

Abstract

Objective: This study was aimed at predicting tendency to drug use based on behavioral activation and inhibition systems, cognitive flexibility, and distress tolerance among students.

Method: The research method used in this study was descriptive and correlational. The statistical population of this study included all high school students in Ardabil in the academic year of 2015-2016. From among the population, 255 students were chosen via cluster random sampling method as the participants, but the total of 230 questionnaires was analyzed at the end. For data collection, Zargar et al.'s Addiction Potential Scale (2006), Gray-Wilson Personality Questionnaire (1989), Dennis and Vander Wal Cognitive Flexibility Questionnaire (2010), and Simons and Gaher's Distress Tolerance Questionnaire (2005) were used.

Results: The results indicated that behavioral activation system has a significant positive relationship with tendency to drug use in students. In addition, it was found that behavioral inhibition system, cognitive flexibility, and distress tolerance were significantly correlated with tendency to drug use in students. In addition, regression analysis revealed that almost 45% of the total variance in students' tendency to drug use was predicted by behavioral activation and inhibition systems, cognitive flexibility, and distress tolerance.

Conclusion: It can be concluded that behavioral activation and inhibition systems, cognitive flexibility, and distress tolerance are the variables interrelated with tendency to drug use in students. Therefore, these variables should be taken into account in addiction prevention and treatment programs.

Keywords: tendency to drug use, behavioral activation and inhibition systems, cognitive flexibility, distress tolerance, students

On the Prediction of Tendency to Drug Use Based on Behavioral Activation and Inhibition Systems, Cognitive Flexibility, and Distress Tolerance among Students

Ali Sheikholeslami, Ahmad Reza Kiani, Shilan Ahmadi, Esmail Soleimani

Ali Sheikholeslami

Assistant Professor, Department of Educational Sciences, University of Mohaghegh Ardabili, Ardabil, Iran. Email: a_sheikholslami@yahoo.com

Ahmad Reza Kiani

Assistant Professor, Department of Educational Sciences, University of Mohaghegh Ardabili, Ardabil, Iran

Shilan Ahmadi

MA in Counseling, University of Mohaghegh Ardabili, Ardabil, Iran

Esmail Soleimani

Assistant Professor, University of Urmia, Azerbaijan-e-Gharbi, Iran



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Introduction

Drug addiction is a psychological relapsing and chronic disease that is associated with severe motivational disorders and loss of behavioral domination and leads to personality destruction. Millions of people suffer from this disorder, which is often manifested with other mental illnesses and disorders and imposes various social and economic costs on the community (Dallas, David & Julie, 2010; Choudhury, Nagel & Saleha, 2009). Indeed, drug use has imposed heavy burdens and costs on the society by its destructive effects on people's health and the increase in crime and mortality in society; therefore, it has become a major threat to societies (Peter & Alicia, 2010). At present, heroin, cocaine, and other drugs cause around 200,000 deaths each year in the world and lead to the destruction of families and the misery of thousands of other people (World Drug Report, 2012). Drug addiction has been conceptualized as follows: the end point of a progressive loss of control over behaviors and the obsessive-compulsive consumption of drugs, and continuing these behaviors in spite of undesirable consequences. In addition, drug addiction may be accompanied by a lack of executive control over maladaptive habits (Belin, Murry & Everitt, 2013). Studies have shown that the most dangerous time for the highest vulnerability to the phenomenon of substance use is during the transitional stages of life. Early in high school period, adolescents are faced with multiple socio-psychological challenges and issues, including coping and communicating with peers. In fact, it is early in the adolescence that that individuals first encounter with drugs. During high school, they also face specific educational, psychological, and social challenges that can result in smoking, alcohol drinking, and use of other substances (Tareman, 2004).

Tendency is an internal state in which there is a high possibility of the occurrence or the easy acquisition of behaviors (Pourafkari, 2008). Tendency to drug use has been defined as individuals' beliefs and attitudes about drugs use and its negative and positive consequences (Aderm & Nikmanesh, 2011). There are several reasons for tendency to a variety of drugs. Some people go for drug use to be accepted by the society, while others try to grow more and more, and some take refuge in drugs to gain relief (Abolghasemi, Mahmoudi & Soleimani, 2009). There is no specific agreement on the root causes of tendency to drug use; therefore, there are multiple various factors associated with drug use and abuse, which include individual backgrounds, family characteristics, and social, and environmental factors (Maithya, 2009). Recent research strands have focused on risk factors and multiple etiologies. Although emphasis has been greatly placed upon social factors in tendency to drug use, drug use and abuse are also associated with biological and psychological processes, as well (Glantz, 1992).

From among these factors, one can refer to behavioral inhibition system (BIS) and behavioral activation system (BAS). According to Gray's theory, BIS and BAS are the foundation of individual differences, and the activity of each brain-

behavioral system triggers different responses in individuals (De Pascalis, Varriale, & D'Antuono, 2010). Some studies have shown that there is a significant positive correlation between the sensitivity of behavioral activation system and alcohol abuse (Franken, & Muris, 2006; Loxton, & Dawe, 2007; Hundt, Kimbrel, Nelson, & Mitchell, 2008; O'Connor, Stewart, & Watt, 2009). Behavioral inhibition systems are activated by conditional triggers that are associated with punishment or exclusion of rewards, or by the new stimuli or triggers that intrinsically involve fear (Gray, 1994). Since the behavioral activation system orients a person to do things with a probability of receiving a reward (regardless of the probability of negative consequences), the sensitivity of this system is considered as a factor for the expansion of drug abuse. In this regard, some authors have raised the concept of reward deficit syndrome as a potential contributor to the development of substance abuse disorders (Patricia, Ilse, Laurence, & Walter, 2009). Therefore, it is anticipated that those individuals are at the highest risk of drug use and alcohol consumption whose BAS is higher than the activity level of this system in ordinary people and their BIS is lower than that of the activity level in ordinary people (Nathan, et al., 2007). Rose, & Mosler (2013) concluded that there is a positive correlation between behavioral activation system and addiction tendency.

Another relevant concept with regard to drug abuse is cognitive flexibility. In general, the ability to change cognitive metrics for the purpose of adaptation to the changing environmental stimuli is a major element in the definitions of cognitive flexibility (Dennis, & Vander Wal, 2010). Cognitive flexibility is one of the main components of the executive function. Executive functions regulate outcomes of behavior that usually include the inhibition and control of stimuli, working memory, cognitive flexibility, planning, and organizing (Denckla, 2003). People who have the ability to think flexibly use alternative justifications, positively reconstruct their mental framework, accept challenging or stressful situations, and are psychologically more flexible and resilient than those who are less flexible (Burton, Pakenham, & Brown, 2010; Phillips, 2011). Some researchers have reported that abusers of Marijuana, stimulants, and heroin suffer from the defects in frontal executive functions that appear as reduced cognitive flexibility (VerdejoGarcia, Lopez-Torrecillas, & Perez-Garcia, 2005). On the other hand, substance use is associated with damages and harms to the cognitive function, including problem-solving, planning, organizing, learning new content, spatial-visual ability, cognitive flexibility, and memorization skills (Ardila, et al., 2007). Shah Mohammadzadeh, Narimani, Mikaeli & Bashpour (2014) concluded that there is a significant difference in terms of cognitive flexibility between substance abusers and normal people in that cognitive flexibility is low in people with substance abuse.

Distress tolerance is one of the constructs pertinent to the conduct of research in the field of drug use. Distress tolerance is conceptualized as a meta-emotional concept and is considered as a trait rather than an emotional state (Simons, &

Gaher, 2005). Distress tolerance is referred to as the way people respond to negative emotions and includes additional information beyond the individual's awareness of the amount of negative emotions. This behavior is a useful emotional response that has been defined as a person's ability to tolerate unpleasant inner states (Zvolensky, Vujanovic, Bernstein, & Leyro, 2010). Distress tolerance has been increasingly observed as an important structure in the development of a new insight into the onset and maintenance of psychological trauma, as well as prevention and treatment (Zvolensky, Bernstein, & Vujanovic, 2011). Research shows that high levels of distress intolerance are correlated with high levels of drug use (Brandon, Herzog, Juliano, Irvin, Lazev, & Simmons, 2003) the increasing risk of development and growth of drug use disorders (Vujanovic, Bernstein, & Litz, 2011), and the increasing risk of relapse of drug use (Daughters, Lejuez, Bornoalov, & Kahler, 2005). Bashpour & Abbasi (2014) concluded that distress tolerance has a relationship with the severity of drug dependence and craving in drug-dependent people. In the same vein, Daughters et al. (2013) showed that low distress tolerance increases the risk of alcohol abuse, delinquent behaviors, and internalizing disorders. Potter, Vujanovic, Marshall-Berenz, Bernstein, & Bonn-Miller (2012) also found that distress tolerance is an intermediary variable between the severity of post-traumatic stress symptoms and marijuana use as a coping method.

Therefore, the question that is raised here is to know whether behavioral activation and inhibition systems, cognitive flexibility (perception of different options, perceived controllability, and perceived behavioral justification), and distress tolerance (tolerance, appraisal, absorption, and regulation) have a simple and multiple relationship with tendency to drug use in school students; and whether these variables can predict the tendency to drug use in students.

Method

Population, sample, and sampling method

The present research was an applied one in terms of objective, a descriptive one in terms of method, and a correlational one in terms of research type. The statistical population of this study consisted of all the male secondary school students of Ardabil in the academic year 2015-16. Random cluster sampling method was used to select the sample. In the two educational districts of Ardabil, one district (District 2) was selected. Then, three schools were selected from among the schools of this district (10 schools) and, finally, four classes (from the total of 12 classes) were selected as the sample from each school. The number of 255 students constituted the final sample of this study, out of whom the questionnaires pertaining to 230 participants had been completed soundly and could be finally analyzed.

Instruments

1. **Addiction Potential Scale:** This scale has been constructed by Weed, & Butcher (1992) and some attempts have been made to determine its validity in Iran. This scale is the Iranian scale of addiction potential, which was constructed according to the psychosocial conditions of the Iranian society by Zargar (2006) (cited in Zargar, Najarian & Naiami, 2008). It consists of two factors, 36 items plus 5 lie detecting items. Each question is scored on a continuum from zero (strongly disagree) to 3 (strongly agree). However, the scoring method for the items numbered 6, 12, 15, and 21 is in reverse. The minimum score of the scale is zero and the maximum score is 108. Zargar et al. (2008) used two methods to assess the validity of this scale. In the criterion validity, the two groups of addicts and non-addicts were well-differentiated from each other. The construct validity of the scale was calculated by correlating it with the 25-item scale of the list of clinical symptoms, which was obtained equal to 0.45 and is significant. The reliability of this scale was obtained by Zargar, Najarian & Naimati (2008) using Cronbach's alpha coefficient and it equaled 0.90. In this study, its reliability was assessed via Cronbach's alpha coefficient and the value of 0.88 was obtained.

2. **Gray- Wilson Personality Questionnaire:** The main form of Gray- Wilson Personality Questionnaire was designed by Wilson, Barrett, & Gray (1989) to measure the brain-behavioral systems whose dominance in humans is recognized as the cause of individual differences in attention and selection of stimuli and behavior. However, in 2003, Slobodskaya, Knyazev, Safronova, & Wilson developed the 28-item form of this questionnaire. The response spectrum was based on three options, i.e. yes (2), and no idea (1), and no (0). The items are scored both negatively and positively. The answers yes, no idea, and no to each positive item are assigned 2, 1, and zero points, while the opposite story holds true for negative questions. The minimum score of this scale is zero and the maximum score is 56. There are two subscales, namely behavioral inhibition and behavioral activation in this form. The questions with odd numbers measure behavioral activation subscale and the questions with even numbers measure the behavioral inhibition subscale. In a research, the Cronbach's alpha reliability coefficients of this scale were calculated and the values of 0.72 and 0.74 were obtained for the behavioral activation subscale and the behavioral inhibition subscale, respectively (Slobodskaya et al., 2003). Moreover, in another study, the Cronbach's alpha for behavioral activation subscale was reported 0.67, for behavioral inhibition subscale was reported 0.62, and for the total scale was reported 0.68. The concurrent validity of this study was examined using Goodman's Strengths and Difficulties Questionnaire and a good correlation was obtained between the two scales (Sepah Mansour, 2010). In the present study, the Cronbach's alpha coefficients of the behavioral activation and behavioral inhibition subscales were obtained equal to 0.64 and 0.66, respectively.

3. **Cognitive Flexibility Inventory:** This questionnaire, developed by Dennis & Vander Wal (2010), is a short self-report tool with 20 questions and is used to

measure a type of cognitive flexibility that is required to challenge the person's situation and replace inefficient thoughts with efficient ones. The scoring is based on a 7-point Likert scale wherein the option strongly disagree is assigned score 1, and the option strongly agree is assigned score 7. This scoring in the questions numbered 2, 4, 7, 9, 11, and 17 is in the reversal form. The maximum score of the scale is 140 and the minimum score is 20. Its components include the tendency to perceive difficult situations as controllable (the items numbered 3, 5, 6, 12, 13, 14, 16, 18, 19, and 20); the ability to perceive multiple alternative explanations for life occurrences and human behavior (the items numbered 1, 2, 4, 7, 9, 11, 15, and 17); and the ability to generate multiple alternative solutions to difficult situations (the items numbered 8 and 10). Dennis & Vander Wal (2010) showed that this questionnaire enjoys a desirable factor structure, convergent validity, and concurrent validity. These researchers showed that the two factors of perception of different alternatives and perception of alternative solutions to difficult situations have the same meaning, and the control factor was considered as the second component. Its convergent validity was assessed with Martin and Robin's Cognitive Flexibility Scale and was obtained equal to 0.75. They evaluated Cronbach's alpha for the whole scale, control perception, and perception of different alternatives, and obtained the coefficients of 0.91, 0.91, and 0.84, respectively; in addition, they obtained the reliability values of 0.71, 0.75, and 0.77 via re-test method, respectively. In Iran, the reliability coefficient of the total scale was obtained equal to 0.71 and the subscales of perceived control, perception of different alternatives, and perceived behavior justification were reported to have taken up the values of 0.55, 0.72, and 0.57, respectively (Soltani, Shareh, Bahrainian & Farmani, 2013). These researchers calculated the Cronbach's alpha coefficients of the total scale to be 0.90 and reported the values of 0.87, 0.89, and 0.55 for the above subscales, respectively. In this study, Cronbach's alpha coefficient reliability of the scale was obtained equal to 0.72.

4. Distress Tolerance Scale: It is a self-assessment index for measuring emotional distress that was developed by Simons & Gaher (2005). This questionnaire includes 16 items that are scored based on a 5-point Likert scale from strongly agree (1) to strongly disagree (5). It is noteworthy that the item numbered 7 is scored in reverse. The maximum score of this scale equals 80 and the minimum score is 16. Its components include tolerance (items numbered 1, 3 and 5), appraisal (items numbered 7, 8, 10, 11, 12, and 13), absorption (items numbered 2, 4, and 16), and regulation (items numbered 9, 14, and 15). The items of this scale measure distress tolerance based on the individual's abilities to tolerate emotional distress and assess mental distress, the degree of attention to negative emotions in case of occurrence, and regulatory measures to relieve distress. High scores on this scale indicate a high degree of distress tolerance. The alpha coefficients of these subscales were obtained equal to 0.72, 0.82, 0.78, and 0.70, respectively and 0.82 for the whole scale. The intra-class correlation

coefficient was obtained equal to 0.61 after the passage of six months. It has also been proved that this scale enjoys a good criterion validity and convergence validity. This scale has a negative relationship with mood acceptance and holds a positive relationship with the Scale of Coping Strategies with Alcohol and Marijuana Use (Simons & Gaher, 2005). The Cronbach's alpha coefficient of the whole scale was obtained equal to 0.86 (Andamikhoshk, 2013). Azizi, Mirzaea & Shams (2009) also reported the Cronbach's alpha of this questionnaire to equal 0.70 and its test-retest reliability to be 0.79. In this study, the reliability of this questionnaire was obtained equal to 0.88 through Cronbach's alpha coefficient.

Results

In this study, 230 secondary school students were with mean age of 15.91 and a standard deviation of 1.32. The following tables provide descriptive and inferential statistics.

Table 1: Descriptive statistics of research variables

<i>Variables</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Variables</i>	<i>Mean</i>	<i>Standard deviation</i>
Behavioral Activation System	13.46	4.81	disturbance tolerance	38.63	8.84
Behavioral deterrent system	12.46	3.91	Tolerance	6.86	2.67
Cognitive Flexibility	75.03	11.46	Evaluation	16.54	3.68
Perception of various options	34.68	10.49	Absorption	7.48	2.52
Controllability perception	33.27	5.94	tuning	7.73	2.69
Behavioral justification	7.08	2.57	Tendency to substance abuse	70.40	22.18

Pearson correlation coefficient and multiple regressions were used to analyze the data. Prior to using these tests, the assumptions that allow them to be used are considered. The assumption is that there is a linear relationship between predictor variables and criterion according to the variables distribution chart (indicating a linear relationship between predictor and criterion variables), assuming the normal distribution of data using the Kolmogorov-Smirnov test ($p > 0.05$), the assumption of the independence of the residuals using camera statistics (Watson) (range from 1.5 to 2.5) and the assumption that there was no linear multiple of independent variables using the Tolerance index (greater than 0.1) was approved. Therefore, Pearson correlation coefficient and multiple regressions were used to analyze the data. There was a positive correlation between behavioral activation system with substance abuse ($r = 0.35, p < 0.01$) and there is a negative relationship between drug addiction and behavioral deterrent system ($P < 0.01, r = -0.42$), cognitive flexibility ($r = -0.35, p < 0.01$), perceived different options ($p < 0.01, r = -0.23$), perceived control ($P < 0.05, r = -0.17$), perceived behavioral justification ($r = -0.22, p < 0.01$), disturbance tolerance

($p < 0.01$, $r = -0.50$), tolerance ($r = -0.41$, $p < 0.01$), evaluation ($r = -0.35$, $p < 0.01$), absorption ($r = -0.41$, $p < 0.01$) and tuning ($r = -0.40$, $p < 0.01$).

Table 2: Regression coefficients of substance use tendency based on behavioral inhibitory and activating systems, cognitive flexibility and disturbance tolerance

<i>Predictive variables</i>	<i>B</i>	<i>Standard deviation</i>	β	<i>t Statistics</i>	<i>Sig.</i>
Constant	53.384	2.575	-	20.730	0.001
Behavioral Activation System	-1.10	0.29	-0.35	-6.97	0.001
Behavioral Restraint System	-1.47	0.25	-0.32	-5.80	0.001
Cognitive Flexibility	-0.24	0.11	-0.12	-2.25	0.026
disturbance tolerance	-0.74	0.15	-0.29	-4.94	0.001

Regression analysis was used to investigate the role of prediction of drug use tendency based on behavioral inhibitory and activating systems, cognitive flexibility and disturbance tolerance. The results showed that predictive variables explained 45% of the variance of drug use tendency. The regression coefficients table is presented in Table 2. Regression analysis was used to investigate the role of prediction of drug use tendency based on cognitive flexibility components. The results showed that predictive variables explained 16% of the tendency to substance use variance. The regression coefficients table is presented in Table 3.

Table 3: Regression coefficients of drug use tendency based on cognitive flexibility components

<i>Predictive variables</i>	<i>B</i>	<i>Standard deviation</i>	β	<i>t Statistics</i>	<i>Sig.</i>
Constant	142.39	11.60	-	12.27	0.001
Perception of various options	-0.39	0.16	-0.18	-2.43	0.016
Controllability perception	-1.28	-0.25	-0.34	-5.00	0.001
Behavioral justification	-2.26	0.69	-0.26	-3.27	0.001

Regression analysis was used to investigate the role of prediction of drug consumption tendency based on disturbance tolerance components. The results showed that the predictive variables explained 26% of the variance of drug use tendency. The regression coefficients table is presented in Table 4

Table 4: Regression coefficients of drug use tendency based on disturbance tolerance components

<i>Predictive variables</i>	<i>B</i>	<i>Standard deviation</i>	β	<i>t Statistics</i>	<i>Sig.</i>
Constant	116.96	6.15	-	19.02	0.001
Tolerance	-1.48	0.63	-0.18	-2.34	0.20
Evaluation	-0.92	0.40	-0.15	-2.30	0.023
Absorption	-1.42	0.69	-0.16	-2.07	0.039
tuning	-1.36	0.60	-0.16	-2.28	0.024

Discussion and Conclusion

The aim of this study was to predict the tendency to drug use based on behavioral activation and inhibition systems, cognitive flexibility, and distress tolerance in school students. The positive relationship of behavioral activation system and the negative relationship of behavioral inhibition system with drug

use tendency and prediction of drug use tendency based on behavioral activation and inhibition systems are in the same line with the research findings reported by Rose & Mossler (2013); O'Connor, Stewart, & Watt (2009); Hundt, Kimbrel, Nelson, & Mitchell (2008); Franken, & Muris (2006); and Gray (1990). To explain this finding, one can argue that the behavioral activation system controls the pleasant motivation and this motivation is associated with euphoric emotional states. The individuals with substance use and substance abuse have a stronger behavioral activation system. These people seem to be more vulnerable to drug use because of this system (Fowles, 2000). In other words, the higher the levels of behavioral activation, the more willingness one have to drug use and abuse; hence, addiction increases in such individuals. The increased activity in the behavioral activation system makes the person actively and unthinkingly look for drugs as a very attractive stimulus based on the feeling of pleasure. Therefore, as one's sensitivity to the behavioral activation system increases, one's willingness to drug use and efforts to achieve it will increase in the same line (Franken & Muris, 2006). In other words, one can argue that the high activity or sensitivity of a behavioral activator system in a person leads to the actions that are likely to lead to rewards instead of leading to negative outcomes. Due to this feature, this system seems to play an important role in the tendency to drug use in such a way that some researchers have described the concept of Reward Deficiency Syndrome as a major contributor to the problem of drug use (Hundt, Kimbrel, Nelson, & Mitchell, 2008). According to Gray Motivation Theory (1987), the behavioral inhibition system is a neurological system whose weakness is associated with the activation of the hallmarks of pleasure and euphoria, and causes a feeling of emancipation in the individual. In the revised Reinforcement Sensitivity Theory (1994), the behavioral inhibition system is an indirect defense approach that emphasizes passive avoidance and the need for caution. This finding is consistent with clinical evidence wherein the emphasis is placed on the prevalence of avoidance-focused coping strategies (especially avoidance of negative emotions) in drug-dependent patients (Francis & White, 2002). The weak behavioral inhibition system prevents the inhibition of inappropriate behaviors in different situations, and the low sensitivity of the behavioral inhibition system can create an increasing happiness state and increase one's tendency to experience drug use and deviation.

The negative relationship between cognitive flexibility (perception of different alternatives, perception of controllability, and perception of behavioral justification) and tendency to drug use as well as the prediction of drug use tendency based on cognitive flexibility (perception of different alternatives, perception of controllability, and perception of behavioral justification) are consistent with the research findings reported by Shahmohammadzadeh et al. (2014), Phillips (2011), Burton, Pakenham, & Brown (2010), Ardila, Perez, Sanches, Peluso, Glahn, & Soares (2007), and VerdejoGarcia, Lopez-Torrecillas, & Perez-Garcia (2005). To explain this finding, one can say that

cognitive flexibility is one of the important components of executive function (excellent cognitive and meta-cognitive functions). Executive functions are responsible for the regulation and control of our behaviors, emotions, and thoughts when dealing with the environment. Therefore, adolescents' tendency toward drug use and abuse can be attributed to the developmental deficiency of adolescents' brain functions (Cyrus & Hadg, 2006; cited in Ebrahimi Ghavam, 2013). The weakness in executive function causes the adolescents to show uncontrolled and risky behaviors, including drug use and abuse in the face of high-risk situations. In addition, they will not be able to use different approaches in coping with a problem in their efforts or will not be able to choose the more favorable objectives and goals; that is, they do not have the cognitive flexibility necessary to solve the problem when faced with the problem. Research findings indicate that the deficiency in the executive function leads to the weakness of the cognitive flexibility, and this is related to the tendency to drug use among addicts. On the other hand, the role of the cognitive flexibility function in tendency to drug use can be explained by the fact that the adolescents and young people with a low cognitive flexibility cannot choose goals other than drug use or cannot use alternative problem-solving strategies other than drug use when faced with the situation with the consumption of substances. In addition, during adolescence and early adolescence, after experiencing failure in an important personal goal, it is more likely that the person will be directed toward drug use as a reinforcing alternative to that goal, since the adolescents and young people with low cognitive flexibility cannot replace the more favorable goals or choose other ways to achieve the same goal when faced with failure in achieving the goal. In consequence, they are directed to drug use due to failures and frustrations in order to get free from psychological stress.

The negative relationship between distress tolerance (tolerance, appraisal, absorption, and regulation) and tendency to drug use and the anticipation of drug use tendency based on cognitive flexibility (perception of different alternatives, perception of controllability, and perception of behavior justification) is consistent with the research findings reported by Bahsarpor & Abbasi (2014), Daughters et al. (2013), Peter et al. (2012), Zvolensky, Vujanovic, Bernstein, & Leyro (2010), Daughters, Lejuez, Bornovalov, & Kahler (2005), and Simons & Gaher (2005). To explain this finding, one may hold that individuals with a low level of distress tolerance get involved in behavioral disorder during a false attempt to deal with their negative emotions (Keugh, Rickardi, Timpano, Mitchell & Smith, 2010) and embark on relieving their emotional pain by addressing some destructive behaviors, such as drug use. An emotion-focused coping strategy, such as the consumption of alcohol and other substances may result in a quick release of them from negative emotions. This strategy is considered an appropriate method, especially for those who have a low level of distress tolerance (Lazarus, 1991; cited in Azizi et al., 2010). People with low distress tolerance view emotions to be intolerable and cannot deal with their

distress; moreover, they do not accept the presence of emotions and feel embarrassed for the existence of emotions because they underestimate their coping ability with emotions. The third major characteristic of people with low distress tolerance is their great effort to avoid experiencing the negative emotions. It should be noted that if these people are not able to relieve these emotions, all their attention will be diverted to this negative emotion and their performance will be significantly reduced. Many studies on addiction have shown that drug users and abusers have difficulty in the components of distress tolerance and psychological stress; and suffer some deficiencies in the skills necessary to deal with their problems. For this reason, they employ drug use and abuse as a coping method in order to reduce the unpleasant emotions arising from difficult situations (Daley et al., 2005). In recent years, researchers have evaluated alcohol and drug abusers and have found that people with low distress tolerance turn to drug abuse to regulate their emotions (Turner & Kari, 1997; cited in Buckner, Keugh, & Schmidt, 2007). Research has shown that the low level of distress tolerance, which is the consequence of the inability to deal effectively with emotions and manage them, plays a major role in the onset of drug use (Kaiser, Milich, Lynam, & Charnigo, 2012). On the other hand, studies have shown that low distress tolerance is one of the causes of drug addiction. The low distress tolerance of these people seems to force them to find an immediate solution to get rid of emotions (Khantzian, 1997; cited in Azizi, 2010).

In general, it can be said that behavioral activation and inhibition systems, cognitive flexibility, and distress tolerance are among the variables associated with the tendency to drug use in school students and, thereby, these variable should be considered in the prevention and treatment of addiction. Therefore, it is possible to identify the ones who are at risk via the identification of the individuals whose behavioral activation system is more active than that of the normal people and, accordingly, develop specific behavioral programs to prevent drug use in this group. Strategies of distress tolerance are generally learned in childhood and are almost converted to relatively stabilized automatic cognitive styles at the end of adolescence; hence, authorities are recommended to start the conduct of training programs to stop the use of negative strategies and turn to the use of positive and adaptive strategies at childhood and by parents. These can be completed through the relevant skills training in schools. Finally, since people with low cognitive flexibility use only one solution in the face of difficulties and problems, problem-solving training seems necessary.

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