

Abstract

Objective: This study was an attempt to investigate the effectiveness of group psychotherapy of transactional analysis in the reduction of craving beliefs, cognitive emotion regulation, and adjustment of attachment styles. **Method:** This was an experimental study along with pre-test and post-test and control group. The population of the study consisted of all male drug addicts who had referred to Tehran rehab clinics in 2015. A total of 30 drug-dependent persons were selected as the participants of the study using convenience sampling method and, then, were randomly assigned to experimental and control groups. For data collection purposes, Craving Beliefs Questionnaire, Adult Attachment Scale, and Cognitive Emotion Regulation Questionnaire were used. Group psychotherapy of transactional analysis was carried out during ten 90-minute sessions. **Results:** The results of analysis of covariance showed that therapy of transactional analysis can reduce craving beliefs, self-blame, rumination, catastrophizing, other-blame, and insecure attachment styles; and increase positive refocusing, refocusing on planning, positive reappraisal, perspective taking, acceptance, and secure attachment styles. **Conclusion:** Considering that drug-dependent individuals are more exposed to negative emotions, they are likely to act haphazardly and impulsively in such situations. Therefore, teaching transactional analysis to these people can increase the control rate in stressful situations.

Keywords: Craving Beliefs, Cognitive Emotion Regulation, Attachment Styles, Transactional Analysis, Addiction

Effectiveness of Group Psychotherapy of Transactional Analysis in Craving Beliefs, Attachment Styles and Cognitive Emotion Regulation in Addicts under Treatment

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Introduction

Substance abuse is a chronic relapsing disorder that is followed by many issues in medical, psychiatric, family, professional, legal, financial and spiritual domains. This disorder not only affects individual lives, but also produces a lot of flaws and problems for the family and the community and imposes a large burden on the family and society. Like any other chronic disease, addiction requires time management over time (Daley et al., 2005). This disorder results from an interaction of genetic and environmental factors such as growth abnormalities and psychosocial disadvantages and can be caused by the use of alcohol, opium, hashish, and cocaine and show itself in the form of intoxication, dependence, and abuse (Abou– Saleh, 2006). Many theorists in the field of substance abuse believe that emotional components are effective in the tendency of people to drug use and people's desire to substance abuse. Craving is one of the important features that is experienced in substance abuse disorder. World Health Organization defines craving as a foundation for drug dependency, loss of control, and relapse (Drummond, 2000). In many modern definitions of drug dependency, craving has been regarded tantamount to the central phenomenon and the main cause of continued abuse and also return to substance abuse after a period of treatment (Ekhtiari, Behzadi, Oghabian, Edalati & Mokri, 2006). The word desire or craving is crucial in explaining many addictive behavior. This term is used to explain the high levels of drug use in relapse to substances. Craving has an important role in relapse after treatment, preservation of drug use situation, and drug dependence (Reese & Veilleux, 2015) and is among the most important factors in returning to drug use after discontinuation (Abrams, 2000). Craving is a strong desire for drug use which, if not met, results in psychological and physical pains, such as weakness, anorexia, anxiety, insomnia, aggression, and depression (Addolorato, Leggio, Abeavoli & Gasbarrini, 2005). In addition, a wide range of negative experiences such as sadness, boredom, anxiety, and feelings of isolation are substantial signs of substance abuse (Chaney, Roszell & Cummings, 1982). Many studies pertaining to people dependent on cocaine indicate the relationship between craving and drug use relapse (Bordnick & Schmitz, 1998), craving and treatment outcomes in tobacco consumers (Piasecki, 2006), craving and attentional bias to drug-related stimuli (Ehrman et al., 2002), and the role of emotional schemas in craving for drug use (Masoumi Nowmandan, Hassani & Hatami, 2014). It is assumed that people with substance abuse take drugs in order to manage adverse emotional states. One of the most common strategies for the management and regulation of emotional experiences and emotionally motivating information is the employment of cognitive processes. Cognitive emotion regulation strategies emphasize the cognitive aspects of coping. How to evaluate one's cognitive system in the face of negative events is very important and the mental health of people is the result of the interaction of cognitive emotion regulation strategies of emotional experiences

and proper evaluation of stressful situations. Emotion regulation is a process through which people regulate their emotions to achieve a favorable outcome (Garnefski, Kraaij & Spinhoven, 2002). Previous studies have shown that maladaptive emotion regulation strategies are involved in the development and persistence of pathological states due to their conflict with self-regulation goals during periods of emotional turmoil (Garnefski et al., 2001). People at high risk for substance use disorders show fewer emotionally stable and regulated behaviors compared to the individuals at lower risk of addiction (Shedler & Block, 1990). Accordingly, poor emotion regulation is considered as a very important background for substance use disorders (Mezzich et al., 2007) and predicts poor emotional regulation skills and high level of alcohol consumption in the period after treatment (Berking et al., 2011). Research findings have shown the fundamental role of many variables related to family functioning and behavior in the field of prevention and emergence of substance use disorders (Bagheri, Azad Falah & Fathi-Ashtiani, 2013; Newcomb, 1992). The scope and depth of the influence of family variables have been studied in terms of their importance from different angles. These variables influence children's readiness for drug use and drug abuse through the processes of socialization and parental discipline (Newcomb & Richardson, 2000; Johnson & Pandina, 1991). Clinical findings confirm consumption of most of the substances among the family members that lack intimate parent-child relationships and have not experienced safe bonds (Kandel, 1980). Mother-infant attachment formation process showed that the formation of such a link and experience of safety within such a link are the cornerstone of development and functioning in non-affected individuals. On the other hand, the experience of insecurity in attachment relationships is correlated with mistrust, vulnerability, sensitivity, and communication problems (Ainsworth, Blehar, Waters & Wall, 1978; Kobak & Sceery, 1988). Attachment styles affect methods of dealing with stressful situations (James & Jongeward, 2005). Numerous studies have examined the relationship between attachment and psychopathology in childhood, adolescence, and adulthood. The results of these studies generally show the undeniable importance of attachment as a major factor in mental health (Cassidy & Shaver, 1999; Ozturk & Mutlu, 2010; Liu, Nagata, Shono & Kitamura, 2009; Korver, Meijer & Haan, 2010). Attachment styles are associated with several variables such as self-esteem and impaired interpersonal relationships (Morley & Moran, 2011), anger and hostility (Horowitz, Rosenberg & Bartholomew, 1993), anxiety (Muris, Meesters, Morren & Moorman, 2004), depression (Liu et al., 2009), and personality disorders and attachment (Fossati et al., 2003). Transactional analysis theory is about the social dynamics and character and can be effective as a psychological treatment. Transactional analysis is a therapy system that is applied for the treatment of psychiatric disorders, ranging from daily problems to very deep psychosis about personality towards growth and personal change. This theory offers individual, group, couple, and family therapeutic methods and is also used

outside treatment domain in transactional analysis in training centers (Johnsson, 2011). Psychotherapy is a form of interpersonal relationship. All therapists firmly believe in the need for nurturing a strong therapeutic relationship. The effectiveness of group therapy of transactional analysis in people with depression and anxiety (Widdowson, 2014), in lovemaking styles of couples (Sadeghi, Ahmadi, Bahrami, Etemadi & Pourseyed, 2013), in bringing positive changes in people referring to psychological clinics (Nejadnaderi, Darehkordia & Divsalar, 2013), and increased performance of discordant couples (Sudani, Mehrbizadeh & Soltani, 2012) has been confirmed. Group therapy of transactional analysis is also effective in the increase of self-esteem of the soldiers (Ibrahim Sani, Hashemian & Dowkaneh'ea, 2012), in the increase of marital satisfaction and happiness (Allameh, Aghayi, Atashpour & Moshtaghi, 2014), in the increase of marital satisfaction in couples (Honari, 2014), in the improvement of parent-child relationship and conflict resolution skills (Ghanbari Hashemabadi, Shourcheh, Vafayi Jahan & Bolqanabadi, 2012). In this theory, concepts such as sensual mode pattern (parent, adult, and children), interaction, stroking, and life draft are considered and this theory aims at cognition and behavioral change.

Based on the available evidence, it can be said that the failures associated with cognitive emotion regulation, craving ideas related to drugs, family variables, attachment, and personality formation play some part in the emergence of substance use disorders. Due to the growing trend of substance abuse disorders in the society and the possible practical implications, this study is aimed at examining the effectiveness of group therapy of transactional analysis in relapse prevention among the individuals under detoxification.

Method

Population, sample, and sampling method

This was an experimental study along with pre-test and post-test and control group. The population of the study consisted of all male opiate abusers who had referred to Tehran rehab clinics from October 23, 2015 to December 22, 2015. A total of 30 persons were selected as the participants of the study using convenience sampling method and, then, were randomly assigned to experimental and control groups.

Instrument

1. Demographic questionnaire: This was a researcher-developed questionnaire which contained some items on age, education, physical health, psychiatric disorders, and the type of substance used by participants.

2. Craving Beliefs Questionnaire (CBQ): The Persian version of this scale was used to assess craving beliefs (Beck & Clark, 1993). This questionnaire is a self-report scale that measures the beliefs pertinent to craving for drug use from

mental, physical, and behavioral aspects and consists of 20 items, which are scored based on a 7-point Likert scale (from 1 = strongly disagree, to 7 = strongly agree). The total score of the scale ranges from 7 to 140. Higher scores represent more devastating and unreal beliefs about craving. The validity and reliability of the questionnaire have been reported (Beck & Clark, 1993). Pearson correlation coefficient of .028 has been reported to assess the validity of the scale by investigating the relationship between craving and attentional bias to drug-related stimuli (Ehrman et al. 2002; cited in Rahmanian, Mirjafari & Hassani, 2006). In addition, Mohamadkhani, Sadeghi & Farzad (2011) reported the reliability of this questionnaire using Cronbach's alpha (.77) once and explored the reliability of the questionnaire once more via Cronbach's alpha (.84) and split-half method (.81) (cited in Rahmanian et al., 2006).

3. Adult Attachment Inventory (AAI): This scale was constructed using the items of Hazen & Shaver's attachment questionnaire (1987) and has been validated in student samples and general population of Iran (Besharat, 2005). This scale consists of 15 items that measure three styles, namely secure attachment, avoidant, and ambivalent styles based on a 5-point Likert scale (1 = very low, 2 = low, 3 = average, 4 = high, very high = 5). Minimum and maximum scores of participants in this scale will be 5 and 25, respectively. Cronbach's alpha coefficients of the subscales of secure, avoidant, and ambivalent styles were calculated on a sample ($n = 1480$, female = 860, and male = 620) and were obtained equal to .86, .83, and .84 for the total sample, .86, .83, and .84 for females, and .84, .85, and .86 for males, respectively which show the desired internal consistency of adult attachment questionnaire (Besharat, 2005).

4. Cognitive Emotion Regulation Questionnaire (CERQ-P): This scale was developed by Garnefski (2001) in the Netherlands and contains two English and Dutch versions. This is a 36-item self-report scale which is used to detect cognitive coping strategies and consists of 9 subscales. Each item is scored based on a 5-point Likert scale (1 almost never to 5 almost always). High scores on each subscale show the greater use of strategy to cope with stress and negative events (Bordnick & Schmitz, 1998). The Persian version of cognitive emotion regulation questionnaire was standardized on the Iranian culture by Hassani where the reliability of the scale was reported to be desirable based on internal consistency (Cronbach's alpha coefficients ranged from .76 to .92) and test-retest reliability (with correlation ranging from .51 to .77). The validity of this scale was obtained through factor analysis with principal component analysis and Varimax rotation. The correlation between the subscales has been reported to range from .32 to .67. The criterion validity of the questionnaire has also been reported desirable (Hassani, 2011).

Procedure

After selecting participants from four drug rehabilitation centers of Tehran municipal district 3, the following inclusion criteria were considered in addition

to psychiatric diagnosis: diagnosis of dependence on opium, opium syrup heroin, and crack as the latest drug used according to the diagnostic and statistical manual of mental disorders fourth Edition (revised) and detoxification diagnosis of centers, being male, placement in 20-40-year age range, being at least literate, history of methadone use for less than a year, no diagnosis of other psychological disorders, and willingness to participate in therapy sessions. In addition, exclusion criteria were: unwillingness to continue to participate in therapy sessions, absence of more than two sessions, and discontinuation of treatment under supervision of addiction treatment centers. First, those interested in attending the training course were enrolled by putting up posters to inform the patients referring to the clinic. This process lasted about two months, and the number of 37 people announced readiness to participate in training sessions and the eligibility of them was examined. Then, the individuals were randomly placed in two 15-participant groups (experimental and control). Both groups were evaluated and analyzed once before and once after treatment. Then, the experimental group received transactional analysis training program, containing 10 two-hour sessions on a weekly basis. During this period, the control group received no training and were waiting. The structure of sessions of transactional analysis therapy was extracted and used based on the therapeutic model and protocol of the book, entitled a new introduction to transactional analysis (Stewart & Joines, 2009).

Table 1: Practical guide and description of group sessions of transactional analysis

<i>Session</i>	<i>Content</i>
First session	Introduction and familiarity with members of the group, introduction of the training therapeutic course, setting of a consulting contract with the members present at the meeting and agreement on the goals and tasks, conduct of the pre-test, use of verbal and nonverbal messages in the treatment process, simple structural analysis of sensual states (adult, parent and child). The patients were asked to give a brief description of the status and history of their life and interpersonal relationships.
Second session	In this session, the therapist discussed the history of transactional analysis and provided such conditions to prepare members for homework. In addition, all the individual members read one of their transactional relationship and the members were asked to express their views about the mentioned relationships. Then, the members were given homework.
Third session	Tasks of group members were checked and a brief description was presented about the book "last state" and four mental states. Treatment process in this session included the presence of communication rules about respect for self, others, friends and how to be assertive. Assignment (ego-gram drawing based on complex structural analysis).
Fourth session	Review of homework of the previous session; in this session, group members became familiar with the role of communication patterns in personal and social life. Stroking training, complementary and cross-sectional interaction constituted the interventions of this session.

<i>Session</i>	<i>Content</i>
Fifth session	Review of homework of the previous session; involuntary restoration of childhood (child ego) and basic living conditions were fully described. Each of the members received two pages of the book "mental games" (Eric Berne) by playing the game "Why do not you do something? Yeah, but". The social and psychological levels were introduced and described. Then, the participants played the game "Why do not you do something? Yeah, but" to become familiar with the atmosphere of the game and its analysis.
Sixth session	The members were asked to express their preoccupations. These preoccupations can include shallow relationships and family disputes, lack of will and motivation, frustration and so forth. Treatment process included the restoration of the state "mature ego" and the members were asked to discuss and interact with others their engagements. In this session, training of hidden relationships and extra mutual behaviors, assignments along with some examples of hidden relationships with practice and role-play were explained.
Seventh session	At the beginning of the session, the assignment of the previous session was reviewed. Training of four life states and healing of the inner child constituted the therapeutic interventions. In this session, members of the group tried to analyze the modes (child-adult-parent) and to apply the best way to communicate between these modes in their everyday behavior. Homework (question & answer with the dominant and non-dominant hands) was presented.
Eighth session	Homework of the previous session was reviewed, practical work (exercises and role play) was done, and communication skills were exercised. In addition, the life story of each of the members who was willing was told. Time management concepts and methods of activating "adult" constituted the interventions of this session. Assignment (determination of time management and use of "mature ego" in one's behavior) was also given.
Ninth session	Some explanations were presented about Karpman's drama triangle and four states of life. First, a few examples of games mentioned in book "Eric Berne Games", were presented and analyzed. Then, using the "alcoholic" game, Karpman's drama triangle and four states of life were introduced and applied. "Alcoholic" game and "If it were not for you," along with analysis and their relations based on the diagram of three circles and use of Karpman's drama triangle were also presented. Finally, participants discussed the analyses conducted on the characters of the story, as well as games and their own situations.
Tenth session	First, the draft of life and its definitions was presented to the participants. Then, using the analyses of the previous session about the games, the characters, and four states of life, the draft of the main characters of the story of one of the participants was analyzed at transactional preliminary level. In this way, the story ended. Finally, a complete review of all topics presented during the 10 sessions was done and, as the final step, a memorial plaque was presented to each of the participants in addition to thanking all of them.

Results

The mean and standard deviation of the age of the experimental group were 28.73 and 1.6, respectively while these values for the control group were 26.33 and 1.34, respectively. In terms of education, 3 participants in the experimental group (20%) had a degree below diploma, 9 participants (60%) had diploma degrees, and 3 participants (20%) had bachelor’s degrees. In the control group, 2 participants (13.3%) had a degree below diploma, 10 participants (66.7%) had diploma degrees, and 3 participants (20%) had bachelor’s degrees. In the experimental and control groups, 9 participants (60%) and 8 participants (53.3%) were employed. Duration of drug use from the beginning of suffering had the mean and standard deviation of 3.13 and .39 in the experimental group and 3.27 and .44 years in the control group, respectively.

Descriptive statistics of the variables under study are presented in the table below for each group and test.

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

<i>Variable</i>	<i>Experimental</i>		<i>Control</i>	
	<i>Pretest</i>	<i>Posttest</i>	<i>Pretest</i>	<i>Posttest</i>
Craving beliefs	112.67 (4.79)	77.53 (4.10)	112.67 (4.79)	77.53 (4.10)
Secure attachment	10.73 (2.12)	16.47 (1.46)	10.73 (2.12)	16.47 (1.46)
Avoidant attachment	19.87 (3.44)	12.73 (1.98)	19.87 (3.44)	12.73 (1.98)
Ambivalent attachment	15.87 (3.54)	12.67 (1.63)	15.87 (3.54)	12.67 (1.63)
Acceptance	4.70 (1.03)	7.33 (.72)	4.70 (1.03)	7.33 (.72)
Positive refocusing	4.33 (1.29)	7.80 (1.01)	4.33 (1.29)	7.80 (1.01)
Refocus on planning	4.87 (.83)	7.47 (1.25)	4.87 (.83)	7.47 (1.25)
Positive reappraisal	4.53 (1.36)	7.40 (.99)	4.53 (1.36)	7.40 (.99)
Putting into perspective	4.00 (1.26)	7.53 (.92)	4.00 (1.36)	7.53 (.92)
Self-blame	7.87 (1.41)	2.87 (.92)	7.87 (1.40)	2.87 (.92)
Rumination	7.67 (1.11)	3.53 (1.19)	7.67 (1.11)	3.53 (1.19)
Catastrophizing	7.33 (1.75)	3.01 (1.00)	7.33 (1.75)	3.00 (1.00)
Blaming others	7.73 (1.03)	3.40 (1.12)	7.73 (1.03)	3.40 (1.12)

To investigate the role of psychotherapy in craving beliefs, univariate analysis of covariance should be used. One of the assumptions of this test is the equality of variances. Levene's test results indicate that this assumption has been met ($P>.05$, $F = 3.740$). In addition, the results of Box test representing the consistency of covariance matrix were not obtained significant. Investigation of the slope of regression line between the two groups showed no significant difference between the two groups. The results of covariance analysis are presented in the table below.

Table 3: Results of analysis of covariance representing the effectiveness of therapy in craving beliefs

<i>Mean square</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size</i>
5013.92	440.33	.0005	.94

To investigate the effectiveness of psychotherapy in attachment styles, univariate analysis of covariance should be used. One of the assumptions of this test is the equality of variances. The results of Levene's test indicate that this assumption has been met ($P > .05$). In addition, the results of Box test representing the consistency of covariance matrix were not obtained significant ($M = 23.67$, $P > .05$). Finally, the investigation of the slope of regression line showed no significant difference between the two groups.

The results of multivariate analysis of covariance indicated the presence of a significant difference ($P < .001$ $F = 85.279$, Wilks Lambda = .082). Univariate analysis of covariance was used to examine difference in patterns as follows.

Table 4: Results of univariate analysis of covariance representing pattern differences in attachment components

<i>Variable</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size</i>
Secure attachment	231.23	172.570	0.0005	0.87
Avoidant attachment	331.35	57.540	.0005	.70
Ambivalent attachment	91.00	17.230	.0005	.41

As it is observed in the above table, there is a significant difference in all attachment styles ($P < .001$).

To determine the effectiveness of therapy in cognitive emotion regulation, multivariate analysis of covariance (MANCOVA) should be used. One of the assumptions of this test is the equality of variances. Levene's test results indicate that this assumption has been met ($P > .05$). Moreover, the results of Box test represented the equality of covariance matrix ($M = 82.55$, $P > .05$). The slope of regression line between the two groups showed no significant difference in the pretest scores. Thus, multivariate analysis of covariance was conducted and the results indicated the effectiveness of psychotherapy in cognitive emotion regulation ($P < .001$ $F = 29.511$, Wilks' Lambda = .013). Univariate analysis of covariance was used to examine difference in patterns as follows.

Table 5: Results of univariate analysis of covariance representing pattern differences in components of cognitive emotion regulation

<i>Variable</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size</i>
Acceptance	74.69	109.569	.0005	.85
Positive refocusing	80.34	83.142	.0005	.81
Refocus on planning	59.22	45.135	.0005	.70
Positive reappraisal	80.20	133.411	.0005	.87
Putting into perspective	71.84	93.14	.0005	.83
Self-blame	174.30	137.985	.0005	.88
Rumination	88.04	64.703	.0005	.77
Catastrophizing	105.92	103.618	.0005	.84
Blaming others	108.80	81.571	.0005	.811

As it is observed in the above table, there is a significant difference in all the components ($P < .001$).

Discussion and Conclusion

The results of this study showed that changes in craving beliefs, attachment styles, and cognitive emotion regulation in the experimental group in post-test were significant compared to the changes in the control group. In other words, the application of group therapy of transactional analysis significantly reduced scores of craving beliefs, insecure attachment styles, and weak and maladaptive cognitive strategies. In the same way, the scores of secure attachment and adaptive strategies increased. Scores significantly reduced during the ten therapy sessions. These results are consistent with meta-cognitive model (Wells, 1995), compassion focused therapy (Gilbert, 2010), and the theories related to self-regulation, regulation of affects, and emotion regulation (Gross, 1998). In addition, the findings of the current study show that emotion regulation skills based on the analysis of behavior can be effective in the selection of coping strategies with desire and craving and in the emotional states that can lead to the return of addictive and compulsive behaviors in drug abuse. Negative emotions and an inability to properly manage them are among the important stimuli for the resumption of substance abuse. The substance abusers who employ more adaptive emotion regulation strategies are more successful in treatment period. On the contrary, people who are not able to control their emotions are likely to become permanent drug users (Wells, 1995). Therefore, the use of emotion regulation strategies is regarded as one of the comprehensive treatment plans in prevention of addiction relapse. On the other hand, it should be noted that the promotion of mental health entails training on how to achieve a healthy lifestyle, as well as assisting the individuals at risk of drug abuse to avoid risky behaviors (Gilbert, 2010; Gross, 1998).

The results showed that treatment based on transactional analysis can enhance affective performance and communication, behavioral model of roles, and problem-solving ability of the addicts with insecure attachment styles. This finding is consistent with the results of previous studies (Rezapour Mirsaleh, Eini, Ayinparast & Heshmati, 2014; Jahanbakhsh, Bahadori, Amiri & Asgari-Mobarake, 2014; Bögels & Brechman-Toussaint, 2006; Diamond, Reis, Diamond, Siqueland & Isaacs, 2002). To justify this finding, one can argue that emotional and intimate relations between addicts is of utmost importance. Such relationships are effective in physical and psychological well-being and individuals' ability to function effectively in various individual, familial, and job-related fields. Production and maintenance of intimate relationship are reinforced by certain emotional and attachment bonds. Healthy relationships have positive outcomes and interests in life and non-satisfactory relationships endanger physical and psychological health of people (Adam, Gunnar & Tanaka, 2004). In this regard, since the change in attachment styles will affect many human relationships and attachment patterns are subject to change throughout life (Kerns, Aspelmeier, Gentzler & Grabill, 2001), it can be stated that

transactional analysis like attachment-based therapy can lead to the improvement of affective relations in the addicts with insecure attachment styles (Suchman, Decoste, Rosenberger & Thomas, 2012). In addition, the findings are consistent with previous research findings (Widdowson, 2014; Sadeghi et al., 2013; Sudani, et al., 2012; Liu et al., 2009; Honari, 2014). Emotion regulation strategies play an important role in adaptation and coping with stressful situations. The ability to properly manage emotions in the face of environmental or stressful events makes it possible for individuals to prevent the occurrence of negative emotions and maladaptive behaviors (Garnefski, Boon & Kraaij, 2003). In other words, individuals' thoughts and cognition can bring about a considerable ability to manage and control emotions when facing stressful situations. People who employ poor cognitive strategies such as rumination, catastrophizing, and self-blame are more vulnerable than others. In contrast, those who use other desirable strategies like positive reappraisal are less vulnerable (Garnefski & Kraaij, 2006). To account for this finding, one can assert that, in transactional analysis, mature "ego" is focused on the present, here and now and is in line with the current position and thus "mature" is always self-determined and psychological development of mature "ego" is a continuous process. In decontamination method, polluted beliefs undergo accurate challenges in the process of decontamination. The identification of draft beliefs could lead to modification and adjustment (Stewart & Joines, 2009). Thus, individuals question the reliability and accuracy of the beliefs and experiences that do not enjoy supportive evidence by means of the techniques of this treatment. This explanation is consistent with the theories of cognitive emotion regulation which assert that many emotions require cognitive assessments. In addition, the effectiveness of transactional analysis assist people establish effective communication in a variety of relationships, especially complementary, cross-sectional, and hidden relationships. In other words, transactional analysis makes people be equipped with appropriate communication skills to establish a good complementary relationship by the diagnosis of their own and others' "ego states" and others, especially with regard to verbal and nonverbal clues. Moreover, it is possible to manage the situations of potential conflict via strengthened "mature" supervision using the technique of driving "parent". In this way, conditions for constructive rather than destructive relationships are provided (Berne, 1961). Transactional analysis theory presents some lessons and approaches in the field of passion, intimacy, free self-expression and self-disclosure, avoidance of other-blaming, and other acceptance that can reduce negative interactions between individuals (Stewart & Joines, 2009).

Improvement in the moderation of craving ideas about drugs and the use of adaptive emotional cognitive strategies and secure attachment by the addicts under treatment may be attributable to the nature of self-help education in social interactions and deeper transactional analysis therapy. This is so because the ultimate goal of this therapy is to enable addicts to overcome their emotional and

affective problems and needs by the employment of drafts and healthier living conditions and appropriate communications. Behavioral analysis puts emphasis on the root of evolution, life situation, draft messages, life drama and does not attribute emotional problems to automatic thoughts (Stewart & Joines, 2009). The identification of drafts, which relate turbulent experiences of the childhood to the adolescence of addicts, helps people with substance abuse overcome the emotions, beliefs, behaviors, and destructive feelings (James & Jongeward, 2005). Training of behavior analysis in a friendly atmosphere with positive feelings causes addicts to advance from cold cognition to hot cognition and facilitates the achievement of life drafts. Thus, it brings about addicts' desire to follow up treatment and recovery. Behavior analysis techniques include the revitalization of the inner child, mental coexistence, life draft, and Freud's games similar to "emotional discharge", "ventricular memories", and Penfield's temporal lobe phenomenon. These hot techniques cause severe emotional discharge from maladaptive schema of emotions among addicts. The therapist somehow helps addicts by supportive parents to take steps to modify their feelings and drafts (Stewart & Joines, 2009; James & Jongeward, 2005). Furthermore, empathy with the addict's lives encounters them with this reality that their life draft is not fruitful and they cannot adopt a better draft. Addicts pass through some stages in the treatment process to achieve further understanding of their problem and bring into existence positive changes and stability. In fact, the person begin to change in three states of parent, adult, and child and concentrates on problem-solving more and more, day by day without entering the draft. Then, s/he goes to social control (finds him/herself as the problem, takes the responsibility of his/her actions, and increases his/her autonomous behavior). In the next stage, s/he achieves treatment of transfer and eventually extricates him/herself from the system of destruction (James & Jongeward, 2005; Korver et al., 2010).

Group therapy of behavior analysis provides addicts with such conditions to solve their problems in the presence of others, observe the reaction of others to their behavior, and take new alternatives when their response-giving methods are not satisfactory. These individuals can gain a greater insight and understanding through interaction with each other and self-disclosure, thereby, receiving support, empathy, and feeling of shared pain about their problems (Stewart & Joines, 2009). Cognitive restructuring in adult-adult relationship allows the person under treatment to learn that changing the interpretation of events can modify emotional responses and, thereby, s/he can induce a sense of higher efficiency when experiencing an unwanted emotion. These individuals are also benefited by domination over "adult"; therefore, they can use social support, acceptance and arousal reduction, problem-solving, behavioral activation, cognitive restructuring, and adaptive behaviors in a more effective fashion. On the one hand, addicts in the group are made aware of the emotions pertaining to feeling of shame or guilt, and the effects of negative emotions and

beliefs on their current lives via reviewing life draft and parent-child messages. The ability to manage emotions with "mature ego" makes these people use proper coping strategies in situations with high risk of substance abuse. People with stronger maturities benefit from a higher ability in the anticipation of others' demands, understand others' unwanted pressures, and harness their emotions and cravings; therefore, they show more resistance to drugs. This possibility can be raised that insecure attachment styles, morbid personality structure, and inefficient cognitive self-regulation are associated with substance abuse. Various intervention strategies have been proposed for the treatment of drug dependence. However, most of treatment methods suffer from some deficiencies in terms of reducing the damages caused by this disorder and their effectiveness in recovery despite the relative efficacy of these methods. In consequence, alternative theoretical models are on the way and new treatments have also been applied. However, judgment on the effectiveness and efficacy of various methods of treatment associated with substance dependence disorder should not be made in haste. One of the limitations of this study was mere dependence on self-report instruments related to the outcomes of treatment and absence of follow-up. It is suggested that other treatments be used in both genders in future studies.

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