

Abstract

Objective: The aim of the present study was to compare alexithymia and emotional control between substance abusers and healthy people. **Method:** The research design was causal-comparative research which is categorized as descriptive research method. The study population included all the clients who had referred to addiction treatment centers in Noor-Abad (Delfan). The study participants were comprised of 50 addicts under treatment and 50 healthy participants who were selected based on age, education level, socio-economic status, and number of children through convenience sampling method. The Toronto Alexithymia Scale (TAS-20) and Affective Control Scale were used for data collection purposes in this study. **Results:** The results showed that there was a significant difference between addicts and non-addicts in terms of alexithymia and emotional control. In addition, depression, difficulty identifying feelings, anxiety, and anger were the most important predictors of addiction severity. **Conclusion:** The results show that any difficulty expressing emotions and inability in controlling negative emotions (anger, depression, and anxiety) are risk factors for substance abuse.

Keywords

Alexithymia, Emotion Control, Addiction

On the Comparison of Alexithymia and Emotional Control between Substance Abusers and Healthy People

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Introduction

Drug abuse is a subject that is of interest to clinical psychologists and psychiatrists because it has long-term negative consequences in various sectors of society (Carr, 1999). Addiction is a physical, mental, social and spiritual illness (Galanter, 2006). Regarding drug dependence, various psychological, social, family, and biological factors are involved (Magid, Colder & Stroud, 2009; Franques, Auriacombe & Tignol, 2000). Addiction is a condition caused by the frequent use of a natural or synthetic substance in a way that a person becomes addicted to it physically and mentally (Ammari, Sharifi, Mirzamani & Hashemian, 2011). Drug abuse and addiction are indeed known as ruinous disasters among people, which nowadays have become one of the major concerns of societies (National Institute on Addiction, 2007). On students' drug use, Rahmati & Taremyan (2008) reported as follows: cigarette smoking 8.17%, hookah 30.6%, alcohol 13.17%, hashish 2.6%, ecstasy 1.8%, opium 4.4%, heroin 0.8 %, and crack 1.1%.

One of the important variables related to drug users is affective control. Studies have shown that inadequate emotional development, difficulty organizing behavior, and negative emotions are the characteristics of people with drug dependence (Dawes, Clark & Moss, 1999). Emotions constitute the important and substantial part of human life so that thinking about life without considering it is difficult. Features of and changes in emotions and how to emotionally communicate, understand, and interpret others' emotions play an important role in the development and organization of personality, moral and social development, and formation of identity and self-concept (Lotf Abadi, 2010). All people experience emotions and excitements in their life and this is absolutely normal that they show different forms of emotions and excitements when encountering different situations. However, severe and negative emotions and excitements are unusual and not only are they ineffective, but also they have adverse impacts (Ghadiri, 2005). Extremes of emotions lead individuals to conflict, aggression, anger, hatred, and anxiety which seriously jeopardize their mental and emotional health in an uncontrolled way (Ahmadi, 2001). It is desired to decrease the responsive reactions of emotions rather than prevent the occurrence of them and, accordingly, find enough time for better decisions, foresight, and creativity (Sharifi & Aghayar, 2007). The purpose of emotion management skills is to teach individuals how to distinguish their emotions in different situations and to express and control them (Gross, 1998). Emotion management skills influence different aspects of individuals' life, their interpersonal communications, and mental and physical health (Kurdoi, 2005 cited in Dunham, 2008). In fact, management and control of emotions cause individuals to be realist, virtuous, and honest and to be considered as useful and efficient persons in the development of the society (Shoari Nejad, 2007).

Alexithymia is one of the variables related to drug use. It refers to the difficulty in emotion self-regulation and, in other words, to the inability of cognitive processing of emotional information and emotion regulation. These individuals encounter difficulty in recognition, disclosure, processing, and emotion regulation. They also have difficulties in distinguishing internal feelings from external ones (Besharat, 2008, Eastwood, Cavaliere, Fahlman & Eastwood 2009). The prevalence of alexithymia has been reported to be from 9 to 17 percent in male adults and 5 to 10 percent in female adults (Kokkonen, Karvonen & Veijola, 2001). Results have shown that alexithymia is interrelated with many disorders such as generalized anxiety (Schut, Castonguay & Borkovec, 2001), social anxiety and panic (Fukunishi, Kikuchi, Wogan & Takubo, 2001), eating disorders (Zonnevijlle-Bender, van Goozen, Cohen-Kettenis, van Elburg & van Engeland, 2002), drug abuse (Cecero & Holmstrom, 1997), and fatigue (Eastwood, Cavaliere, Fahlman & Eastwood, 2007). Regarding cognitive and emotional deficits, it is assumed that alexithymia can be linked to health indicators in general and physical and medical issues in particular. It has also been revealed that alexithymia, particularly the subscale of difficulty identifying feelings, is related to the inability in control of emotions such as depression, anxiety, and anger (Porcelli, Tulipani, Maiello, Cilenti & Todarello, 2007). Generally, it seems that few studies have directly attempted comparing alexithymia and emotion management in drug users. In a study, Dubey, Pandey & Mishra (2010) showed that alexithymia is related to unhealthy behaviors such as eating disorders, drug abuse, alcohol dependence, and gambling. Furthermore, alexithymia is associated with anxiety, depression, aggression, pain disorders, and abnormal sexual relationships. (Wills, Vaccaro & McNamara, 1994) showed that drug addicts are characterized by such personality traits as novelty seeking, poverty, self-control, anger, addiction, records of adverse events in life, tolerance for deviation, and negative emotions. Carver & Scheier (2008) found that drug abusers take drugs to relieve anxiety, hopelessness, and negative mood changes and also to reduce aggressive behavior. In another study, Lerner & Vicary (1984) found that mood problems in childhood are related to the probability of increased use of tobacco, drugs and alcohol in adolescence and adulthood. Also, Yi, Luo & Zhong (2007) showed that alexithymia is positively correlated with maladapted styles of emotion regulations and negative excitements and is negatively correlated with adapted styles. In the same way, those with low scores on this scale make use of negative coping styles and take a higher dose of drug (Dubai, et al., 2010).

Garnefski & Kraaij (2006) concluded that people having difficulty describing their emotions suffer more than other people from depression, anxiety, and negative emotions. Epstein, Botvin, Diaz, Williams, & Griffin, (2007) showed that adolescent smokers or alcohol, marijuana and heroin abusers have more negative emotions, maladaptive behaviors and aggressiveness compared to their peers. McColor, Susman, Din & Kran (2008) found that family conflict,

anxiety, depression, positive attitudes, and positive beliefs in drugs are the strongest predictors of drug use. In a study, Gerana, Munoz, & Navas (2009) found that those individuals who obtained higher scores in neuroticism tend to drug abuse compared to their counterparts. Yousefi, Reavis, Kean, & Calkins (2010) concluded that those individuals who obtain low scores in mental health indices, depression, anxiety, and somatization take drug more frequently in comparison with their peers. Arria et al (2011) showed that those individuals who give inappropriate responses in dealing with mental stress, feelings of sadness, confusion, and emotion regulation strategies take drug more than their peers. Sinha (2011) found that drug users have more psychological problems such as, stress, anxiety, hopelessness, thoughts of suicide, and depression than ordinary people. Parker, Taylor, Eastabrook, Schell & Wood, (2008) found that failure in creating emotional relationship with others leads to drug abuse in individuals. Drug abuse is related to depression (Basman et al., 2009), anti-social behavior and depression (Embry, Hankins, Biglan & Bole, 2009), injury of psychosis and anxiety (Pluddemann, Flisher, Mcketin, Parry, & Lombard, 2010), and low self-control and depression (Otten, Barker, Maughan, Arseneault Louise &Engels, 2010). Results of studies done by Cole, Logan & Walker (2011) also showed that self-control and personal control followed by incoming stress have a negative correlation with drug abuse.

In sum, studies have shown that emotional intelligence which is closely in line with emotional regulation ability has a negative correlation with drug abuse (Riley & Schutte, 2003). Also, inadequate emotional development, difficulty organizing behavior and emotions (Davis, Stonkoy, Roberts, 1999), and negative emotional experience (Siegle & Senna, 1997) are the characteristics of drug addicts. With the quick growth of the number of addicts, some problematic issues such as an increase in the number of prisoners of drug crime, the spread of AIDS, the break-up of families, enormous human and financial costs have come into existence as the main issues related to drugs. Therefore, it was essential to carry out this research (Ammari et al, 2011). It seems that emotion and excitement regulation creates an extra ability for individuals to refrain from drug use and helps them control their temptation to use drug again. This some kind of a conflict between tendency and avoidance and this issue adds to the novelty of this study (Mayer &Salovey, 1997; Parker et al, 2008; Aldao, Nolen-Hoeksema &Schw, 2010). Regarding the results of previous studies and the role of the variables pertaining to alexithymia and emotional regulations in the pathology and treatment of drug abuse, this study was carried out with the aim of comparing the dimensions of alexithymia and emotional regulation between the individuals with drug abuse and healthy individuals and the role of these dimensions in predicting the severity of addiction.

Method

This research is a descriptive and causal-comparative one which has been conducted through retrospective techniques. The study population consisted of all young drug abusers of opium, heroin and crack who referred to heroin rehab center in Noor-Abad (Delfan) in 2012. The sample consisted of 50 drug abusers and 50 healthy individuals who were included according to age, number of children, socio-economic status, and educational level through convenience sampling method. Inclusion criteria were: 1) obtaining consent from the patients to participate in the study, 2) age range of 20 to 35 years, 3) duration of drug abuse between 2 to 5 years, 4) addiction to opium, heroin, and crack, 5) lack of chronic mental illness, and 6) lack of chronic physical illness.

Instrument

1. Toronto Alexithymia Scale (TAS-20): this is a 20-point scale developed by Bagby, Parker & Taylor (1994) and measures alexithymia in three subscales of difficulty identifying feelings (seven items), difficulty describing feelings (five items) and externally-oriented thinking (eight items). Scoring is done by a 5-point Likert scale from one to five from strongly agree to strongly disagree (Besharat, 2009). In Persian version, Cronbach's alpha coefficients were obtained 0.85 for alexithymia and 0.82, 0.75, and 0.72 for the three subscales of difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking, respectively which is representative of desirable internal consistency (Besharat, 2007). Ghorbani, Bing, Watson, Davison & Mack (2002 cited in Shahgholian, Moradi, & Kaafi, 2007) obtained the Cronbach's alpha of 0.74, 0.61, and 0.50 for difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking subscales of this questionnaire in Iranian samples. Shahgholian et al (2007) obtained the reliability of the whole scale in an Iranian sample using Cronbach's alpha as 0.74 and 0.70, 0.64, and 0.52 for the sub-scales of difficulty describing feelings, difficulty identifying feelings, and externally-oriented thinking subscales, respectively.

2. Affective Control Scale: This is an instrument for measuring people's control over their emotions and consists of 42 questions with four sub-scales entitled anger, depressed mood, anxiety, and positive affect. Response to questions is provided in a seven-degree scale wherein point one means strongly disagree and point seven represents strongly agree. The number of 12 items are scored reversely. The subscales of anger, depressed mood, anxiety, and positive affect contain 8, 8, 13, and 13 items, respectively. Internal consistency and test-retest reliability for the total score of the scale have been reported to be 0.78 and 0.94; 0.72 and 0.73 for the subscale of anger; 0.91 and 0.76 for depressed mood; 0.89 and 0.77 for anxiety; 0.84 and 0.64 for positive affect (Williams, Chambless & Ahrens, 1997). Also, Dehesh (2009) evaluated the reliability of the scale and came with the Cronbach's alpha value of 0.84 for the total scale and 0.53, 0.60,

0.76, and 0.64 for the subscales of anger positive affect, depressed mood, and anxiety, respectively.

Results

The mean (standard deviation) of the age of drug abusers were 27.17 (4.10) years and for the normal group 26.11 (3.85) years. In the study samples, educational level was as follows: 36% and 26.45% of drug abusers and normal individuals had diploma; 22.6% and 24.3% of drug abusers and normal participants had associate degree; and 41.4% and 49.25% of drug abusers and normal participants had bachelor's degree or higher, respectively.

Descriptive statistics of the study variables are presented separately in Table 1.

Table1: Descriptive statistics of alexithymia and emotional control in separate groups

<i>Variables</i>	<i>Components</i>	<i>Normal group (SD±Mean)</i>	<i>Drug abusers (SD±Mean)</i>
Alexithymia	Difficulty describing feelings	19.42±3.70	24.57±4.58
	Difficulty identifying feelings	14.76±3.05	23.55±4.83
	Externally-oriented thinking	19.63±3.02	28.84±4.03
Affective control	Depressed mood	21.59±3.39	31.54±4.76
	Anxiety	33.87±3.54	46.08±4.29
	Positive affect	48.74±4.92	33.56±4.16
	Anger	22.40±3.26	33.66±4.48

MANOVA should be used to examine the mean score differences of the studied variables between groups. One of the pre assumptions for the analysis is the equality of covariance matrices. Box's test results indicated the satisfaction of this pre assumption (Box's M= 39.56, F=1.290, P<0.05). Similarly, Leven's test results indicated the equality of error variances. Due to satisfaction of pre assumptions, MANOVA results indicated a significant difference between the two groups (Wilk's Lambda= 0.437, P<0.001). Then, one-way ANOVA was used to examine difference patterns as follow:

Table2: One-way ANOVA results representing difference patterns in the subscales of alexithymia and affective control

<i>Variables</i>	<i>Components</i>	<i>Sum of squares</i>	<i>F</i>	<i>P</i>
Alexithymia	Difficulty describing feelings	72.05	3.399	0.066
	Difficulty identifying feelings	380.68	15.619	0.0005
	Externally-oriented thinking	63.97	6.906	0.0009
Affective control	Depressed mood	521.59	26.758	0.0005
	Anxiety	192.85	8.794	0.003
	Positive affect	120.92	5.434	0.02
	Anger	94.63	5.278	0.017

As seen in table 2, there is a significant difference between the two groups in components of difficulty describing feelings ($P < 0.001$), externally-oriented thinking ($p < 0.01$), depressed mood ($P < 0.001$), anxiety ($P < 0.01$), positive affect ($P < 0.05$), and anger ($P < 0.05$).

Stepwise regression analysis was used to predict the severity of addiction based on the components of alexithymia and affective control. Results showed that difficulty identifying feelings has entered the equation in the first step and by itself accounts for 54.7% of the variance in addiction severity. In the second step, depression entered the equation where these two variables together explained 73% of the total variance. In the third step, anxiety entered the equation that explained 74.7% of the total variance along with the first two steps. In the final step, anger entered the equation and constituted 78.1% of the total variance along with the other three steps. Regression coefficients in the last step are presented in the following table.

Table 3: Regression analysis of addiction severity based on alexithymia and affective control

<i>Predictors</i>	<i>B</i>	<i>SD</i>	<i>β</i>	<i>t</i>
Difficulty identifying feelings	1.461	0.387	0.219	3.708
Depressed mood	0.497	0.107	0.456	4.662
Anxiety	-0.983	0.588	-0.152	1.672
Anger	-0.727	0.438	-0.131	1.660

Discussion and Conclusion

The aim of the present study was to compare alexithymia and emotional control between substance abusers and healthy people and the role of these variables in predicting addiction severity in both groups. The results of this study indicated that the mean scores of difficulty describing emotions, difficulty identifying emotions, and externally-oriented thinking in drug users are

significantly higher than healthy individuals. These findings are in line with the findings obtained by (Trinidad & Johnson, 2002; Garnefski & Kraaij, 2006; Yu et al., 2007; Parker & Taylor, 2008; Yousefi et al., 2010) in that drug users suffer more alexithymia and negative emotions. These results show that drug users' inability in expressing emotions is due to lack of emotional sufficiency, inappropriate emotional skills, and low ability of these individual in problem solving (Mayer, David, Caruso & Salovey, 1999). It seems that these individuals lack sufficient ability in eliminating the mentioned deficits and avoiding relapse to drugs regarding components of emotional management, affective control of themselves and others, and social skills. It can be concluded that inadequate emotional development, difficulty organizing behavior and emotions, and negative emotions such as anger are the features of drug abusers (Davis & Clarck, 1999). The ability of expression of emotions prevents from the repetition of temptation and creates a conflict between tendency and avoidance. Additionally, lack of emotional management skills can cause low level of understanding from negative and harmful consequences of drugs; therefore, the individual fails when encountering psychological and social pressures in avoiding drug use (Mayer & Salovey, 1997). In explaining this issue, it can be concluded that alexithymia is a cognitive-emotional trait wherein the sufferer is unable to regulate and understand his/her emotions. When emotional information cannot process cognition, understanding, and evaluation; individuals get cognitively and emotionally confused and this failure can disrupt their understanding of emotions and cognition (Besharat, cited in Mazaher Afshar, 2010). These individuals normally are not able to identify, understand or describe their emotions and have limited ability in dealing with stressful situations which is due to the lack of awareness of the emotional and cognitive inability in processing their feelings. One of the methods of controlling stress, especially in terms of emotions, is the failure to verbally release negative feelings. Accordingly, the psychological components of alexithymia, such as depression and anxiety are intensified. Those individuals who have the ability to identify their emotions and effectively express their emotional manners can encounter life issues in a better way and are more successful in adapting themselves to the environment and others. They also enjoy higher levels of mental health. They take negative and provocative events as an opportunity for challenge rather than a threat (Motan & Gencoz, 2007). However, due to high self-confidence, healthy individuals enjoy creating communication with others in such a way that one kind of positive emotion is established between them. This causes them to become healthy in all aspects of emotional, psychological, social, and physical life.

Similarly, the results showed that the mean score of depression, anxiety, and anger in drug users is significantly higher in comparison to healthy people. This result is consistent with that of previous studies in that drug users have higher levels of depression, anxiety, and anger (Wills et al, 1994; Epstien et al, 2007;

Gerana et al, 2009; Arria et al, 2011). In terms of these results, it can be asserted that widespread and rapid change in all aspects of life is one of the characteristics of youth which probably leads to high mental stress. Adolescents, unlike adults, do not have enough experience to deal with feelings of mental stress; therefore, they use drugs as a self-prescription in these stressful situations. On the one hand, drug addiction is probably a response to the inability to deal with obstacles, failures, and frustration experienced by the individual in life which makes him/her anxious or depressed. By this means, individuals try to relieve their pains and internal problems through an enjoyable external source, the problems that have caused changes in mood, apathy, and lack of pleasure and uniformity of affairs. On the other hand, those children and adolescents who have special destiny may feel higher levels of anger and confusion in problem-solving situations. Thus, they may tend to use drugs in order to tackle these emotions (Franken, 2005). Therefore, in terms of these results, one may state that these individuals do not use drugs only for taking pleasure, but they use drugs to suppress and overcome their internal turmoil. As well, this possibility is at play that their aggressive behaviors may cause them to be abandoned by their friends and positive peers who respond to life problems and issues in a logical and abstinent way and this can cause them to join to deviant groups. By this way, appropriate ground for drug use is provided. If a person encounters obstacles because of family or social problems, it can cause his/her anger and aggression. Since aggression and violent behavior are deemed culturally and educationally unacceptable in our society, these individuals view themselves in need of pain-killers to overcome emotions and achieve inner peace; and they find this effect in narcotic drugs.

The results of this study showed that alexithymia and affective control are significant predictors of addiction. The role of these variables in predicting addiction severity was 54% while the remaining 46% is related to living, social, and environmental conditions. This finding is in line with that of other studies in that difficulties identifying feelings, depression, anxiety, and aggression have the largest role in predicting addiction severity (McKaller et al, 2008; Parker et al, 2008). In explaining these findings, it can be stated that the view of people's uniqueness in terms of drug abuse, lack of parental attention, and people's inability to adequately express emotions make the persons away from the family environment and this leads youth or adolescents to take refuge in places wherein the level of acceptance and expression of emotions are not encountered any difficulty (Sharifi & Aghayar, 2007). When individuals are involved in internal depression and stress, they need an external source to reduce the level of excitation to extricate them from these conflicts. To this end, they try to solve problems in an emotion-oriented way rather than cope with them in a problem-oriented way. In this case, they feel a sense of enjoyment just for a short while. This cycle of short-lived enjoyment and relief leads the individual to drugs again and a vicious circle is created. Regarding the results of this study, it can be stated

that the reasons of individuals' tendency to drug use are negative emotions and many shortcomings in the area of emotional expression. As well, drug use as a coping strategy of avoidance is negative and inefficient for reducing negative emotions and resolving interpersonal conflicts and problems (Cooper, Russel, Skinner & Windle, 1992).

Selection of patients from rehab centers of Noor-Abad (Delfan) and lack of control in the type of drug were the limitations of this study. The implication of this study indicate the importance of the development of new interventions and approaches that drug abusers have to learn in order to cope with negative emotions and expression of emotions. In the same way, it is possible to teach individuals how to express emotions and control emotional feelings in different situations to prevent drug abuse.

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