Study of the Metacognition Technique in Reducing the Desire for Opioid Dependence

Maryam Sedghi*
Young Researchers club, Ardabil Branch,
Islamic Azad University, Ardabil, Iran
Phone: +98 45 3372 8020
maryam.sedghi94@gmail.com

Simin Heydardoust
Young Researchers club, Ardabil Branch,
Islamic Azad University,Ardabil, Iran
Phone: +98 45 3372 8020

Samira Vaez Hashtroudi
Department of Psychology, Zanjan Branch,
Islamic Azad University, Zanjan, Iran
Phone: +98 24 3342 1001

Abstract

The aim of this study was to determine the effectiveness of the technique of meta-cognitive effect in reducing desire Addicts in the city of Ardabil. Semi-experimental study. The population consisted of all patients referred to one of the centers in the city of Ardabil in 2016 is addiction. For Sample, 50 people with opiate dependence according to criteria of inclusion and exclusion and obtain the certificates necessary medical certification that the leave be available were selected and randomly divided into two groups of 25 experimental and control have been. The experimental group received eight sessions on techniques of meta-cognitive control group spent their daily routine. Using a desire scale anticipated return was gathered and demographic Wright. Information obtained using analysis of covariance and variance MANOVA and multiple variable was analyzed using SPSS software. The results showed that meta-cognitive learning techniques to reduce desire Addicts in Ardabil significant effect (0.01> P). The overall results showed that the technique of meta-cognitive training can reduce the desire in consumer consumption of opioid use.

Keywords: Meta-Cognitive technique; Desire; Opioid.

1. Introduction

Drug abuse is one of the most important social problems which different features can be seen in it such as creating physical dependence, psychological dependence and incidence of drug tolerance (Eslamdoust, 2011). Because of the consumer individual is damaged at various aspects of the personal and social (Naji, 2004) also change in various personality aspects (Mousavi, 2012). Despite the extensive efforts has taken place in the world to control narcotics, the prevalence of drug use continues to grow and age drug use is declining. The cause of addiction prevalence is complex. Drug control headquarters has been estimated the number of consumers' between15-64 years old in Ardabil namely 40,126 people or 1.26% of total population of Ardabil in 2013. That only 11,000 people are treated through the clinic and camp and associations (Statistics anti-drug campaign in Ardabil, 2016).

In determining the causes of people tendency to drug abuse, there are several theoretical approaches such as biological, sociological and psychological. In determining the psychological,

addiction is a mental disorder that is defined in division of psychiatric. Substance abuse and it is the second most common mental disorder (Kaplan & Sadock, 2010). Beliefs includes the ideas about themselves, others and the world which affect how our interpretation from the events. Belief and knowledge include two levels, fundamental level which is called unconditional belief and conditional level which is usually known as conditional orientation or belief) Nobre, Gouveia & Gomes, 2003. (Different approaches separately discuses to assess different aspects of substance abuse disorder (Abu Saleh, 2006). Research has shown that meta-cognitive approach is one of important approaches in the identification and treatment of drug abuse. Several researches have been done by Wells and colleagues in the field of the role of meta-cognitive beliefs in the drug dependence. The results of their recent studies indicate that there is a relationship between metacognitive beliefs and drug dependence (Wells, 2000). Trends in drug abuse psychological factors have a prominent role that in the meantime researchers have underscored the role of belief systems of people. One of these belief systems is meta-cognitive beliefs. Meta-cognitive beliefs are those that a person has about thinking and its processes (Janeck et al., 2007).

People suddenly and without reasons do not reuse the drug, but they are actively involved in drug use on the basis of their temptation and desire and their attitude, imitation, beliefs and expectations is important in this area (Beck et al., 1993, Samimi Bonab, 2012).

There is a high temptation to re-experience the impacts of drugs in the processes of treating the addicts, after quitting drugs and reaching abstinence. This state could be observed from a few hours after the beginning of the treatment to days or even months after that. (Abrams and Niaura, 2000) Generally, the studies show that positive and negative emotional states, desire and temptation are among the most important factors of desire and recurrence in treating or preventing addiction recurrent. (Witkins and Marlet, 2005)

Observations suggest that drug abuse has a root in behaviors due to dependence, mental, emotional and motivational features. Drug abuse is a mental and emotional behavior since it is associated with an intense desire of abuse after quitting. The drug abuse is motivational since in many cases, the tendency towards drug abuse turns into searching for goal related drugs. Traditional behavioral models of tendency towards drugs suggest that the tendency is the prerequisite of the drug search behavior. Hence, based on the available evidence, tendency towards drugs does not always lead to drug abuse. For instance, all detoxified consumers experience the tendency towards the drug abuse, while some stay clean. Therefore, Tiffany has distinguished between tendency towards drugs, desire and drug abuse. He has expressed that the automatic cognitive processes that entail the tendency towards drug abuse are completed with conscious and also automatic cognitive processes. The individual is aware of their tendency and has the opportunity to decide to either stay committed or consume. (Salehi et al., 2010). The present research is in line with these researches and with the aim of answering this fundamental question: Metacognitive therapy has an effect on decreased desire in opiate dependent people?

2. Method

The population of this research, including all men dependent on opiates who had referred to one of the opiate withdrawal centers in Ardabil in 2016.

Sampling, sample size and methods

The research was from type of semi-experimental studies with pretest and posttest and control group. Sampling method in this research was as available. So that among addicts referred to the withdrawal centers in Ardabil, 50 people were selected and randomly placed in two groups (25 people meta-cognitive intervention group and 25 people control group). Meta-cognition was taught to the participants by the researcher in the 8 sessions. That the structure of the sessions was designed based on Wells meta-cognitive pattern based on meta-cognitive defects as follows: First session:

Introduction and attention technique training. Second session: Mindfulness training and testing repression - lack of repression. Third session: Training to postpone attention focused with uncontrollability beliefs. Fourth session: Training of the focus attention again on safety symptoms. Fifth session: Training the use of encounter techniques and prevent the response focused on assurance beliefs. Sixth session: Training monitoring the threat focused on the self-belief. Seventh session: Training behaviors focused on the risk beliefs. Eighth session: Training techniques to review the contrary evidence and preparing the members to identify obstacles and finally was concluded.

Data Collection Methods

After obtaining the necessary permits in order to collect data, we first referred to an addiction center in Ardabil and explained objectives of the study to them. Then the sample was selected and categorized in two groups (experimental and control groups) that both groups completed the research questionnaire (lapse and relapse prediction scale questionnaire) and then experimental group received therapeutic intervention while control group did not receive any intervention. Finally, after training sessions and spending 8 weeks, participants (through questionnaires) were studied and thus the collected data were analyzed by SPSS statistical software. Attributes of subjects that are essential for their selection to participate in this research: recognition of drug consumption based on diagnostic and statistical manual of mental disorders, maleness, the ability to read and write, history of opioid use less than one year, failure to detect other psychological disorders, willing to participate in therapy sessions and departure criteria were: lack of interest to continue participating in therapy sessions, the absence of more than two sessions, treatment abandonment under the supervision of addiction centers.

Instruments
Lapse and Relapse Prediction Scale (PRS):

This questionnaire is a self-assessment scale with 45 questions which is presented by Wright. Each question includes a situation that participant must imagine himself in it and responds to two parts of this scale: A) intensity of desire strength in a particular situation B) the possibility of using on that situation. In this variable, only scale A is applicable. This scale has been translated by Goudarzi and to evaluate its reliability, it was conducted by researcher on a sample of 45 subjects with criteria of drug dependence. Cronbach's alpha coefficient for the first part of the questionnaire that measures the desire to use drug equals 0.58 and for the second part which measures the possibility of use and lapse equals 0.63 (Wells and Beck, 2001).

Demographic Characteristics

Table 1. The level of Education in the Study Groups

Group		Under Diploma	Diploma	Associate Diploma	Bachelor	Total
Control	F	9	8	7	1	25
	Percent (%)	0.36	0.32	0.28	0.4	100%
Experimental	F	11	7	4	3	25
	Percent	0.44	0.28	0.16	0.12	100%

Table 1 shows that the most frequency distribution of educational level in control group is 36 percent which is related to high-school dropouts and the most frequency distribution in experimental group is 44 percent which is also related to high-school dropouts.

Table 2. Mean and Standard Deviation in the Study group

Group	Mean (%)	Standard Deviation
Control	31.4	4.27
Experimental	32.50	5.31

According to table 2, mean (and standard deviation) age of control group is 31.4 (4.27) and it is 32.50 (and 5.31) for experimental group.

Table 3. Mean and Standard Deviation of Lapse in the Study Group

Variable	Group	Time	Mean	Standard Deviation
Craving Beliefs	Control	Pre-test	88.16	11.94669
		Post-test	89.96	8.06990
	Experimental	Pre-test	89.4	9.025113
		Post-test	61.48	8.02143

Table 3 shows that mean of lapse in the pretest control group is 88.16 and it is 89.96 in the posttest control group. Pretest is 89.40 in the experimental group and posttest is 61.48.

Table 4. Levene's Test Results to Determine the Equality of Variances

F	Df 1	Df 2	Significant Level
0.972	3	96	0.409

According to the results of table 4, the significance level or error rate of equality test of variances (P> 0.05) shows that variances are equal.

Table 5. The Results of analysis of variance (Manova)

Sov	Total Squares	df	Mean Squares	F	Significant Level	Eta Square
Model	738244.640	1	738244.640	8494.046	0.000	0.989
Group	4408.960	1	4408.960	50.730	0.000	0.346
Pre-Test Post-Test	4356.000	1	4356.000	50.120	0.000	0.343
Group* Pre-Test Post-Test	6988.960	1	6988.960	80.415	0.000	0.456

According to the table 5 results and considering the amount of F (80.41) and due to the fact that significance level or error rate for confidence level of 0.99 is less than 0.01, it can be said that this hypothesis failed to be rejected and cognitive technique affects the desire reduction in opiate dependents.

Discussion and Conclusion

Various intervention strategies have been proposed for the treatment of drug dependence. Meanwhile, despite the relative effectiveness of most treatment methods in reducing the damages caused by this disorder and helping improve it, there are still shortcomings that consequently alternative theoretical models are emerging and new treatments have been used. Although judging the measure of effect and efficacy of different therapeutic methods associated with drug dependence disorder is too early. However, it seems that using meta-cognitive therapy for drug dependence

disorder, due to its impact on the metacognitive deficits in comparison with other theoretical models, is in a better condition. Wells, as the most famous face in this field, has emphasized that when the cognitive deficits are directly challenged, many coping behaviors such as drug use can be corrected.

The aim of this study was to evaluate the role of metacognitive therapy in reducing the lapse in opioid dependents. The results of data analyses of this study showed that the hypothesis failed to be rejected and significant results were obtained (P < 0.01). This result indicates that the training of metacognitive therapy in experimental group has a positive effect on lapse reduction.

The findings of this study are similar to those of Qolami (2014), Shiffer, 2007, Frankl (2003), Powel Lucin et al. (2012). In a study, Qolami (2014) studied the impact of metacognitive group therapy on the decrease in the tendency and probability of drug abuse in drug-dependent individuals. The results of his study indicated that the metacognitive treatment has a significant role in the decrease of the tendency and probability of the drug abuse in drug-dependent individuals and had led to a decrease in the tendency and probability of the drug abuse in drug-dependent individuals. Similar studies showed that the tendency in the individuals with a recurrence who had been drug abuses, there was a relationship between the cognitive impairment, tendency and drug abuse. (Shiffer, 2007). In his study, Frankl (2003) showed that considering the behavior among the emotions and tendency, it could be said that the emotional states could adjust the concentration. Concentration and tendency processes also can adjust the emotional processes. Additionally, tendency towards symptoms related to drugs can adjust recurrence and temptation.

In a study entitled "Metacognition Effects in the Intensity of Smoking Craving, Tendency and Perseverance", Powel Lucin et al. (2012) showed that the decrease in abuse craving decreased the low negative affect of attention bias towards symptoms related to smoking and they showed a higher perseverance. The findings show that the impacts of metacognition are influential in accepting or suppressing the issues related to smoking. To explain these findings, it could be said that uncontrollable tendencies are important factors in the failure in the treatment and returning to drug abuse during and after treatment due to the nature of their referral. In addition, the studies during the recent years have approved the relationship between tendency and concentration so that concentration is considered as a cognitive component or its agent. Considering the relationship between concentration and tendency towards drug abuse, the intervention at concentration level is considered necessary for adjusting the tendency towards drug abuse. It can be concluded that metacognitive treatment (MCT) as revealed in this study causes the patients' awareness of the process of metacognitive processing system and changes the state of mind and controls thought; it can be effective in reducing drug-related beliefs. Because this treatment diverts attention from stopping on dysfunctional beliefs related to drugs including: "the only way to deal with anger is using drug and life seems boring without using drug" and it leads to learning this matter that these thoughts do not necessarily lead to action. In fact, people with development of metacognitive knowledge, control and manage their beliefs about using drug. The multivariate analysis of covariance showed that according to the results of post-test, it seems that Wells' metacognitive model is effective in improving lapse in opioid dependent patients. Thus, metacognitive therapy attempts to change metacognitive deficits that cause lapse in drug and to reduce maladaptive coping behaviors of drug use.

References

Abous-saleh Mt. (2006). Substance use disorder: recent advances in treatment and models of care. *Journal of psychosomatic research*, 61, 305-310.

Abrams, D B. & Niaura, R. S. (2000). Social Learning Theory, In K. E. L. H. T. Blane (Ed.), Psychological Theories of Drinking and Alcoholism, New York: Guilford Press

Aldao, A., Nolen, Hs. Schweizer, s. (2010). Emotional regulation strategies across psycho Pathology Ameta –analytic review, clinical Psychology Review: Behaviors: Behavioral, cognitive, and physiological procedure (pp.198-213). New York: Gailford press.

Beck, A. Wright, F. Newman, C. & Liese, B. (1993). Cognitive Therapy of Substance Abuse. New York: Guildford Press.

Firouz Abadi A, Ghanbari BA, Tabatabai M. (2009). The effectiveness of detached mindfulness and distraction techniques (techniques MCT) in the temptation to slip probability of drug use in male patients dependent on drugs. Journal of Mental Health Journal, 11(4), 292- 301.

Franken. j. H. A., Kroon, L. Y. P. Henderiks, V. M. (2000). Cognitive and moog. K; Bradleg, B. P.; Williams,R. ,(1995). Attentional Biasin

Grant, B. F., Chrou, s. D, Goldstoin, R. B., Huang, B., stinson, F.si, saha, T. D., et al. (2006). Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder results from the ware 2 national epidemiologic surrey on alcohol and related conditions. Journal of psychiatry, Go (4), 533-545.

Goudarzi N. 2006. evaluate the effectiveness of therapy and conventional therapy on treatment of opioid use, addiction studies, Center for Combating Drugs presidential Journal of Research and substance abuse, Issue 9, Spring - 2009

Janeck , A. S., calamavi, j.E ., miemann B.C., & Heffo liner , S, K (2007). Too Mach Thinking about thinking: Meta cognitive differences in obsessive disorder Journal of Anxiety disorders 17, 18-195.

Jazayeri A, Ebrahimi B, and Sadeghi AH. (2011). formulation and evaluation of comprehensive treatment (training) to prevent recurrence and improve personal performance and social patients Substance Abusers: Research Center of drug abuse and drug dependence; University of Rehabilitation Sciences and Social Welfare.

Jazayeri A, Vashtagh-Birakhti N. (2006). Substance Abuse and the Elderly (1), 55-51.

Dabaghi P, Asghar Nejad AA, Atef Vahid K and Bolhari J. (2008). The effectiveness of mindfulness based relapse prevention in mental health treatment for opioid dependence. Addiction Research magazine. 5, pp. 25-44.

Litman, G. K.,Eiser, J.R., Rawson, N. S. B.,& oppenhelm, A. N. (1979). Differences in relaps precipitants and coping hehariours between alcohol relapses and survivors journal of Beharour Research and therapy. 17, 89-94.

Mousavi SA. (2012). Enhancing students' personality traits drug abuse compared with non-use of students. Developmental psychology (Psychology Iran), 9 (34), 179-178.

Mayssam S. (2011). The efficacy of eye movement desensitization and reprocessing to adjust and emotion recognition, tempting ideas and drug addicts relapse prevention. To obtain a master's thesis, the field of clinical psychology, researcher University of Ardabil.

Mohamadkhani SH, Sadeghi N, Farzad V. (2011) .mdl relationships negative emotion, central beliefs, the beliefs associated with tempting ideas and emotion regulation Returning to the substance of the new Journal of Psychological, Volume 6, Number 23, S159-185.

Naji M. (2004). Psychological addiction assessment and treatment of substance use disorders. Tehran: Fine Arts.

Narimani M. (1997) Causes and prevention of addiction treatment. Ardabil. Sheikhsafi Publications.

Narimani M, Sadeghieh S. (2004). Relapse and ways to prevent it. Publisher Department of Culture and Islamic Guidance Ardabil province.

Najafi M and Ahmadi-Sultani M. (2001). Compare beliefs and tolerance of ambiguity in addicts, smokers and normal. Journal of Clinical Psychology. Issue 4.

Paul Lucian szasz, Aurora szentagotai, Stefan G. Hofmann. (2012). Effects of emotion regulation strategies on smoking craving, attentional bias, and task persistence, journal of behavior research and therapy, volume(50), issue(5), pages 333-340.

Saed O, Yaghoubi H, Roushan R and Soltani M. (2010) Comparison of dysfunctional beliefs among drug abusers and people without. (Journal of Substance Abuse Addiction). Fifth year 2011. No. 17.

Sadock B. Virginia, Pocket Handbook of Clinical Psychiatric and sadock Kaplan (2010), translated by M. venerable, Farzin foster, Nadia new defenders, Tehran venerable publication, Generation Next, 2011.

Shafer, F. (2007). Additional Bias and alcohol dependence: A Controlled study using the modified strop parading, Behavior, 27,471-482

Yaghoubi-Asgrabad E, Bsaknezhad S, Mehrabizadeh M and Zamirinezhad S. (2013). Evaluate the effectiveness of group cognitive therapy in reducing symptoms of depression addicts treated with methadone. Journal of North Khorasan University of Medical Sciences, Issue 5, Volume 1. Page 167 174

Roozen, HG, et al. (2006). A systematic review of the effectiveness of naltrexone in the maintenance treatment of opioid and alcohol dependence.

Sandra,S,R.,Brown , S ,A,. Urnod , M., Ramo ., D.E (2004)contex of replase for substance dependent adult with and without co morbid psychiatric disorders, Addictive Behaviors ,26 , 167-180.

Yaghobi, A. Bassakhejad, Mehrabizadeh, M. (2013). Effectiveness of meta cognitive therapy- On social anxiety of addicts with me_hadone maintenance treatment (MMT) in Mashhad, proceeding of the 4 Training psychological Association congress; feb 19-21

Wells, A. (2000) Emotional disorder and meta cognition: Innovation cognitive therapy. chichester, uk : Wiley.

Wells, A. (2000). Emotional disorder and Meta cognition: Innovation cognitive therapy. chichester, uk : Wiley.

Wells, A., carter, k. (2001). Further tests of a cognitive model of generalized anxiety disorder: Meta cognitions and worry in GAD panic disorder. Social Phobia, Suppression and no patients. Behavior therapy, 32, 85-102.

Wells, A, Certwright-Hatton S. (2009). A short of metacognitions questionnaire. Behavior Research and THERAPY; 42(24); 385-396.

Wells. A. (2002). Anxiety disorder, metacognition and gang. Roadblocks in cognitive Behavior trophy, 41(2), 112_122.

Nobre, P. j. Gouveia,J. P. Gomes,F.   (2003). Sexual Dysfunctional Beliefs Questionnaire: an instrument to assess sexual dgs functional beliefs as Vulnerability factors to sexual problems. Sexual and relationship therapy. 18, 2, 171-204.

Witkiewitz, K. & Marlatt, G. A. (2004). Relapse Prevention for Alcohol and Drug Problems: That Was Zen, This Is Tao. American Psychologist, 59, 224-235.

Witkiewitz, K. Marlatt, A. & Walker, D. (2005). Mind-fullness-based relapse prevention for alcohol and substance use disorders: The meditation tortoise wins the race. Journal of Cognitive Psychotherapy 19, 221-229.