

## COMPARISON EFFECTIVENESS OF COGNITIVE BEHAVIORAL THERAPY AND BUSPIRONE-BASED TREATMENT IN REDUCING TEMPTATION OF OPIUM ADDICTS

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### ABSTRACT

The present study aims at determining effectiveness of cognitive behavioral therapy and treatment based on taking Buspirone on controlling temptation of opium addicts. semi-experimental research method with pretest – posttest and control group was used. All people under treatment with methadone in Omid-e-Khanevadeh Medical Center in Islamshahr consisted research population and the research sample included 60 subjects which were selected randomly. The subjects were assigned in four groups of 15. Following implementing pretest, three experimental groups were treated using 1. Cognitive behavioral therapy 2. Cognitive behavioral therapy and Buspirone based treatment, and 3. Buspirone based treatment, while no intervention was used in fourth group (control group). Research tool was Golparvar's Drug Tendency Test which was implemented in pretest and posttest. Multivariate analysis of covariance was used for data analysis. Findings indicate reduction of temptation in people under cognitive behavioral therapy compared to people under Buspirone and methadone treatment. Cognitive behavioral therapy is effective in reduction of temptation to opium.

**Keywords:** *Opium Addicts, Cognitive Behavioral Therapy, Temptation, Buspirone*

### INTRODUCTION

Many people daily come to use drugs and got involved in its physical, mental, cultural, family, economic, and social consequences (Ashouri *et al.*, 2008). Substance abuse is a complex disorder in oneself. Behavioral and thinking patterns, self-threatening and self-destructive patterns manifest turbulence in lifestyle and personal performance. Although genetic, physiological and chemical effects of drugs are well recognized, one should accept primary responsibility of his disorder and recovery. Thus, addiction is a symptom and not the essence and origin of the disorder. During this treatment, the patient receives a collection of medications and psychotherapy. Currently in Iran two medications are used for maintenance treatment: methadone and buprenorphine. Fundamental assumption in cognitive behavioral treatment is that learning processes play significant role in developing and continuation of addiction and dependence to drugs. Thus, these principles can be used to help people in reduction of opium and drug use (Khayatipour *et al.*, 2010).

Unfortunately, the main problem with treatment of addicts is high rate of recurrence, even with prolonged purity period. In addition, stopping treatment period and reinitiating the treatment is associated with more negative outcomes such as more likely to use substances, more severe substance dependence, multiple substance use, increased criminal behaviors and imposing additional costs on the health care systems (Habibi *et al.*, 2012).

The authority office for evaluating addiction in the country provides following figures: Pure heroin (crack) 25%, heroin 18.3%, and opium 32.5%. Drug dependence among young people is rising and the average age is declining. The mean age of 32 years is reported that recently 1.5 year dropped. 93% of men and 7% women are drug dependent. While the Welfare Organization reports addiction growth as zero. According to Majlis Research Center, addiction has a fully upward trend and it has doubled in seven years. Two tones of the drug are discovered daily and 95% of the world's drug discovery is in Iran (Nabdel, 2010). Given the importance of drug abuse in the country and effectiveness of cognitive-behavioral based treatments in reduction of diseases, this study aims at investigating effectiveness of cognitive behavioral therapy in reducing temptation of opium addicts.

## MATERIALS AND METHODS

Semi-experimental research method with pretest – posttest and control group was used. All opium male addicts (20 – 50 years old) who referred to Omid-e-Khanevadeh Medical Center in Islamshahr during first 5 months of 1393 (2014) included research population (n = 200). 60 subjects were selected randomly and they were assigned in four groups of 15.

### Research Tool

#### Drug Tendency Questionnaire:

This questionnaire was evaluated by Golparvar in 2006 which measures tendency to drugs. Reliability of this test was calculated as 0.76 to 0.89 using Cronbach's alpha. It includes 54 items with 30 positive items and 24 negative items. The items are answered using yes or no. in positive items, option Yes has one score and option No has zero score, while in negative items, option Yes has zero score and option No has one score.

#### Cognitive Behavioral Therapy Package:

Session 1: Introduction of group members, introduction of the treatment method, training some techniques of temptation control (distraction, dealing with willingness, reminding negative consequences of drug use, and use of self-talk).

Session 2: Checking the client's readiness for change, the client's current attitude toward quitting drugs, patients' perception of other objectives and target problems, emphasizing the patient's freedom of choice, emphasizing the advantages of quitting as a therapeutic target

Session 3: Assessing availability of materials and steps to reduce it, reviewing strategies to disconnect drug suppliers, learning and practicing skills to refuse drugs, reviewing the difference between the passive, assertive, aggressive and predatory response.

Session 4: Patients gain insights on confrontation with situations and taking important decisions.

Session 5: Predicting future risk situations and developing a general plan for dealing with stressful and tempting situations.

Session 6: Recognition of the problem, identifying and defining the problem, considering different ways to solve a problem, choosing the most effective way to evaluate the effectiveness of the chosen solution.

Session 7: Extending methods of problem solving to real and tangible personal life and social situations.

Session 8: Reviewing plans and objectives of treatment, identifying areas where treatment goals are not being met and progress has not been achieved.

## RESULTS AND DISCUSSION

### Results

Current study was conducted with 60 subjects who were all married men. They were assigned in four groups of 15 as follows: case group 1 (CBT with age mean = 36.86 and SD = 8.75), case group 2 (Buspirone with mean age = 36.53 and SD = 8.51), case group 3 (combination of CBT and Buspirone with mean age = 37.26 and SD = 8.75), and case group 4 (methadone with age mean = 36.17 and SD = 9.41).

**Table 1: Normal data distribution test for pretest variables using Shapiro–Wilk test**

Variable	Group	Statistics	df	Sig. level
Attitude to drug	Group 1 (CBT)	0.929	15	0.261
	Group 2 (Buspirone)	0.935	15	0.503
	Group 3 (Buspirone + CBT)	0.953	15	0.576
	Group 4 (Methadone)	0.936	11	0.470

### Research Article

According to Table 1, results for Shapiro–Wilk test indicate variables are normally distributed in four groups.

**Table 2: Levine's test of equality of error variances**

Variable	F	df <sub>1</sub>	df <sub>2</sub>	Sig.
Attitude to drug	1.652	3	51	0.189

As observed in Table 2, error variances of posttest variables show no significant difference in four groups.

**Table 3: Adjusted means, mean differences and significant level of mean differences**

Attitude to Drug	Adjusted mean	Mean difference & Sig. level			
		Group 1 (CBT)	Group 2 (Buspirone)	Group 3 (Buspirone + CBT)	Group 4 (Methadone)
Group 1 (CBT)	27.95	-	3.815**	1.125	3.015**
Group 2 (Buspirone)	24.13		-	-2.689**	0.200
Group 3 (Buspirone + CBT)	26.82			-	2.889**
Group 4 (Methadone)	23.93				-

As observed in Table 3, mean difference between Group 1 (CBT) and Group 2 (Buspirone) is 3.815, which is significant at level 0.01. Since high score in the questionnaire suggests low temptation to opium, it can be said temptation in patients under CBT treatment is significantly much reduced compared to people under Buspirone treatment. Mean difference between Group 1 (CBT) and Group 3 (Buspirone + CBT) is 1.125 which is not significant at level 0.05. Thus, it can be concluded that CBT based treatment and combined treatment of Buspirone and CBT reduce temptation to opium in the same level. Mean difference between Group 1 (CBT) and Group 4 (Methadone) is 4.015 which, is significant at level 0.01. Thus, it can be said temptation of patients treated by CBT is reduced significantly more than patients treated by methadone. Mean difference between Group 2 (Buspirone) and Group 3 (Buspirone + CBT) is 2.689 in favor of Group 3 which is significant at level 0.01. Hence, it can be concluded the treatment based on combination of CBT and Buspirone significantly reduces temptation to opium more than taking Buspirone. Mean difference between Group 2 (Buspirone) and Group 4 (Methadone) is 0.200 which is not significant at level 0.05. Mean difference between Group 3 (Buspirone + CBT) and Group 4 (Methadone) is 2.889 which is significant at level 0.01. Hence, it can be inferred that combined treatment based on CBT and Buspirone significantly reduces temptation to opium more than methadone based treatment.

### Discussion

Generally research findings indicate cognitive behavioral treatment is effective in reducing temptation of opium addicts. This finding is consistent with findings by Carol (2001) which found cognitive behavioral intervention is one of the treatments with highest experimental support and effectiveness. Ghaafari, Karimi & Nozari studied effectiveness of cognitive behavioral treatment on reduction of tendency for drug and found similar findings. Also, Tajeri (2012) found cognitive behavioral therapy leads to reduction of temptation in addicts to Crystal meth. Considering various clinical experiences and studies showed tendency to drug abuse is influenced by different factors such as social conditions, mental pressure and anxiety, thus, it seems that cognitive behavioral techniques. Which emphasize identifying situations stimulating drug abuse and raising awareness of the factors and showing functional response instead of using medicines, could be effective in reducing the temptation. Lotfi (2013) in a study entitled Comparing

Effectiveness of Cognitive Behavioral Therapy, Methadone Therapy, and Combined Method on Improving Depression of Addicts found all three methods including cognitive behavioral therapy, methadone therapy, and combined method are effective in improving addict depression compared to control group. Ebrahimi *et al.*, (2014) examined effects of CBT period on mental health in homeless women who were in recovery phase of narcotics addiction. They found significance difference for somatization, aggression and ideation. Their findings indicated that CBT serves as a right alternative for improvement of mental health in recovery of narcotics addict. Shamsalina *et al.*, (2014) investigated recovery based on spirituality in substances in Iran. They maintained that there is “Mutual relationship between spirituality and recovery,” which is divided into four subcategories as follows: religious background, religious teachings, experience exchange, and family and society support; they also believed “A new perspective toward life” which is subdivided into access to calmness and spiritual development. McHugh *et al.*, (2010) demonstrated that CBT is effective for substance use disorders as a mono-therapy and as part of combination treatment strategies. Fouladi *et al.*, (2014) showed that adding counseling is effective to reduce opiate narcotics consumption based on the CBT approach and it is useful for reducing temptation in the patients who experience maintenance treatment by methadone. Pournaghash (2008) reported effectiveness of methadone therapy in a 45-day period as significant. Results of this study confirm findings in the current work. An important part of the treatment requires stopping the temptation process. In addiction process, ambivalence and temptation, which act through the process of conditioning, play an important role in the acceptance or denial of existence of the individual's addiction. Zamani *et al.*, (2014) indicated that intentional bias of drug addicts is related to drug-related cues or the temptation for drug abuse. Also, Marhe *et al.*, (2013) concluded that drug-related cognitive process which is evaluated by ecological momentary assessments were related to relapse during drug detoxification. Assessment of craving and cognitions in real time can help identifying the individuals who are at risk of relapse and when they are at risk of relapse. Prosser *et al.*, (2006) investigated neuropsychological functioning in subjects dependent on opiate who received and followed maintenance treatment by methadone. Their findings supported previous finding that if neuropsychological impairment in long term methadone maintenance therapy (MMT) recipients. Both groups of patients receiving MMT and former heroin users in prolonged abstinence showed cognitive impairment in a similar way. Cognitive dysfunction in patients who received methadone maintenance may not resolve following methadone detoxification. Waters, Marhe and Franken (2012) concluded that increased attention bias may be a leader of temptation episodes. Intervention targeting cognitions prior to or during temptation episodes can reduce the probability or severity of a temptation episode. Kazemian and Abdekhodaei (2014) stressed that group therapy based life enrichment and enhancement program can be used as an effective method in attempt for promotion of motivational structure, satisfaction with life as well as reduction of temptation of drug abuse in men substance abusers who are under methadone treatment.

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