Lav in 1998 to measure decrease alcohol consumption, and in 2002, Francken, by adopting the alcohol consumption reduction questionnaire, has written the heroin intake reduction questionnaire. In the Iranian society this questionnaire has been used about reducing the consumption of Methamphetamine. Reliability of the components of this questionnaire in Makry, Ekhtiari, Hasani Abharian and Ganjgahi (2010) survey in Consumer of the various types of opioids, including crack and heroin, are 0.89, 0.79, 0.4 respectively, and in metamphetamines Consumers was 0.25, 0.65, and 0.81 respectively.

### B) Self-esteem increase questionnaire

Self-esteem increase questionnaire consists of 50 items that are used to measure self-esteem. The grading for the questionnaire is 4-point Likert spectrum, which is considered for "never," "rarely," "sometimes," and "almost always," points 1, 2, 3, and 4, respectively. The content validity of the questionnaire was confirmed in the research by Farzianpour et al. The reliability of the questionnaire with Cronbach's alpha was more than 85%. Due to the standardization of the research questionnaires, their reliability in previous research has been proven repeatedly, but in order to ensure their reliability, 30 questionnaires before the final implementation were randomly assigned and implemented. The reliability of the questionnaires using the Cronbach's alpha coefficient to reduce methadone consumption was 94 / 0 and for self-confidence increase was calculated 0.74.

In order to ensure the reliability of the content and formality of validity, the questionnaire was examined by several experts and supervisors and counselors and They all emphasized the validity of the questionnaires for the research.

### The summary of the content of the therapeutic sessions:

First Session: introducing, Group Principles and Structure of Meetings, Motives, Objectives, and Amount of Obligations

Second session: The course of recovery and treatment, non-medical education, the problem of distrust

Third Session: Costs and benefits of consumption and Discontinue Usage, complete purity

Fourth Session: Reducing Energy, Temptation, and Starters

Fifth Session: Situations and external starters, internal factors and triggers

Sixth Session: Understanding auto Thought, Generating Negative Emotions (Depression, Anxiety, Aggression, Paranoid Thoughts, Phobia), shallow Beliefs of Negative Errors

Seventh Session: Control of Auto Thoughts, Technique A-B-C

Eighth Session: Logical Cognitive Errors, Appropriate Alternative Logical Thoughts

Ninth session: ways to change shallow thinking, to oppose with changing logic, to oppose with stimulus sentences

Tenth Session: Temptations and related beliefs, wrong ways of dealing with temptation, dealing with temptation.

Eleventh Session: Thoughts, emotions, and underlying behaviors associated with consumption, boredom, shame and sin, staying or job.

Twelfth Session: Relapse-prone activities, preventative relapses, prevention

**Data analysis**

Data analysis was done by descriptive and inferential methods through SPSS software. In this research, descriptive statistics have been used to calculate the mean and standard deviation of the research

variables and to show the frequency and its related graphs. Inferential statistics are used to examine the research hypotheses. Before testing the hypotheses, the assumption of the normal distribution of data was done by Kolmogorov-Smirnov test. Then the homogeneity assumption of variances was assessed through Levin’s test in all variables of the two groups. To report the results, the significance of the statistical tests and the size of the independent variable was used. To analyze the inferential statistics, covariance analysis was used.

**Result**

According to demographic findings, 50% of the subjects formed the experimental group and 50% of the control group. Out of all patients, 63% of them were married. using the Kolmogorov-Smirnov test, we measured the normal variables.

According to the normal test table information (Table 1), the value of p-value in any of the variables is not significant. This indicates the normality of the research variables, which is one of the preconditions for using the covariance analysis test.

**Table 1. The normal test table information**

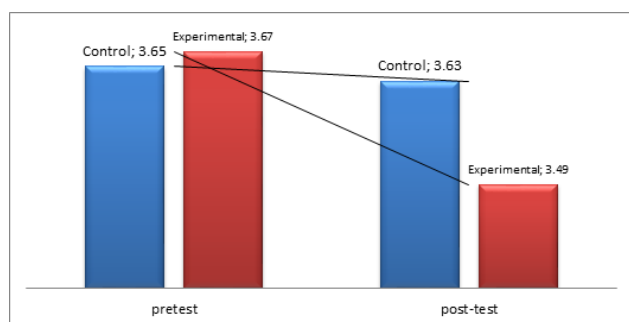
Variable	z	fault	p-value
pretest stage methadone consumption reduction	598/0	0.05	867/0
post-test methadone consumption reduction	764/0	0.05	604/0
pretest stage self-esteem increase	523/0	0.05	947/0
post-test self-esteem increase	637/0	0.05	811/0

Considering that in the Levine test, the *p-value* is greater than 0.05. We can conclude that, the assumption of the equality of the variances of the two groups is confirmed, which is another test precondition for the analysis of covariance. The Levine test table is also shown in table 2.

**Table 2. Levine test to verify the equality of variances**

Variable	f	fault	p-value
methadone consumption reduction	786/0	0.05	383/0
self-esteem	005/0	0.05	942/0

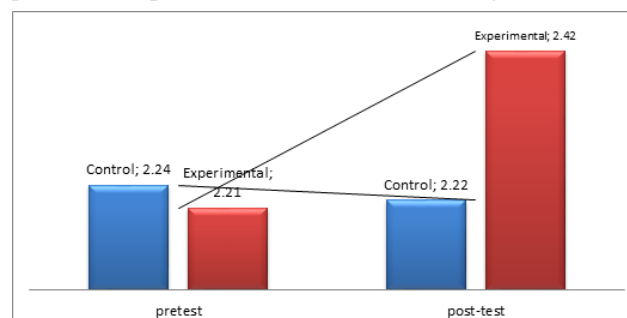
In the pretest stage, there is no significant difference between the mean score of substance use in both control and experimental groups (The value of p-value is greater than 0.05). We conclude that the subjects were divided into two groups of control and experiment equally. However, in the post-test, the difference between the two groups was significant and the test was significant, and in fact, according to the mean value, thoughts of substance use in the experimental group decreased. Evaluation on reducing drug intake in the pre-test and post-test phases, has been shown in figure 1.



**Figure 1. Evaluation on reducing drug intake in the pre-test and post-test phases**

In the pretest stage, there was no significant difference between the mean self-esteem score in the control and experimental groups (p-value greater than 0.05). We conclude that the subjects were divided into two groups of control and experiment equally.

However, in the post-test, the difference between the two groups is significant and, in fact, according to the mean value, the self-confidence of the experimental group has increased. Evaluation of self-esteem score in pre-test and post-test, has been shown in figure 2.



**Figure 2. Evaluation of self-esteem score in pre-test and post-test**

According to the level of  $F = 39$ , and considering that p-value is less than 0.05, with a confidence level of 95%, the hypothesis of the study is confirmed and it is concluded that the treatment of cognitive-behavioral therapy (CBT) in Reducing consumption in methadone addicts is effective. regard to the average score of drug use in the post-test (Figure 1), we find that this is a positive effect, with the intensity of its effect being very high at 0.847. In fact, cognitive-behavioral therapy (CBT) is effective in reducing the consumption of methadone addicts.

**Table 3. One-way covariance analysis of hypothesis 1**

Change	Squared	degree of freedom	mean squared	Fisher-modified	p-value	R2
Fixed coefficient	731/0	2	366/0	81	000/0	847/0
Group effect	004/0	1	004/0	881/0	356/0	
Pre-test score effect	580/0	1	580/0	128	000/0	
Interaction of the pre-test score and the group	176/0	1	176/0	02/39	000/0	
Error	122/0	27	005/0			
Total	382/0	30				

Considering the level of  $F = 111$  and considering that the p-value is less than 0.05, with a confidence level of 95%, the hypothesis of the study is confirmed and it is concluded that training anger management skills on reducing the amount of aggression Prisoners are effective. Considering the average amount of aggression

of the subjects in the post-test stage (figure 2), we find that this is a positive effect, with the intensity of its effect being very high with respect to the 924/0. In fact, cognitive-behavioral therapy (CBT) is effective in increasing self-esteem among addicts.

**Table 4. One-way covariance analysis of hypothesis 2**

Change	Squared	degree of freedom	mean squared	Fisher-modified	p-value	R2
Fixed coefficient	856/0	2	428/0	69/62	000/0	810/0
Group effect	139/0	1	139/0	40/20	000/0	
Pre-test score effect	558/0	1	558/0	71/81	000/0	
Interaction of the pre-test score and the group	347/0	1	347/0	88/50	000/0	
Error	184/0	27	007/0			
Total	163	30				

**Discussion**

Hypothesis 1: Cognitive Behavioral Therapy (CBT) is effective in reducing the consumption of methadone addicts.

The results of the first hypothesis show that cognitive behavioral therapy (CBT) is effective in reducing the consumption of methadone addicts. This result is consistent with the results of research by Yaghoobi Nasrabadi (3) , Keramaty (5).

In explaining this hypothesis, it can be said that in cognitive-behavioral therapy, the therapist and the patient provide a functional analysis for each case of drug intake. It identifies the thoughts, feelings and conditions of the patient before and after drug intake.

In the early stages of treatment, functional analysis helps the patient to identify determinants or risk situations that increase the likelihood of drug intake and reasons of drug intake.

This method of treatment will reduce the intake of drug in addicts, the desire to methadone and the pleasure of using methadone.<sup>(10,11,12)</sup>

**Hypothesis 2: Cognitive Behavioral Therapy (CBT) is effective in increasing self-esteem in addicts.**

The results of the second hypothesis show that cognitive behavioral therapy (CBT) increases self-confidence in addicted people This result is consistent with the results of research by Jacob Nasrabadi (3), Keramati (5), . In explaining this hypothesis, it can be said that cognitive-behavioral therapy is a kind of individual education program that helps abusers to abandon the old habits associated with drug abuse and to learn skills to develop healthier habits.

When the level of drug intake reaches a degree of severity that the person has to be treated. Probably the person used drugs as a way to confront a wide range of interpersonal and individual problems. Addicts usually have little self-confidence. The training of coping skills is the main core of cognitive-behavioral therapy. The

purpose of this training is helping patients to identify the most dangerous situations like high risk of drug intake and to obtain effective coping strategies to deal with those situations. The behavioral therapy helps addicted people not to be afraid of expressing thoughts and opinions and reaching their goals<sup>(13,14,15)</sup>.

### Research constraints

Obviously, the removal of research constraints will be the basis of further research and this will improve the science and research. The present research showed

#### A) Restrictions under the control of the researcher

- 1- The scope of research implementation was Qaemshahr.
- 2- This research was conducted in 95-94
- 3- This research was conducted among all patients referring to methadone clinic of Razi Hospital in Qaemshahr.
- 4- The tool used in this research was a questionnaire.
- 5- The subject of this research is the effect of cognitive-behavioral therapy (CBT) on reducing methadone consumption and self-esteem in drug addicts.

#### B) Restrictions beyond the control of the researcher

1. Unwillingness of some persons to answer related questions.
2. A small number of subjects
3. Lack of research done similar to the current research.
4. having problems in coordinating with addicts.
5. Subjects' perceptual difference from the questions of questionnaire.

Future researchers are encouraged to do this research more widely in other cities. It is suggested to other researchers to investigate the role of cognitive-behavioral therapy in self-confidence and self-esteem of addicts in future research.

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**Conflict of Interest :** None

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