

## Investigation of the Impact of Schema-based Cognition-Therapy on Illogical Beliefs of Drug Abusers

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### ABSTRACT

The main target of the present research is to investigate the impact of schema-based cognition therapy on illogical beliefs of drug abusers. It is a semi-experimental research with pretest-posttest design and a control group. Statistical population of the research included 200 drug abusers who referred to addiction give-up centers. They were studied by means of schema-based cognition therapy. Sample members were selected by means of simple cluster sampling method and after screening, 30 addicts were put into two groups randomly. The experiment group received 12 sessions of training by means of schema-based cognition therapy and the control group did not receive any training. Research instrument was illogical beliefs questionnaire (IBT). Results showed that independent variables reduced illogical beliefs within the framework of a compound variable. Analyses showed that teaching by means of schema-based cognition therapy ( $p < 0.0001$ ) influenced illogical beliefs. Results showed that group training of schema-based cognition therapy can be a good solution for changing attitudes in individuals.

**KEYWORDS:** teaching schema-based cognition therapy, illogical beliefs, and drugs.

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### INTRODUCTION

Cognition therapy is based on information processing model. This model indicates that when psychological disturbance occurs, the individual's thinking becomes flexible and changed and judgments are generalized in absolute and extreme forms. In a mental framework which lacks disturbance, the individual tends to investigate his or her perceptions and evaluations of events and acquire exact information. When an individual is emotionally sad, he or she alters input information with negative bias towards his or her thinking and therefore, his or her thinking becomes inflexible and experiences extreme generalization (Ninan and Dryden, translated by Ansari Shahidi, 2012). Beck's cognitive model states that individuals' experiences forms assumptions and schemas about self and the world and these, in part, are used in organizing perception and controlling behavior evaluation. Ability to predict individual experiences and adding meaning to them is useful and essential for normal performance. However, some assumptions are inflexible, extreme and resistant to change and therefore are "inefficient" or infertile (Qasemzadeh, 2001). Usually, inefficient nature of schemas becomes obvious when patients act in a way that their schemas are confirmed by others even when their early perceptions are wrong. Early maladaptive schemas and inefficient ways by which patients learn to get along with others are usually considered as bases for chronic symptoms of I axis disorders like anxiety, depression, drug abuse and psychological disorders (Yung, Klosko and Wishar; translated by Hamidpour and Andouz, 2010). Beliefs form due to individual experiences in childhood and are improved via information processing. Inefficient beliefs alter information process and this causes individuals to pay attention to evidence which are compatible with their beliefs and leave aside maladaptive evidence. Ideas are assumptions about self, the world and future (Qahari, 2011). Beck et al (1990) referred to several examples of central beliefs like vulnerability, ineptness, incompetency, neediness, weakness, helplessness, self-sufficiency, easily controlled by others, responsiveness, sufficiency, Righteousness, innocence, specificity, uniqueness, attractiveness and glamour (lihi, translated by Hamidpour, Andouz, 2010). Addiction is a physical, psychological, social and spiritual disease (Galater, 2006). Addiction has many psychological, social, family and biological causes (Majid, Kolder and Strode, 2009). Addiction to drugs is the result of repetitive and constant consumption of narcotics and severe dependence on them. An addicted person feels he or she cannot leave drugs or reduce drugs consumption and may suffer from poisoning if he or she leaves drugs. In medicine, addiction to drugs is the equivalent of dependence on drugs and an addicted person is one who becomes dependent on a special kind of illegal drugs psychologically and physically (Moradi, 2002). Many variables influence addiction to drugs. Several variables which have been considered as causes for addiction to drugs in clinical studies are as follows (four categories): a) socio-cultural environment, b) inter-personal factors, c) psycho-behavioral factors, d) bio-genetic factors (Newcome and Richardson, 2000; Latiri, 1985; Newcome, 1995).

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### **Important duties of cognitive therapy in addiction**

- creation of motivation for avoiding consumption: an important technique for increasing motivation in addicts to give up drugs is conduction of an analysis based on judgment in which the therapist and patient specify what is going to be achieved or lost by consuming drugs (advantages and disadvantages of drugs consumption).

- teaching coping skills: the basic pivot of cognition therapy is teaching coping skills which help patients with diagnosing risky situations in which drugs may be used and then more effective methods of coping are used (identification of tempting factors and methods for appropriate confrontation with them).

Changing reinforcement contingencies: many patients spend a lot of time on preparation and consumption of drugs and recovery after drug consumption. This deprives them of other experiences and rewards. In cognition therapy, the main concentration is on identification and reduction of habits which are accompanied by drug abuse and this is done via substitution of activities and stable awards.

- Increase in control over painful emotions: teaching skills also emphasize on techniques which identify tendency to consume drugs and help cope with them. These programs include a very excellent model for contributing to patients to learn how to tolerate other strong emotions like depression and anger.

- adjustment of inter-personal performance and increase in social supports: cognitive-behavioral therapy involves teaching some inter-personal skills and finding solutions for helping patients with developing their social network and establish efficient social communications (Bavi, 2009).

Denis et al (2004) conducted a research and found that cognitive-behavioral therapy strategies reduce drug abuse and its related problems. Pengoya et al (2006) investigated early maladaptive schemas in patients who suffered from social phobia (n=62). Results showed that schema structure of social phobia patients is different from that of normal control group and other anxiety disorders. Patients who suffered from social phobia showed higher levels of social isolation/ alienation in comparison with other anxiety disorders. Rezaee et al (2012) showed that 14% of addicts had antisocial personality disorders and abandonment/instability and mistrust/abuse schemas. Kazemi (2011) conducted a research and investigated relationship between early maladaptive schemas and metacognitive states in students in Isfahan Province, Iran. Results showed that students who suffer from social isolation/alienation schema, i.e. dissatisfaction, need to security, affection and empathy or growth in families with bad behavior face more defects in metacognitive processes. Rasouli et al (2011) conducted a research and showed that cognitive-behavioral therapy and methadone therapy are effective in treating depression and anxiety disorders. Fergosen (2012) conducted a study titled "cigar abuse, a deadly addiction in teenagers" and investigated the role cigarette consumption prevention in teenage. He considered reduction in cigarette consumption in 2010 as a very important subject in high school students because most individuals who use smoke cigarette in adulthood continuously have started smoking in teenage. Therefore, he believed that it is important to prevent teenagers from smoking cigarette. Hides et al (2013) conducted a research and showed that cognitive-behavioral therapy reduces depression, anxiety, drug abuse and coping skills significantly even in 20 weeks after therapy in young people who suffered from abuse disorder. Orgi (2011) conducted a research under the name of integrated cognitive-behavioral therapy effectiveness with self-efficacy management of coping styles, anger control, and reduction in tendency to drug abuse and prevention from return to drug abuse in a group of addicts seeking treatment. Results showed that integrated cognitive-behavioral method with anger management improves the effectiveness of cognitive-behavioral therapies and medicine-therapy in prevention from return to drug abuse and other indices concerning recovery after addiction (like self-efficacy, coping styles, tendency to drug abuse, anger control). Therefore, the basic question in this research is that whether schema-based cognition therapy affects illogical beliefs in drug abusers in Rasht City?

## **METHODOLOGY**

The present research is a semi-experimental research with a pretest-posttest design and a control and an experiment group. The statistical population of the research included 200 drug abusers who referred to addiction treatment centers in Rasht City. Stratified random sampling method and cluster sampling method were used for picking sample members. Sample size was 30 people. The questionnaire was conducted on all individuals. Individuals who had one point above average score in illogical beliefs scale were put into experiment group (15 people) and control group (15 people) randomly. After conducting a pretest of illogical beliefs questionnaires on both groups, the experiment group members received 12 90-minute sessions of cognition-therapy schema-based. The control group did not receive any teaching. After training and therapy sessions ended, both groups received a posttest in order to collect and analyze data and investigate the impact of treatment method.

### **Research instrument**

Illogical beliefs questionnaire (IBT): this questionnaire was designed in 1986. It has been used in many studies in order to investigate wrong beliefs. IBT scale has 10 parts and each part has 10 questions. Each part investigates one wrong belief. Chronbach's alpha for this scale was equal to 0.71 (Taghipour, 1998; ShafiAbadi,

1994). General illogical beliefs in this scale include: need for verification and support of others, high expectations of oneself, tendency to criticize oneself, response to frustration, absence of emotional responsibility, high obsession and anxiety, avoidance of problems, dependence, disappointment towards change and perfectionism. This questionnaire is based upon five-point Likert scale and respondents specify their ideas by selecting one of the choices.

**Training sessions**

- First session: pretest execution.
- Second session: familiarity and attraction of trust.
- Third session: familiarity with narcotics and schema.
- Fourth session: teaching relationships between stimulant-thought-feeling-behavior.
- Fifth session: teaching muscular relaxation.
- Sixth session: teaching distraction techniques like thinking stoppage technique and mental imagery. In the seventh session, positive self-statement technique was taught and in the eighth session, self-expression and ability to say "no" was taught.
- Ninth session: teaching problem-solving technique and decision-making.
- 10<sup>th</sup> session: teaching self-control, controlling excitement and after that, controlling one's behaviors in order to cope with failure and aggression.
- 11<sup>th</sup> session: prediction of risky situations.
- 12<sup>th</sup> session: a posttest was executed and the respondents were thanked for their participation in the survey.

**Findings**

Descriptive and inferential statistics were used in this research. In descriptive analysis, frequency, diagram, mean and standard deviation indicators were used. In inferential analysis, multivariate covariance analysis (MANCOVA) was used for testing the main hypothesis and ANCOVA method was used for analyzing subsidiary hypotheses. All statistical analyses were conducted by means of SPSS software.

**Descriptive results**

In education variable, data analyses revealed that 6.7% of respondents had a degree below high school degree, 56.7% had high school degree, and 36.7% were above high school degree. In age variable, 16.7% of the respondents were between 25-30 years old, and 83.3% were 30-35 years old. 73.3% of the respondents were self-employed, 16.7% were civil servants and 10% were students.

**INFERENCE RESULTS**

**Research hypothesis**

Main hypothesis: schema-based cognition therapy influences illogical beliefs of individuals who suffer from drug abuse.

In order to test the main hypothesis, univariate covariance analysis (ANCOVA) was used. First, we investigate preconditions necessary for this method implementation. Homogeneity of regression line slope was investigated first and showed that interaction between conditions and pretest is not significant ( $P < 0.021$ ,  $F = 2.154$ ). Consequently, data support homogeneity of regression line. Then, Levene's test was used for investigation of homogeneity of variance of dependent variable. The results are summarized in table 1.

Table 1: results of Levene's test for scoring illogical beliefs

Sig.	Df 2	Df 1	F	variable
0.055	28	1	4.020	Illogical beliefs

Results of table 1 show that the assumption of homogeneity of errors of both groups is verified for illogical beliefs score ( $P > 0.05$ ). Therefore, considering the homogeneity of regression slope and homogeneity of, ANCOVA method was used for testing the hypothesis.

Table 2: results of ANCOVA test for score of illogical beliefs posttest in experiment and control groups

Eta coefficient	sig	F	Mean of squares	df	Sum of squares	statistic Source of variations
0.267	0.003	10.296	461.909	1	461.909	group
0.096	0.926	0.186	0.025	1	0.025	Covariance analysis with controlling pretest values
			44.864	27	1211.318	error

As it can be seen in table 2, covariance analysis of posttest of illogical beliefs score after adjustment of pretest shows that after elimination of the impact of pretest score, the impact of schema-based cognition therapy on posttest score is significant ( $P < 0.003$ ,  $df = 1.27$ ,  $F = 10.296$ ). Therefore, when the impact of pretest is eliminated, difference between groups is significant and it can be concluded that schema-based cognition therapy is effective in reducing illogical beliefs of drug abusers. Therefore, the main hypothesis is supported.

## CONCLUSION AND DISCUSSION

Main hypothesis: schema-based cognition therapy influences illogical beliefs of drug abusers. Results of the analyses in the fourth section (table 2) showed that teaching schema-based cognition therapy significantly influences on reducing illogical beliefs of drug abusers. Therefore, the main hypothesis was supported. This result conforms to the result of studies conducted by Orgi (2011), Denis et al (2004), Pnogyo et al (2006). It can be said that if we admit that human behavior is resulted from his or her attitude and human's beliefs influences his or her responses. This treatment method (schema-based cognition therapy) has acquired a lot of empirical support in drug abuse treatment methods. In this treatment method, individuals are taught to cope with conditions which attract them towards addiction and therefore create negative attitudes towards addiction in individuals. Therefore, a positive belief regarding addiction change and this is a basic concept in sessions of teaching schema-based cognition therapy. The present research results showed that cognition therapy interventions schema-based reduce illogical beliefs of individuals and there is enough capacity for successful implementation of programs and acquisition of desirable results. This is important especially for teenagers who are in their critical period of their lives and need to learn skills and knowledge to cope with risky conditions.

## REFERENCES

- Ball, S.A., & Young, J.E. (2005). Dual focus schema therapy for personality disorders and substance dependence :Case study results *Cognitive and Behavioral Practice*, 7(3), 270-281.
- Bavi, Sasan, (2009). *Addiction: different types of drugs, etiology, prevention and therapy*. Ahwaz: Ahwaz Islamic Azad University Press.
- Dennis, M., Goldy, S.H., Diamond, G., Tims, F.M., Babor, T., Donaldson, J., & et al. (2004). The cannabis youth treatment (CYT) study: Main finding from two randomized trials. *Journal of substance abuse treatment*, 27, 197-213.
- Fergosen, D. (2012). The Contribution Of Self- Efficacy Beliefs To Psychological Outcomes In adolescence: Predicting And Global Dispositional Tendencies. *Personality And Individual Differences*, 37, 751- 783.
- Hamid, Najmeh (2010). Relationship between psychological hardiness, satisfaction with life and hope and academic performance of female pre-university students, quarterly of applied psychology, winter, 4 (16:44): 101-116.
- Hatoun, K; Salkovous, Case, P; Clark. (2001). *Cognitive therapy behavior; applied guide to treatment of psychological disorders*. Translated by Habib Allah Qasemzadeh. Tehran: Arjmand publications.
- Hides L, Carroll S, Catania L, Cotton S.M, Baker A, Scaffidi A, Lubman D.I. (2013). Outcomes Of An Integrated Cognitive Behaviour Therapy (Cbt) Treatment Program For Co-Occurring Depression And Substance Misuse In Young People. *Journal Of Affective Disorders*, 121(1-2):169-174.
- Johnson, J.L. (2007). Vengefulness: Relationships with forgiveness, rumination, well-being, and the big five. *Personality and Social Psychology Bulletin* 27(5), 601-610.
- Kazemi, Hamid. (2011). Investigation of relationship between early maladaptive schemas and metacognitive states in students of Isfahan province. Master degree thesis in psychology, faculty of psychology and educational sciences, Isfahan University.
- Keyes, C.L.M., Shmotkin, D., & Ryff, C.D. (2002). Optimizing well-being. The empirical encounter of two traditions. *Journal of personality and social psychology*, 82(6), 1007-1022.
- Lazarus. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York :Springer Publishing Company.
- Lihi, Rabert. (2003). *Cognition therapy techniques*. Translated by Hamidpour, Hasan, Andouz, Zahra. (2010). Tehran: Arjmand publications.
- Magid, V., Colder, C. R., Stroud, L. R. (2009). Negative affect, stress and smoking in college students: Unique associations independent of alcohol and Marijuana use. *Addictive Behaviors*, 34 (11), 973-975.

- Moradi, Majid (2002). *Stain of hashish, a look at drug issue and addiction*. Tehran: Naqsh-e-Kelk publications.
- Ninan, Michael, Windi, Dryden. *Cognitiontherapy*. Translated by Ansari SHahidi, Mojtaba. (2012). Tehran: psychology and art publications. First printing.
- Newcomp, M. D., & Richardson, M. A. (2000). Substance use disorders. In M. Herson, & R. T. Ammerman (Eds.), *Advanced abnormal child psychology*. New Jersey: Lawrence Erlbaum Associates Publishers.
- Orgi, (2011). *Investigation of influence of cognitive-behavioral therapy integrated with anger management on coping styles self-efficacy, anger control, and reduction in tendency to drug abuse and prevention from return to drugs in a group of therapy-seeker addicts*. PhD thesis. AllamehTabatabaee University.
- Pengoya, M (2006). The Association Of Avoidance Coping Style, And Perceived Mather And Farther Support With Anxiety/Depression Among Late Adolescents. *Applicability Of Resiliency Models Personality And Individual Differences*, 40, 1165-1176.
- Qahari, Shahrbanou. (2011). *Challenging skills in cognition therapy. 100 techniques*, Tehran: Qatreh publications. First printing.
- Rasouli Azad, Qanbari Hashem Abadi, Bahram Ali; Tabatabaee, Seyyed Mahmoud. (2009). Influence of group-therapy with cognitive-behavioral approach on male drug abusers with basic depression disorder. *Scientific-research journal of principles of psychological hygiene*, 3, 195, 204.
- Rezaei, F., & Shams Alizadeh, N. (2011). Early Maladaptive Schema in methamphetamine and opiod Addicts. *Journal of European Psychiatry*; 1(26):93-99.
- Sarasoun, Parvin and Sarasoun, Barbara. (2003). *Abnormal psychology. (first and second volumes)*. Translated by Bahman Najjariyan, Mohammad Ali Asqari Moqaddam and Mohsen Dehqani, Tehran: Roshd publications.
- Schulman, P., & Tryon, A. (2010) Group prevention of depression and anxiety symptoms *Behavior Research & Therapy*, 45(6), 1111-1126.
- Sheikhi, Mansour; Housman, Heidar Ali; Ahmadi, Hasan and Mojgan Sepah Mansour (2011). Psychometric characteristics of satisfaction with life, thought and behavior, *spring*, 5 (19): 17-29.
- Taghipour, Manouchehr. (1998). Illogical beliefs and psychological confusions, *journal of psychological hygiene, Shiraz University*, 12<sup>th</sup> year, number 3.
- Tannenbaum, C., Ahmed, S., & Mayo, N. (2011). What drives older women's perceptions of health-related quality of life? *Quality of Life Research*, 16(4), 593-605.
- Willams /R.I/8 Chang/s.y. (2005). A comprehensive and comparative review of adolescent substance abuse treatment in Iran. *Clinical psychology*.
- Yang, Jeffrey. Klosko, Jean. Wishar, Marjouri. (2003). *schema therapy. An applied guide for clinical experts*. Translated by Hamidpour, Hasan. Andouz, Zahra. (2010). Tehran. Arjmand publications. First volume.