

# Prediction of Vulnerability to Addiction on the Basis of Psychosocial Stressors

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## ABSTRACT

**Objective:** Addiction is one of the most vulnerable social issues and the tendency to it involve several factors, including psychosocial stressors (life unpleasant events), and inability to deal with these stressors and the belief that drug use will lead to the desired result. This study was conducted to determine the relationship between psychosocial stressors and vulnerability to drug abuse among students.

**Methods:** This research was a correlational study. In this study, 483 male students from Salmas City (West Azerbaijan Province) high schools were selected by multi-stage cluster sampling. Then, the questionnaire to identify people at risk of addiction and also perceptions of stressful events questionnaire were conducted to them. Data were analyzed using Pearson correlation and simultaneous regression analysis. Statistical analysis were performed using the SPSS 20.

**Results:** The results showed that among these variables, stressors associated with solution of unpleasant events have the greatest ability to predict vulnerability to addiction. Next, stressors related to lack, positively predict vulnerability to addiction.

**Conclusion:** The present study showed that psychosocial stressors can contribute to the vulnerability of adolescents to addiction.

## 1. Introduction

Addiction is one of the most vulnerable social issues that threatens the community, especially the younger generation in earnest (Karkhi, 2012). Today the problem of drug addiction and various drugs are a global problem. With regard to 218 million addicted people around the world and proximity of our country to major areas of drug production and taking the shortest transit route, which has led to the complexity of drug trafficking, and in spite of the measures taken in various fields, addiction has spread in various sectors, especially among young people. There are 1200000 drug users and 800000 recreational consumers in Iran, which makes it a major

problem that leads to family breakdown and other serious problems (Amani et al., 2005).

Addiction and substance abuse as a social problem is a phenomenon, which has the potential to destroy social organizations and order. It also causes structural changes in the economic, social, political, and cultural aspects of a society. The World Health Organization (WHO) considers the issue of drugs, including production, transmission, distribution, and consumption as a fundamental issue and as important as the three other global problems: production and stockpiling of weapons of mass destruction, pollution, and poverty and income gap (Bagheri et al., 2011). Nonetheless the adolescents are not exempt from the risk of addiction, according to the reports in 2003, in Iran, the age of onset of drug use has risen from 14 to 16 years, and

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**Table 1.** Information about the basis of the study's participants

Grade	Frequency	%
First grade	149	30.8
Second grade	190	39.3
Third grade	144	29.8
Total	483	100

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this shows the need to do a lot of research on the causes and rates of drug use among adolescents (Dehkordian, Delavar, and Jali, 2011)

Research literature indicates that drug use has increased dramatically among adolescents and young people. Most people who work with adolescents noticed that they take refuge in drugs, as a response to the repeated exposure to inappropriate situations, including feelings of insecurity, stress, psychological distress, and conflict with parents or problems of everyday life. Drug abuse begins in many people at high-school age, so one of the ways to reduce drug use in adulthood, is its control in adolescence (Tavousi et al., 2011).

On the other hand, today because of the aggravation of the stress factors (stressors) and reduction of the coping ability of humans to them (due to the changing lifestyle), stress has become a large and complex phenomenon, as it is influenced by multiple factors and their interactions. The most important psychosocial stressors are factors such as migration to big cities or foreign countries, industrialization, rapid developments in science and technology, population growth, lack of adherence to the traditions of the past, changes in family relationships, changing family roles, disruption of family relations, war, anxiety about nuclear war, poverty, disability, chronic illness, and changing cultural and social values (Frydenberg, Lewis, 1993). Psychosocial stressors destroy and harm the basic needs of the body and intervene in human development and efficiency and make him/her out of balance. People's reaction to stressors depends on the stimulus,

the individual features, and experience and if the stress does not receive a correct response, then symptoms such as fatigue, irritability, difficulty in concentrating, feelings of guilt, digestive and physical pains occur (Laschinger, Rong, 1999).

The fact that stress can cause undesirable changes in social functioning and mental growth has reflected on this issue that from 1980 and the publication of the third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980), the presence of psychosocial stressors in diagnosis of psychiatric disorders should be considered in a separate axial (American Psychiatric Association, 2000). In this regard, the role of stress in causing or worsening disease has been the subject of considerable research in recent years (Caballo, Cardena, 1997; Roberts, Golding, Towell, Weinreb, 1999; Keyes, 2002; Banerjee, 2012).

Stressful conditions affect the incidence of diseases and in the course and results of treatment (Skodol, 1991). Studies on addicts are indicative of a strong relationship between stress and the risk of addiction. In fact, intellectual and economic stability and a lifestyle free of stress would reduce the risk of addiction (Alabsi, 2007). Also research suggests that stress and anxiety play a decisive role in the tendency of adolescents toward drug addiction (Sinha, 2008).

Results of Schwab, Dickinson, and Wolf (2011) suggests that history of severe childhood stress has been identified as a risk factor for early onset of alcohol abuse

**Table 2.** information about the mean and SD of participants

Variable	Mean	SD
Stressors related to lack	17.69	4.41
Stressors associated with recompliance	26.92	5.54
Stressors associated with educational and career	30.76	6.26
Stressors associated with solution of unpleasant events	39.95	4.81
Vulnerability to addiction	73.37	9.71

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**Table 3.** Matrix of simple correlation coefficients between psychosocial stressors and vulnerability to addiction.

Components	1	2	3	4	5
1. Vulnerability to addiction	1				
2. Stressors related to lack	0.22**	1			
3. Stressors associated with re compliance	0.05	0.14*	1		
4. Stressors associated with educational and career	0.04	0.13*	0.27**	1	
5. Stressors associated with solution of unpleasant events	-0.37**	-0.11*	-0.12*	-0.23**	1

\*\*Significant at the  $P < 0.01$

\*Significant at the  $P < 0.05$

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in adolescence, and alcohol and drug dependency in adulthood. Also, in their study, they found that stress increases the risk of addiction.

The results of Coffey et al., (2002), Buffalari, and See (2009), as well as Darummond (2001) also showed that stress has a direct and significant relationship with the tendency for addiction. Studies have shown that environment, psychological characteristics, and stress play an important role in alcohol and drug abuse. Social, economic, and psychological stressors are involved in building and development of addiction (Samouee et al., 2000). In a study conducted by Goeders (2004), they proposed self-medication hypothesis in the context of stress-related disorders and drug addiction. Self-medication means that the person often uses drugs to overcome the actions associated with life stressors or reduce symptoms of anxiety and depression resulting from the occurrence of harmful events. People exposed to unpleasant stimuli such as unpleasant marriage, dissatisfaction with the job or harassment, mostly report the addictive behaviors.

Studies have shown that psychosocial and environmental problems are effective in most mental disorders. However, little research has been done in our country about the impact of these problems on individuals vulnerable to addiction. Hence, we seek to identify those categories of psychosocial stressors that can make teens vulnerable to addiction.

## 2. Methods

This research was a correlational study. The study population comprised all male high-school students in Salmas City (West Azerbaijan Province), including 7652 people who were enrolled in 2013-14 academic year. The sample size on the basis of Krejcie–Morgan's table ( $N = 8000$ ) was 367 people. Population size was rounded to 8000, but considering some loss of participants (incomplete questionnaires), the size sample was taken of 500, which were selected by multi-stage cluster sampling. In

this way, at first, among 20 boys high-school of Salmas, 5 high schools were selected by cluster random sampling method. In each school, 25 students per class and a total of 100 students were randomly selected from each school. Thus, 500 students completed questionnaires. Of those, 17 patients were excluded from analysis due to flaws in the questionnaire and the final sample was reduced to 483 people. It should be noted the age range of the participants was 15 to 19 years. Also, volunteers participated in the study were free to terminate their collaboration anytime for any reason. After explaining the purpose of the study and invoking students' participation and confidence, perceptions of stressful events questionnaire and the questionnaire to identify people at risk of addiction were conducted on them. Data were analyzed using Pearson correlation and simultaneous regression analysis. Statistical analysis were performed using the SPSS 20.

## Measures

Perceptions of stressful events Questionnaire: This questionnaire was made to measure psychosocial stressors by Bakhtiar poor and Banijamali (2008) and has 100 questions. It is the most comprehensive evaluation of psychosocial stressors. This questionnaire is a 10-point scale that assesses the perceived severity of incidents. One represents the lowest level of severity of an accident and 10 represents the highest level of severity of an accident. It has 4 subscales that are as follows: stressors related to lack, stressors associated with recompliance, stressors associated with unpleasant events, stressors associated with educational and career. Cronbach  $\alpha$  for this scale has been reported at 0.98 (Bakhtiar poor and Banijamali, 2008).

Anisi Questionnaire to identify people at risk of addiction: This questionnaire is a screening tool that was designed in 2013 by Jaafar Anisi in Baqiyatallah University of Medical Sciences. The questionnaire consists of 75 items and 4 subscales, the subscales are as follows: depression and helplessness, positive attitude to drugs, anxi-

**Table 4.** Prediction vulnerability to addiction, on the basis of psychosocial stressors

Variable	Index										
	B	$\beta$	t	P	R	R <sup>2</sup>	$\Delta R^2$	E.S	F	P	
Model					0.39	0.15	0.14	6.22	8.07	0.001	
Stressors related to lack	0.12	0.19	3.06	0.002							
Stressors associated with recompliance	0.08	0.11	1.73	0.08							
Stressors associated with educational and career	0.04	0.08	1.22	0.22							
Stressors associated with Solution of unpleasant events	-0.14	-0.23	-3.37	0.001							

Predictors: psychosocial stressors

Dependent variable: vulnerability to addiction

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ety and fear of others, high sensation seeking. Scoring is rated on 4-point Likert scale from totally disagree (0), disagree (1), somewhat agree (2), and agree (3). Scores range from 0 to 225 and the cutoff point of the test is 80. In other words, people who have a score of 80 or higher are at risk of addiction. Cronbach  $\alpha$  for this scale has been reported at 0.97 (Anisi, 2013).

### 3. Results

Table 1 shows data on the basis of the study's participants.

Table 2 shows the mean and SD of the participants.

In the present study, before examining the contribution of predictor variables of vulnerability to addiction in the regression model, the simple correlation between the variables were examined (Table 3).

Before performing the analysis, initial analyzes were conducted to ensure no violation of the assumptions of normality, linearity, multiple linear, and same distribution. In this study, to assess the independent predictive variables, multiple linearity assumption was calculated. Tolerance and the variance inflation factor were derived. Tolerance index values were in the range of 0.79 to 0.96 and index variance inflation factor was ranged from 1.17 to 1.49. Therefore, it is possible that predictive variables are independent of each other and multiple linear did not happen. After the test and ensuring of no violation of the assumptions, the regression analysis were used in order to determine what variables of psychosocial stressors predict vulnerability to addiction. Table 4 shows the results of the regression analysis.

Information on table 4 shows that multiple correlation for the regression model is  $MR = 0.39$ , its square is equal to  $R^2 = 0.15$  and the correction coefficient is 14%. In other words, 14% changes in vulnerability to addiction is explained by psychosocial stressors (stressors related to lack, stressors associated with solution of unpleasant events). Of these variables, the solution of unpleasant events as negative is able to predict the maximum power in vulnerability to addiction. Next would be stressors related to lack that positively predicts vulnerability to addiction. It should be noted that stressors associated with recompliance and stressors associated with educational and career did not contribute significantly to the prediction of vulnerability to addiction.

### 4. Discussion

In this study, the results showed that 14% change in vulnerability to addiction is explained by psychosocial stressors (stressors related to lack, stressors associated with solution of unpleasant events). These findings were consistent with the results of Fox et al., (2005), Ilgen, Jain, Myrakim, and Trafton (2008), Eblich et al., (2003), Glamus, Bovbjerg, Eblich (2007), Goeders (2004), Staiger et al., (2009), and Erb (2010). In all these studies, stress has a direct and significant relationship with attitudes to drugs and is a predictor. According to Garland, Boettiger, and Howard (2011) stress is an important mechanism that causes alcohol dependency and high consumption and leads to relapse. In fact, people who drink alcohol to cope with their stress and negative experiences in their lifetime, have more symptoms of alcohol dependence than those who drink alcohol for other reasons. Those consuming alcohol who had experienced 6 or more incidents of stressful life events, consumed alcohol more than

3 times compared to those who didn't had experienced stress in the past year.

According to Heb's theory of cognitive, signs that have been coded and entered into the memory together, with associations and come to mind one of them, they all come to mind. Substance abuse is increasing among young people and adolescents who are in reproductive age. Obtaining a great feeling, curiosity, the desire for new experiences, risky and aggressive behavior, norm-breaking, gaining more independence, getting rid of the problems and carefree, compensation the social limitations, lacking of work and leisure, unemployment and Inflation creates stress in adolescents and young people. And they tend to materials because of the high risk and learning capacity and high readiness to the slip. (Mousae et al., 2012).

In the study of Hyman et al., (2007), illustrating major life stresses in patients showed that opioid craving increased in opiate-dependent patients treated with Naltrexone.

Therefore, stress can lead to tendency to addiction, increase in drug use, and relapse. Life stress is not only a risk factor in the development of addiction, but also is a factor to return to drug use. In fact, it can be concluded that hyperbaric environment may be involved in the excessive use of alcohol and drugs, drug dependence, and drug trends.

Accordingly, it can be noted that there are two sets of theoretical and practical implications of this study. In practical level, we propose providing training in the field of stress management skills, strategies, and efficient training to individuals who are in despair and unable to deal with life stressors, in order to empower them to meet their. The theoretical implications of research findings, providing new ideas and assumptions about the predictors of vulnerability to addiction. These forecasts (psychosocial stressors) not only enrich theoretical models of addiction but it will lead to strengthening of the relations between the two theories; the theory of stress and addiction.

The population and sample size poses some limitations on the findings, interpretations, and attributions of cognitive variables that should be considered. Also this study was conducted only on male students and the results are not generalizable to the population of females.

In future research, it is recommended that this topic be investigated in parents so that family (as a contributing factor to student stress) becomes a protective factor against stress in adolescence. It is also recommended to

conduct a similar study in other geographic areas, basic education, and education sectors also on girls to generalize the results with greater confidence.

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