The Effectiveness of Metacognitive Group Therapy in Substance Withdrawal and its Stability

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Abstract

Objective: The current study was aimed at examining the effectiveness of metacognitive group therapy in substance withdrawal and its stability. **Method:** Pre-test and post-test along with control group were employed for the conduct of this study. The population of the study consisted of all addicts who had referred to rehab centers in Tabriz in the second half of 2013 and the first half of 2014. Then, the number of 50 participants was selected via random sampling method, 25 participants received metacognitive intervention and 25 participants constituted the control group. McMullin Addiction Thought Scale, Change Readiness and Treatment Eagerness Scale, and Attitude to Addiction Scale were administered to the participants. In addition, metacognitive group therapy was carried out in eight 60-minute sessions. **Results:** The results showed that metacognitive group therapy decreased attitude towards addiction and increased tendency to change and addiction treatment. **Conclusion:** Metacognitive group therapy is one of the treatment methods effective in attitudes toward addiction and tendency to change and treatment.

Keywords: Metacognitive Group Therapy, Addiction Treatment, Rehab Centers, Stability

Research on Addiction Quarterly Journal of Drug Abuse

Presidency of the I. R. of Iran
Drug Control Headquarters
Department for Research and Education

Vol. 9, No. 34, Summer 2015
http://www.etiadpajohi.ir

Introduction

Today, addiction is considered a bio-socio-psychosocial disease and many factors affect susceptibility to substance abuse. These factors interact with each other and lead to substance abuse and drug dependence since they are entangled with each other and, accordingly, are effective in the emergence of addiction. Addiction is a personal disorder that involves body, mind, emotions, values, and personal, familial, social, spiritual and psychological relationships (Rostami, 2009). Official statistics show the increasing prevalence of drug addiction in the past two decades. According to recent research done by the Ministry of Health and Medical Education in cooperation with international institutions, there are about three million consumers of opiates, opium, heroin, morphine, and opium syrup in the country. The rapid assessment of drug abuse in recent years in Iran has shown the average annual growth of 8 per cent abuse in the country (Aghayi, 2012). In addition, the change in consumption pattern from opiates, such as opium and its derivatives towards cheaper industrial substances such as crack and crystal has made this situation far more difficult. Nowadays, the production of traditional drugs has been reduced and cheaper synthetic drugs are produced in more quantities. Thus, drug dependence disorder requires more serious control since it brings high-risk health problems, such as shared injection, use of contaminated syringes, and increased risk of catching infectious and contagious diseases such as AIDS and hepatitis in addition to individual, family and economic problems arising from drug dependence. Therefore, the necessity of doing similar research projects assumes importance towards identifying the causes and treatment of this disorder. Any substance that creates dependency and brings about some socially unacceptable changes in an individual will be illicit substances and the person who consumes such substances is referred to as addict (Saduk & Saduk, 2007; translated by Reza'ea & Faghani Jadidi, 2010). Addiction leads to many problems for individuals, families and society. Fortunately, a number of addicts have arrived at the conclusion that they must be treated and, thereby, they come over to seek treatment and refer to rehab centers. Unfortunately, some of these addicts become discouraged and give up the treatment process. Some also actively try to change themselves; however, they break their determined goal after a while and resume drug use (Aghayi, 2012). Hence, a psychological intervention effective in changing people's attitudes and opinions, can be influential in adherence to treatment and abstinence from repeated substance abuse. Meta-cognitive therapy is one of the psychological therapies that today has attracted the attention of many researchers (Wells, 2004). Welles defined meta-cognition as cognition about cognition (Wells, 2004; translated Ghalandari, 2004). In fact, metacognition refers to a cognitive and conscious process, which is concentrated on the review or control of cognition. Metacognition is a multidimensional concept and includes beliefs, processes, and strategies that are responsible for monitoring cognition and

cognitive control. Most meta-cognitive activities are contingent on cognitive factors (Wells, 2004; translated by Ahooghalandari, 2004). Metacognitive therapy has been proposed in recent years and is important from different aspects, such as a regular structure, a limited number of therapeutic sessions, emphasis on process of cognition rather than its content, and development of specific skills like attention training. Metacognitive therapy removes maladaptive thinking styles (as a barrier to natural cognitive and emotional processing) through attention modification and boosts flexibility in cognitive controlling.

Moreover, detached mindfulness is one of the main techniques of this therapy which leads to super-consciousness by making one aware of internal events without giving any response to them (Wells, 2008, translated by Mohammadkhani, 2009). It is believed that the beliefs associated with substances can act as an inconsistent coping behavior arising from the cognitive interactions between meta-cognitive deficits and substance use. In meta-cognitive therapy, some techniques are employed to correct meta-cognitive deficits and the drug-related beliefs and, thereby, to undermine drug use coping behaviors (Haji Alizadeh, Bahrainian, Naziri & Modares Ghorori, 2009). Yaghoubi Asgarabad, Basak Nejad, Mehrabizadeh Honarmand & Zamiri Nejad (2013) showed that metacognitive therapy had a significant effect on reducing symptoms in addicts treated with methadone in the post-test. In general, findings demonstrate the efficacy of motivational interviewing and cognitive treatment in addiction treatment and its continuation. Setorg, Kazemi & Ra'easi (2013) also reported that meta-cognitive therapy had a significant effect on the revision of tempting ideas and beliefs associated with substances among crack, heroin, and crystal dependent groups. In addition, the effectiveness of this therapy enjoyed stability after two months. In another study, Steven & Ondersma (2010) showed that meta-cognitive therapy has a significant effect on opioid withdrawal and relapse prevention. According to the above-mentioned points, the current study aims to evaluate the effectiveness of group meta-cognitive therapy on addiction withdrawal in rehab centers and to measure its stability.

Method

Population, sample, and sampling method

In this study, an experimental research design along with pretest/ posttest and control group was used. The addicts referring to rehab centers of Tabriz City in 2013-2014 constituted the population of the study and the number of 50 participants (metacognitive intervention group=25, and control group=25partcipants) was randomly selected as the sample of the study. The criteria for the inclusion of the addicts in the sample group were: male, placement in 20-to-50-year age group, addiction features, no severe mental disorders with medical and psychiatric evaluation, and lack of physical disease.

In addition, the exclusion criteria were as follows: lack of interest in participating in therapy sessions, more than two sessions absenteeism, and cessation of therapy under the supervision of addiction treatment centers.

Instrument

1- McMullin Addiction Thought Scale (MAT): This scale was developed by McMullin in 1990 to assess irrational beliefs of chemically dependent people. This test can be both applied for assessing the situation of referents to rehab centers and for assessing the progress of the treatment program. This scale consists of 42 items and measures five irrational belief. Its subscales are: not my fault; I am powerful enough to control it; drinking is good, pleasant, and fun; I am not an alcoholic (alcohol dependent) / don't have a problem; I need to drink. This is a self-report 42-item and a very useful measure for identifying changes over time, especially the changes arising from cognitive-behavioral treatment in different addiction cases. McMullin (1990) reported the parallel form reliability and internal consistency of this scale equal to .78 and .80, respectively. In the same way, Cronbach's alpha coefficient of the scale was calculated .89. This coefficient was reported by Najafi Abhari equal to .83.

2- Scale of Stage of Readiness for Change and the Desire to Treat Addiction: This scale was constructed by Miller & Tonigan in 1996. Today, this instrument is used to evaluate people addicted to drugs other than alcohol. This scale contains several versions, including individual drug/ alcohol use questionnaire (the current questionnaire), which contains 19 items; the 32-item scale of drug/ alcohol use related to the men's partners; the 32-item scale of drug/ alcohol use related to the women's partners; and the 32-item scale of alcohol use related to the women's partners. This scale consists of 3 sub-scales, namely recognition, ambivalence, and taking steps. Recognition indicates the participant's awareness of the existence of the problem and his/her desire to change. Subscale ambivalence suggests doubt and uncertainty about the existence of problems. Subscale taking steps includes the activities that a person has done to make a change. Parallel form reliability and internal consistency of the scale were reported to equal .78 and .80, respectively. Moreover, Cronbach's alpha coefficient of the scale was obtained equal to .89. Thus, the psychometric characteristics of the scale are approved (Miller & Tonigan, 1996).

3- Attitude to Addiction Scale: This self-report questionnaire was developed by Nazari (2000) and is scored based on a Likert scale. In terms of the items pertaining to positive attitude to addiction, each of the alternatives strongly agree, agree, no idea, disagree, and strongly disagree is assigned 5, 4, 3, 2, and 1 points, respectively. However, the items pertaining to negative attitude to addiction are scored in reverse. Thus, the range of one's score will fluctuate from 32 to 160 and higher scores represent favorable attitude towards drug use and addiction. Parallel form reliability and internal consistency of the scale were reported to equal .79 and .81, respectively (Nazari, 2000). Moreover, Cronbach's

alpha coefficient of the scale was obtained equal to .89. Thus, the psychometric characteristics of the scale are approved (Nunnally & Bernstein, 1996).

Procedure

Group meta-cognitive therapy is based on Well's MCT (1994-1997) in groups and in 8 one-hour sessions based on Wells' metacognitive model as follows (Wells, 2004; translated by Ahooghalandari, 2004).

Table 1: Summary of group meta-cognitive sessions

Session	*Subject*
First session	Development of specific conceptualization, providing therapeutic logic, preparing patients for treatment, conducting test of attention technique, homework: Practice of attention technique, reception of patients
Second session	Review of homework (practice of attention technique), resuming preparation of patients if needed, conducting test of detached mindfulness and repression-no repression test, homework: Practice of detached mindfulness testing and repression- no repression test, reception of patients
Third session	Review of homework, practice of detached mindfulness and repression-no repression test, conducting the test of delaying concentrated attention with uncontrollable beliefs, homework: Practice of delaying concentrated attention with uncontrollable beliefs
Fourth session	Review of homework especially focused attention on uncontrollability, challenging the beliefs pertaining to uncontrollability, conducting the tests of refocusing attention to safety signs, homework: Practice of refocusing attention to safety signs, reception of patients
Fifth session	Review of homework (practicing attention to safety signs), challenging the belief pertaining to attention to safety signs, conducting the test related to the use of confrontation technique and preventing focused response on assurance beliefs, homework: confrontation practice and prevention of focused response on assurance beliefs
Sixth session	Review of homework (practice, especially beliefs related to assurance, challenging the beliefs about assurance, conducting the test pertaining to bringing changes in monitoring focused threat on self-mindfulness beliefs, homework: practice of monitoring focused threat on self-mindfulness beliefs
Seventh session	Review of homework (practice, especially beliefs about self-mindfulness), challenging beliefs about self-mindfulness, conducting the test pertaining to the use of behaviors focused on risk beliefs, homework: practice of behaviors focused on risk beliefs
Eighth session	Review of homework, especially behaviors focused on risk beliefs, challenging beliefs about risk, conducting the test about technique of checking different opposing evidence and preparing members to identify existing barriers to the use of techniques, conclusion

Results

The results of the study showed that the control and experimental groups were placed in 32.24 and 30.96 year-old age groups. In terms of education, bachelor holders took up the lowest frequency with 8% in the control group and 56% with degrees below diploma constituted the highest frequency of this group. In the experimental group, bachelor holders took up the lowest frequency with 9% while 60% of this group with degrees below diploma constituted the highest frequency of this group. In addition, in the control group, 49.33% of the participants were married, 17.27% were separated, and 33.40% were unmarried while in the experimental group 50.18% were married, 13.48% were separated, and 36.34% were unmarried.

The descriptive statistics of the variables of the study are presented in the following table for each group and each type of test.

Table 2: Descriptive statistics of the variables of the study for each group and each type of test

Variable	*Group*	*Test type*	*Mean*	*SD*
Attitude to addiction	Control	Pretest	145.80	5.71548
		Posttest	136.80	6.65833
		Follow-up	131.00	2.04124
	Experimental	Pretest	142.00	6.95222
		Posttest	120.40	6.81990
		Follow-up	88.00	8.26640
Tendency to change and treatment	Control	Pretest	24.20	.76376
		Posttest	26.40	1.70783
		Follow-up	28.80	.76376
	Experimental	Pretest	22.55	1.88675
		Posttest	48.20	1.44338
		Follow-up	78.60	1.32737
Addictive thoughts	Control	Pretest	116.7200	9.30734
		Posttest	136.2800	10.91833
		Follow-up	139.5200	9.57479
	Experimental	Pretest	119.9600	25.02579
		Posttest	124.7600	12.09902
		Follow-up	123.0800	26.97826

Multivariate analysis of variance was used to examine the effect of metacognitive therapy. The results proved the effectiveness of the intervention ($P<.01$, $F = 3.003$, Wilks Lambda = .542). Univariate analysis of variance was used to examine differences in patterns as follows.

Table 3: Univariate analysis of variance representing differences in patterns

Variable	*Mean Square*	*F*	*Sig.*	*Effect size*
Attitude to addiction	29400.00	377.461	.0005	.724
Tendency to change and treatment	7004.17	4066.935	.0005	.966
Addictive thoughts	63860.17	666.077	.0005	.822

As it can be observed in the above table, metacognitive therapy has been effective in the three variables. To investigate the stability of the effectiveness, repeated measures test was used as below.

Table 4: Results of repeated measures test representing the stability of the effectiveness of metacognitive therapy

Variable	*Mean Square*	*F*	*Sig.*	*Effect size*	*Power*
Attitude to addiction	34152.84	279.710	.0005	.91	1
Tendency to change	30152.48	3283.880	.0005	.99	1
Addictive thoughts	66.00	1.660	.197	.008	.07

Discussion and Conclusion

The present study was an attempt to examine the effectiveness of group metacognitive therapy in addiction withdrawal and to measure the stability of this effectiveness. The results showed that group metacognitive therapy had a significant impact on attitudes toward addiction, tendency to change and treatment, and stability of the effectiveness. In other words, group metacognitive therapy decreased attitudes toward addiction and increased tendency to change and treatment among drug addicts in addiction centers. Moreover, some other part of the results showed that group meta-cognitive therapy had no effect on addictive thoughts and the stability of its effectiveness in the addicts of addiction treatment centers. These results are consistent with the research findings obtained by Spada, Zandvoort & Wells (2008), Steven & Ondersma (2010), Harrison & Brien (2010, cited in Yaghoubi Sgrabad et al., 2013), Akbari, Rezaei, Darake & Aghabeighi (2012), Kashefi, Aghamohammadian & Samari (2012), Yaghoubi Sgrabad et al. (2013), and Setorg, Kazemi & Ra'easi (2013). In another study, Harrison & Brien (2010, cited in Yaghoubi et al., 2013) showed that meta-cognitive therapy had a significant impact on reducing the tendency to substance use. Expectations about the rewarding effects of substances, beliefs and attitudes about responsible behavior, and received reinforcement are among the factors which lead to drug use tendency and reuse of drugs despite the incidence of problems. Drug users employ a high level of cognitive distortions and dysfunctional thinking. In the meantime, meta-cognitive control strategies are the responses that people provide in controlling activities of their cognitive system. These strategies may intensify or suppress thinking strategies and may increase them towards review processes. These review processes may include avoiding and reducing drug use. Moreover, strategies of metacognitive therapy are known as behavioral responses and thought control strategies. The dynamics

of thought control strategies employed by the people intensifies the process of rigorous scrutiny and the consequences of anxiety and worry. Coping behaviors include avoidance, information seeking, distraction, alcohol use, drug use, and so on. These behaviors lead to the persistence of negative assessment and beliefs about worry because the dominance of external factors disrupts the process of self-determination (Wells, 2004; translated by Ahooghalandari, 2005). In this regard the fundamental principle of metacognitive therapy that disorders (tendency to addiction, relapse, etc.) are associated with the activation of some maladaptive thinking style is called cognitive attentional syndrome. Cognitive attentional syndrome involves some type of perseverative thinking style in the form of worriedness or rumination based on threat and maladaptive coping behaviors (such as thought suppression, drug use, avoidance). This style leads to some consequences that maintain emotions and reinforce negative thoughts (Wells, 2008, translated by Mohammadkhani, 2009). An important process in metacognitive therapy is one's inability in not engaging in the process of worriedness when it is activated. This inability is reflected by consistent thinking about the concerns of substance use in order to deal with it or attempt to reassure oneself through self-talk (Wells, 2004; translated by Ahooghalandari, 2005). Metacognitive therapy leads to changes in the attitude of people by applying attention training techniques and detached mindfulness. The purpose of designing attention techniques is to develop a way to influence various aspects of cognitive attentional syndrome and its provocative metacognitions. Detached mindfulness techniques refer to a state of internal events that attempt to control or suppress the events by giving behavioral response to them rather than responding to them through continuous assessment. An obvious example of this decision-making situation includes the employment of such strategies as holding no worries in response to an idea (such as fear of returning to drug use) and instead letting the idea occupy a specific mental space without doing any interpretation or other measures (Wells, 2005). The concept of detached mindfulness contrasts cognitive attentional syndrome and assists people cope with worries of resuming drug use, but it has no effect on control of addictive thoughts. In fact, the application of detached mindfulness and attention training techniques leads to some change in the attitudes of the individuals, but it does not influence addiction thoughts. Lack of control over the type of substance and duration of use and also the limitation of the sample to the addicts of addiction treatment centers in the city constitute the limitations of the current study. Therefore, it is recommended to control the type and duration of drug use in future research. This research is also recommended to be replicated in other locations. With regard to the impact of group metacognitive therapy on the reduction of attitudes toward addiction and addiction thoughts and also on the increase of tendency to change and treatment, it is recommended that this therapy be widely used in addiction treatment centers and residential recovery centers (camps).

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