

Abstract

Objective: This study aimed to investigate the relationship of cognitive emotion regulation, self-efficacy, impulsiveness, and social skills with substance abuse among students. **Method:** This study was a correlational one falling into the category of descriptive designs. A total of 400 senior high school students of Shiraz (first and second grades) in the academic year 2011-12 were selected by cluster sampling method as the participants of the study. These participants responded to the scales pertaining to cognitive-emotion regulation, self-efficacy, impulsiveness, social skills, and substance abuse list (researcher made). **Results:** The results showed that impulsiveness and low levels social skills play a significant role in predicting substance abuse. **Conclusion:** The results indicated that behavioral impulsiveness, low levels of self-efficacy, lack of cognitive emotion regulation, absence of thinking and planning in responsibilities, and low levels of social skills are effective in leading students to substance abuse.

Keywords: Cognitive Emotion Regulation, Self-Efficacy, Impulsiveness, Social Skills, Substance Abuse

On the Relationship of Cognitive Emotion Regulation, Self-Efficacy, Impulsiveness, and Social Skills with Substance Abuse in Adolescents

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Introduction

Substance abuse and its unpleasant consequences are among the worst social problems that have been the focus of mental health professionals. In recent years, drug use has become prevalent not only in adults but also in adolescents. In this regard, studies have shown that the use of illicit substances has increased among students in some countries (Botvin, Dusenbury, Baker, James & Ortiz, 2008). Difficulty in regulating emotions is often regarded as an essential component in many behavioral problems. Cognitive emotion regulation is used as an instrument to understand how a person can organize attention to his/her activities and acquire strategic and persistent actions to solve problems. Any defects and deficiencies in the regulation of emotions can make the individual vulnerable to emotional problems, such as depression, anxiety, stress, and behavioral and cognitive problems (Ehring, Fischer, Schnulle & Bosterling, 2008). The recognition of impulsiveness and its pertaining management methods can be greatly effective in domination over students' behavior and adoption of clear and acceptable decisions. Therefore, it brings them health and success. Impulsiveness is characterized by living at the present moment, lack of planning in life, difficulty in doing chore and leaving them unfinished, creation of trouble for the selves and others, and aggression towards others (Pourafkari, 2003). The results of the studies done by Barratt (1994), Young (1999), and Vassileva, Gonzalez, Bechara & Martin (2007) suggests the existence of a relationship between impulsiveness and substance abuse. Social skills are also associated with substance abuse in students. Social skills lead to the incidence of the behaviors that are positively or negatively reinforced. Based on Pentz's model (1980), substance abuse in adolescents is due to social factors (drug use by parents and peers) and poor social skills. In other words, students who feel socially incompetent turn to drug use to avoid problems and stress. This leads them to increased vulnerability in interaction with their peers (Mehryar & Jazayeri, 1997). Estabrook, et al. (2010) also showed that proper social and family environments (out of the environmental dimension) and high self-efficacy, improvement of interpersonal skills, and internal locus of control (personality dimension and individual factors) constitute the most important predictors of successful abstinence of cigarette smoking. However, some studies show that more than 90% of consumers begin drug use in adolescence and refer to the role of personality traits as background and moderating variables for the initiation and persistence of drug use in various age groups and cultural backgrounds (Mohammadkhani, Jazayeri, Rafiea & Ghazi Tabatabai, 2007). For example, Samavi & Hosseinchari (2009) showed that foreclosed and diffused identities are positive and significant predictors of substance abuse among university students. Other research findings suggest that there is a significant relationship between self-efficacy and substance abuse in adolescents (Bandura, 1980; Tate, 2008; Dolan & White, 2008; McKeller, Eric & Carver, 2008). Dolan

& White (2008) indicated that there is an inverse relationship between high levels of self-efficacy and propensity to drug use in high-risk situations. McKeller, et al. (2008) showed that the degree of self-efficacy in the first year of recovery is a suitable predictor of the reduction of alcohol consumption, alcohol-related problems, depression, impulsiveness, social support from friends, and long-term participation in Alcoholics Anonymous groups. In addition, appropriate training about the harmful effects of alcohol consumption, self-efficacy skills, and inhibition of impulsiveness during the first year of training in women were predictors of self-efficacy improvement in the next 16 years. Kelly, Leatherdale, Dubin & Hammond (2009) investigated the relationship between addiction to methamphetamine and hostility and found that methamphetamine use leads to an increase in impulsiveness and hostility and shows the environment as a hostile and threatening place due to the emergence of psychotic symptoms. Research has shown that low levels of self-inhibition skills, high levels of sensation seeking and impulsiveness constitute the important factors in predicting substance use in adolescents and young adults (Schlauch, et al., 2012). People who cannot control their impulses are likely to become permanent substance users (Akbari Zardkhaneh, Rostami & Zare'an, 2008). Considering the specific characteristics of adolescence, such as sensation seeking and intense desire to experience new situations, the identification of risk factors in adolescents' tendency towards substance abuse assumes more importance. Hence, the present study aims to answer the following question: Can high levels of impulsiveness, low levels of self-efficacy, cognitive emotion regulation and social skills predict drug abuse among students?

Method

Population, sample, and sampling method

This study is a correlational one which falls into the category of descriptive designs. The senior high school students of Shiraz (first and second grades) in the academic year 2011-12 constituted the population of this study. For sampling, 10 high schools in four school districts in Shiraz were selected through cluster sampling. Then, two classes (first and second grades) were randomly selected from each school. Substance abuse inventory was administered to all the students in order to identify the students who were at risk of substance abuse. Next, 20 students with the highest scores in relation to the cut-off point (score 25) were selected as the sample.

Instrument

1. Cognitive Emotion Regulation Questionnaire: This questionnaire, developed by Garnefski, et al. (2002) is one of the most reliable instruments for the assessment of different cognitive strategies (cited in Samani & Sadeghi, 2010). This questionnaire has been designed to specifically examine the

cognitive processes that come into existence after experiencing negative life events. This questionnaire contains 36 items, which are scores based on a 5-point Likert scale (from always to never). It has been translated into Persian by Samani & Sadeghi (2010) and consists of seven factors as follows: 1. Acceptance: It refers to thoughts of accepting what has been experienced, 2. Self-blame: It refers to the thoughts of blaming the self because of what has been experienced, 3. Other-blame: It refers to the thoughts of putting the blame on others for what one has experienced, 4. Catastrophizing: It refers to the thoughts that put emphasis on the negative aspects of the experience, 5. Rumination: It refers to some thoughts about the feelings that are associated with negative life events, 6. Positive reappraisal: It refers to the thoughts that assign positive meaning to the negative life events in the form of personal growth, and 7. Positive refocusing: It refers to pleasant thoughts about what to do and how to use previous experiences. The reliability of the scale was reported based on Cronbach's alpha as follows: .75 for positive refocusing, .65 for positive reappraisal, .86 for other-blame, .83 for self-blame, .75 for rumination, .73 for catastrophizing, and .66 for acceptance. In the present study, internal consistency of the dimensions was obtained based on Cronbach's alpha as follows: .74 for positive refocusing, .68 for positive reappraisal, .86 for other-blame, .85 for self-blame, .80 for rumination, .78 for catastrophizing, and .72 for acceptance. Samani & Sadeghi (2010) obtained the Cronbach's alpha coefficients within the range of .71 to .81 for the dimensions and reported the coefficient of .70 for the construct validity of the scale.

2. Self-Efficacy Scale: This scale, developed by Sherer in 1982, measures general and social self-efficacy and contains two subscales and 23 items. This scale was translated into the Persian language and 344 bachelor's students in Shahid Beheshti University completed it. The results showed that the scale enjoys acceptable reliability and validity. Exploratory factor analysis was used to assess the construct validity of the scale, the results indicated the existence of three factors in this scale. Confirmatory factor analysis testing the hypothesis suggested the existence of a three-factor model with a higher degree (self-efficacy). Cronbach's alpha coefficient was used to check the reliability of the scale and the value of .83 was obtained for the total scale. The items of the scale are scored based on a five-point Likert scale (from strongly disagree to strongly agree). Each participant's score is calculated based on the two subscales' scores and the total score of the scale. Cronbach's alpha coefficient and test-retest reliability of the scale were obtained equal to .81 and .67, respectively. Watson & Friend (1962) calculated the correlation between self-efficacy scale and social anxiety scale and reported it to equal -.61, which indicates the divergent validity of the scale (cited in in Sherer, 1982). In this study, Cronbach's alpha coefficient of the scale was obtained equal to .67.

3. Barratt Impulsiveness Scale (Barratt, 1994): This scale consists of three subscales, namely, non-planning, motor, and cognitive impulsiveness and

includes 30 items. The scale is scored based on a four-point Likert scale (never/almost always) and participants' scores are calculated based on the three subscales and total score. Abolghasemi & Kiamarsi (2009) reported Cronbach's alpha and test-retest reliability coefficients (after a month of the scale equal to .87 and .79, respectively. In this study, Cronbach's alpha coefficient of the scale was obtained .80.

4. Matson Evaluation of Social Skills with Youngsters (1983): This questionnaire has been developed for people under 18 years and includes 65 items and five factors (subscales). The first factor represents appropriate social skills such as a desire to make eye contact with others, politeness, using another name, and eagerness to interact effectively with others. The second factor is inappropriate assertiveness that includes behaviors such as lying, beating, faultfinding with others, creation of abnormal and saddening sounds, and promise breaking. The third factor represents impulsive/recalcitrant acts such as irritation, obduracy, and headstrongness. The fourth factor is overconfidence such as self-pride, pretension to have everything, and seeing the selves to be superior to others. The fifth factor is jealousy/withdrawal which entails loneliness and grudge. The items of this questionnaire are scored based on a 5-point Likert scale. This scale takes advantage of acceptable test-retest reliability and discriminant validity (Matson & Alendik, 1988; cited in Yousefi & Kheir, 2002). Principal component analysis was conducted to determine the construct validity of this scale. Cronbach's alpha coefficient of the scale was equal to .86 (Yousefi & Kheir, 2002). Similarly, Narimani & Rajabi (2006) reported the Cronbach's alpha coefficient of .82 for the scale. In the present study, Cronbach's alpha coefficient was obtained equal to .86.

5. Checklist of Substance Abuse: This checklist was constructed by the researcher in order to evaluate family status in terms of education and smoking, alcohol consumption, and other drugs among students. It consists of 50 items and two parts, namely demographic information and status of drug use (history of drug use in the family, age of onset of drug use, smoking pattern, consumption of alcohol and other illicit drugs in the lifetime and past month).

Results

Descriptive statistics and Pearson correlation coefficients for the variables under study are presented in the table below.

Table 1: Descriptive statistics and Pearson correlation coefficients of the variables

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Positive cognitive regulation	24.00	6.40	-	-	-	-
2. Negative cognitive regulation	30.50	7.8	-.53	-	-	-
3. Self-efficacy	78.77	10.9	+.42	-.52	-	-
4. Impulsiveness	93.29	11.43	-0.52	+.57	-.41	-
5. Social skills	139.80	30.48	0.61	-.44	.67	-.55
6. Substance abuse	23.09	11.12	-0.62	.76	-.81	.41

Multiple regression analysis was used to investigate the predictive role of cognitive emotion regulation and self-efficacy. The results suggest that self-efficacy, entered the equation in the first step, accounts for 17% of the variance of substance abuse. Negative cognitive regulation entered the equation in the second step and could explain 26% of the variance of substance abuse along with self-efficacy. In the final step, regression coefficients are presented in the table below.

Table 2: Regression coefficients of substance abuse based on self-efficacy and cognitive emotion regulation

<i>Variable</i>	<i>B</i>	<i>Standard error</i>	<i>β</i>	<i>Sig.</i>
Self-efficacy	-.41	.14	-.48	P < .01
Negative cognitive regulation	.34	.17	.18	P < .01

In the same way, multiple regression analysis was used to investigate the predictive role of impulsiveness and social skills. The results show that impulsiveness, entered the equation in the first step, accounts for 27% of the variance of substance abuse. Social skills entered the equation in the second step and could explain 30% of the variance of substance abuse along with impulsiveness. It is noteworthy that the correlation coefficient of the first predicting variable (i.e., impulsiveness) is reduced when social skills as the second predictor variable enters the equation. However, the coefficient still remains significant.

Table 3: Regression coefficients of substance abuse based on impulsiveness and social skills

<i>Variable</i>	<i>B</i>	<i>Standard error</i>	<i>β</i>	<i>Sig.</i>
Impulsiveness	.51	.16	.49	P < .01
Social skills	-.23	.12	-.12	P < .01

Discussion and Conclusion

The results of this study confirm the existence of the relationship between low levels of self-efficacy and substance abuse among students. Low self-efficacy affects substance abuse among students both directly and indirectly. In the same way, emotion regulation influences substance abuse by affecting social skills. This finding is consistent with findings from other studies (Epstein, Griffin & Botwin, 2000; Dolan & White, 2008). High self-efficacy helps adolescents show resistance against peer pressure to use drugs. If decision-making skills and self-efficacy are not directly related to cigarette smoking, they will be a foundation for other factors that are closely associated with smoking. Ability to strongly assert and refuse is an example of the basic skills that are closely related to smoking (Epstein, et al., 2000). According to the promotion of smoking by the mass media, if adolescents enjoy the ability to resist social pressures for cigarette smoking, they will be less likely to smoke. Botwin & Griffin (2004) showed that strong refusal has a negative relationship with cigarette smoking among the

adolescents of minority groups. The differentiation of two types of self-efficacy in connection with testing consumption is essential. Consumption self-efficacy means the adolescents' belief about their ability to access to and use of drugs. According to this view, some teenagers use drugs since they know where and how to obtain and use drugs (Taremian & Mehryar, 2008). Refusal self-efficacy also represents the adolescents' belief in the ability to resist social pressure to use drugs. According to this view, adolescents are likely to use drugs due to lack of necessary skills in refusing the pressure (or drug use offer) on part of peers. Studies have shown that the consumption of cannabis is correlated with adolescents' inability to deal with social pressures to consume alcohol, smoke cigarettes, and use other related substances (Fly & Miller, 1995 cited in Taremian & Mehryar, 2008). In addition, research has shown that personality variables such as high levels of self-inhibition and self-efficacy are good predictors of drug abuse among adolescents in frustrating situations (Ziauddin, Zarezadeh & Heshmati, 2006). Woicik, Stewart, Pihl & Conrod (2009) found that psychological characteristics such as frustration, impulsiveness, anxiety, and sensation seeking are important predictors of substance abuse. The results of the present study showed that high levels of impulsiveness and substance abuse among students are correlated. In other words, impulsiveness has direct and indirect positive effects (by influencing social skills) on substance abuse among students. This finding is consistent with other research results (Barratt, 1994; Dawe & Loxton, 2004; Vassileva, et al., 2007; Brewer & Potenza, 2008). Moreover, Howell, Leyro, Hogan, Buckner & Zvolensky (2010) found that low levels of social skills, self-efficacy, and tolerance are important variables in predicting alcohol abuse when individuals are faced with stressful and frustrating situations. Lack of understanding and knowledge of how to harness impulsiveness may weaken behavior management and self-control skills. In such circumstances, the probability of conducting false and irrational behavior will rise, and ultimately, poor goal setting and planning, poor social and self-inhibitory skills, and lack of knowledge on coping skills and dealing with failures increase substance abuse among students. As a result, students' educational success, social, and mental health will be put at risk (Barratt, 1994). Urban (2010) concluded that sensation seeking and emotional impulsiveness in both enjoyable and frustrating situations are among the effective factors in the experience of smoking in adolescents. According to the results of the present study, impulsiveness components, namely non-planning, motor impulsiveness, and cognitive impulsiveness had a significant positive relationship with substance abuse in adolescents. This finding is consistent with other research findings (Barratt, 1994; Dawe & Loxton, 2004; Young, 1999; Vassileva, et al., 2007; Houban & Wiers, 2008) is. It seems that non-planning makes adolescents pay less attention to the future and act without planning. This, in turn, provides the background for tendency to substance abuse in these individuals. Thus, a more systematic approach towards planning for the future can help adolescents

avoid substance abuse. Motor impulsiveness in adolescents means aggression towards others and leaving tasks unfinished when they are angry. It may create some problems in interpersonal relationships; therefore, individuals may tend to substance abuse to get rid of these problems. Barratt (1994) believes that some brain patterns are associated with impulsiveness. It seems that cognitive impulsiveness makes individuals physiologically susceptible to such a pattern. In addition, cognitive impulsiveness can make concentration, attention, thinking, reasoning, and information processing more difficult. Therefore, the risk for substance abuse in adolescents will increase.

In the present study, a negative relationship was found between social skills and substance abuse among students. This result is consistent with other research findings (Epstein, et al., 2000; Botwin, Griffin, Paul and Macaulay, 2003; Manshaea, 2002; Bagheri, 2002; Rahmati, 2004; Imam Hadi & Jalilvand 2007). Poderson, Hameri & Laberi (2012) also showed that poor social skills, inability to maintain sustainable relationships and lack of empathic and intimate relationships are among the factors affecting students' orientation to alcohol and drug use. Lack of access to appropriate social skills leads to the development of psychological problems such as weakness in the establishment of relationships with peers, poor educational performance, non-participation in group activities and isolation, rejection by peers, anxiety, depression, and anger in childhood and higher ages (Segrin, 2000).

Some people, such as those with substance abuse do not enjoy adequate social skills in areas such as stress management, the conduct of usual activities, job-seeking, and financial management (Gurd & Smith, 2004). Therefore, teaching social skills to adolescents with alcohol and drug abuse will lead to positive achievements in order to increase self-esteem, improve social health, and enhance social skills and performance (Canorce & Walitzer, 2001). Based on the boosting ability approach, substance abuse is considered as a learned social behavior that is the result of the interaction of individual and social factors (Epstein, et al., 2000). This approach suggests that adolescents with poor social and individual skills are vulnerable not only vulnerable to drug use incentives, but also tend to view drug use as an alternative to adaptive coping strategies (Botvin, 2000). Overall, the results of this study are in the same line with the results of previous studies done by Taremian (2001), Manshaea (2002), Botvin (2003), and Imam Hadi & Jalilvand (2007). In addition, the findings of this study are consistent with those of the studies conducted by Rahmati (2004) and Bagheri (2002). The present study is limited to students in Shiraz and this wanes the generalizability of the results. According to the current research findings, it is suggested to hold training workshops aimed at strengthening social skills and self-efficacy and, thereby, the effectiveness of these variables in individuals at risk for substance abuse be examined..

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