

Comparison of Self-Esteem, Mental Health and Risky Behaviours between Children of Drug Abuser and Non-Drug Abuser Parents

Hamidreza Ahmadkhaniha¹, Behnam Shariati², Morteza Naserbakht¹, Ruollah Seddigh¹, Sara Saei³, Kheiri Amirkhiz¹ and Shahrzad Kheiri^{1*}

¹ Department of Psychiatry, Research Center for Addiction and Risky Behaviors (Re-CARB), Iran University of Medical Sciences (IUMS), Tehran, Iran

² Department of Psychiatry, Mental Health Research Center, Rasoul-e-Akram Hospital, IUMS, Tehran, Iran

³ Nikan Medical Group, Tehran, Iran

*Corresponding author: Shahrzad Kheiri, Department of Psychiatry, Research Center for Addiction and Risky Behaviors (Re-CARB), Iran University of Medical Sciences, Tehran, Iran, Tel: + 989119522585; E-mail: Shahrzad.amirkhiz@gmail.com

Received date: October 27, 2018; Accepted date: December 12, 2018; Published date: December 19, 2018

Copyright: © 2018 Ahmadkhaniha H, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Abstract

Aim and Background: Reviewing the previous articles appears that most studies have concentrated on the drug abusers themselves, not on their families and children. According to previous researches, addicted people can cause social damage to their family.

Materials and Methods: This study is a case-control study, designed to evaluate mental health, risky behaviors and self-esteem among the children of drug abuser parents. The case group are 150 children of male drug abusers who referred; and the control group are a random selection of 150 children of non-drug abuser parents in the same period. Rosenberg self-esteem test, SCL-90-R and additional questionnaires were used for evaluation.

Results: The present study indicates that comparing to the children of non-drug abusers, the children of drug abusers are more susceptible to problems like somatization, obsessive-compulsive disorder, sensitivity in communications, anxiety, depression, hostility, phobic anxiety, paranoid ideation, psychosis and insomnia discrete orientation.

Conclusion: Children of addicted parents have poorer self-esteem and show more tendencies to high-risk behaviours such as dangerous driving, violence, smoking, drugs, alcohol and non-appropriate sexual behavior. Therefore, these children need more attention in their educational, social and familial issues. Besides, a more serious attempt should be considered in identifying and screening for mental health and behavioral interventions in these children.

Keywords: Self-esteem; Mental health; Risky behaviors; Drug abusers; Children

Introduction

Background

Substance abuse is a physical and mental illness that due to its progressive nature puts all aspects of life, health, family and society, in danger; and family is the first place affected [1]. Living with a substance abuser has adverse effects on life and all members of the family [2]. Meanwhile, perhaps most of all the addicts' spouse and children are injured. Examining this issue is important from two aspects: first, by identifying these injuries, their effects could be prevented; second, this group can support the patient through the process of detoxification and encourage them to continue [3].

Parental substance abuse is a risk factor for many types of negative psychosocial outcomes for children [4]. According to the National Survey on Drug Use and Health (NSDUH), more than 8 million children below 18 yrs in 2014 lived with at least one substance abuser parent [5]. The impacts of parental addiction on children are complex and ambiguous, and are related to the presence or absence of key protective factors, e.g. the nature and frequency of substance abuse, the

child's age and their development stage [6], and environmental factors such as socioeconomic deprivation and unemployment [7]. Children of the substance abusers are at higher risks of psychological damages in their future and show greater tendency to high risk behaviors such as drug abuse. They are also prone to stressful events during their life more than those whose parents are not substance abusers [8]. In addition, children who live with addicted parents are more likely to commit risky behaviors such as aggression, destroying public property and truancy. They are susceptible to conduct disorder, coping disorder and committing crimes [1]. Therefore, since parental addiction has negative psychological and social consequences for children apart from its harms for themselves, it is crucial to recognize these consequences; to help them cope with the outcomes and improve their quality of life.

In Iran, research on high-risk behaviors has not been conducted among offspring's children; most of the related research has been carried out abroad. Also, they have merely studied some outcomes of parental addiction, including drug use and anti-social issues that are a subset of high-risk behaviors or have studied mental health problems, including psychopathology in offspring, and have paid less attention to the role of children in drug abusers [9-11]. The purpose of this study was to compare mental health problems and the tendency towards high-risk behaviors of the children of addicted parents to that of non-addicted parents in a more comprehensive way.

Materials and Methods

We evaluated and compared the self-esteem, high-risk behaviors and general health of people with substance abuser parents with that of the individual of non-substance abuser parents in a 6-month period, from March 20 to September 22, 2016. This study was a cross sectional study. At the baseline, the participants were informed of the goals and importance of the research and written consent was obtained without any compulsion to take part in the study. Participants were assured that their identity would be kept confidential. Three hundred eligible individuals were enrolled in the study; 150 subjects for the experimental group and 150 subjects for the control group were selected *via* sampling method. The inclusion criteria of the study included a 1 yr history of participants' parents, and living together in childhood. The sample consisted of people whose parents had at least 1 yr of addiction and who had referred to the addiction treatment centers of Iran University of Medical Sciences during March 20 to September 22 in 2016 in Tehran. The control group consisted of those whose parents were referred to Rasoul-e-Akram Hospital in the same period; aged 18 to 35 yrs old, whose parents were not addicting. Patients aged between 18 to 35 yrs, living together with their parents, willing to participate in the study, without any other disorders than substance abuse, based on a psychiatrist's diagnosis and DSM-5 (Diagnostic and Statistical Manual-5th edition) criteria were considered eligible to enter the study. For those who did not have the required literacy to complete the questionnaire, another person according to their answers filled the questionnaires.

We assessed self-esteem by the Persian version of the Rosenberg self-esteem questionnaire [12], ranging from 10 to 40, with lower scores indicating higher self-esteem. This scale consists of 10 general statements measuring the degrees of life satisfaction and feeling good about them. In the pilot study with 30 grades 10 students with a two-week interval, test-retest correlation was 0.79 (Cronbach's alpha 0.83). The Rosenberg self-esteem scale is considered a reliable and valid quantitative tool for self-esteem assessment. This questionnaire has been validated and its validity and reliability is approved in Iran and [13] worldwide [14].

To measure the mental health of the two groups, the SCL-90 (Symptom Checklist 90) questionnaire was used [15]. The SCL-90 questionnaire consists of 90 questions measuring mental health in nine different dimensions including physical complaints, obsession and compulsion, sensitivity to interactions, depression, anxiety, aggression, paranoia, paranoid thoughts, and psychological discrepancy [15]. The general indexes of this questionnaire are in three forms of GSI (Global Severity Index), PSDI (The Positive Symptom Distress) and PST (Positive Symptoms Total). In this tool, a mean score of one and above shows a state of the disease, and a mean score above three states of mental disorder according to Noorbala [16], the cutting point based on GSI is 0.7. In this study, people were considered mentally disordered if they had an overall GSI score of more than 0.7. This questionnaire has acceptable validity reliability [17] in both Iranian and non-Iranian articles [18].

To assess the risk-taking of adolescents, an Iranian Risk Scale was used which includes 38 items for assessing the susceptibility of adolescents to 7 high-risk behaviors including hazardous driving, violence, smoking, drug use, alcohol consumption, sexual behavior and sexual attraction to the opposite sex. The validity of Iranian Adolescent Risk Scale (IARS) was investigated in an article evaluating Validity and Reliability of Iranian Youth Risk-Taking Scale, in which it has been mentioned to have high validity and reliability [19].

The gathered data were analyzed using SPSS-22. For statistical analysis, parametric and non-parametric t-test was used. The Demographic data were analyzed using independent test and Pearson Chi-Square test. The remaining findings were obtained using the Mann-Whitney U test.

Results

In the two arms of this observational study, age (p value 0.1) and sex (p value 0.487) were not significantly different. The two groups were significantly different in terms of occupation (p value 0.034) and education (p value 0.036).

Self-esteem in the case group was significantly lower than the control group, with an average score of 0 versus 8 respectively (p value 0.01) (Table 1).

The mental health status of the two groups was measured by standard questionnaires. The GSI overall grade index was significantly different between the two groups. Children of substance abusers were in a worse condition in terms of mental health, and the numbers of overall severity index was higher (p value 0.01) (Table 1).

Variable		Case Group	Control Group	p value
Mean of AGE (SE)		27.81 (5.10)	26.84 (5.04)	0.1
Sex	Female	44.70%	48.70%	0.49
	Male	55.30%	51.30%	
Job	Jobless	32.70%	44.00%	0.03
	Retired	0.70%	0.00%	
	Working at home	16.00%	6.70%	
	Workman	14.70%	8.70%	
	Self-employed	16.70%	18.00%	
	Employee	19.30%	22.70%	
Education	Illiterate	0.00%	0.30%	0.04
	Elementary	1.30%	1.70%	
	High School	16.70%	11.00%	
	diploma and university Students	24.30%	23%	
	bachelors and Higher	7.70%	14%	

Table 1: Demographic data.

The two groups had also responded to questions regarding tendency towards risk taking behaviors. Significant difference was observed between the two arms of the study with this regard, and the median for the children of addicts was much higher than in the control group (105 vs. 78.5, p-value <0.001). This difference was observed in all the aspects of the Iranian Youth Risk-Taking Scale except friendship with the opposite sex (Table 2).

Case Control						
Variable	Median		Mann-Whitney U	Wilcoxon W	Z	p value
Somatization	1.92	0.71	2533.50	13858.50	-11.61	0
OCD (Obsessive-compulsive Disorder)	2.00	0.80	2369.50	13694.50	-11.83	0
Interpersonal Sensitivity	1.89	0.67	3118.00	14443.00	-10.84	0
Depression	1.92	0.77	3338.50	14663.50	-10.54	0
Anxiety	1.95	0.60	2524.00	13849.00	-11.63	0
Hostility	2.00	0.50	2301.50	13626.50	-11.94	0
Phobic Anxiety	1.86	0.29	1797.00	13122.00	-12.63	0
Paranoid Ideation	1.83	0.83	3747.50	15072.50	-10.01	0
Psychoticism	1.90	0.35	1591.50	12916.50	-12.87	0
Additional Items	1.86	0.71	3143.00	14468.00	-10.81	0
GSI (Genuine Stress Incontinence)	1.96	0.64	1981.00	13306.00	-12.34	0

Table 2: The mental health status result.

Discussion

The present study showed that the median score of self-esteem among the children of the drug abusers is significantly lower than that among the children of the non-drug users' group. The findings of this study on the self-esteem of children of substance-abusers are consistent with previous studies. This result was similar to the study by Dalvandi and Sadrosadat [20] which showed that addiction of a family member causes a decrease in the self-esteem, social and behavioral isolation, social problems, financial pressures and feelings of fear and anxiety for the other family members. Another study conducted in Orumieh-Iran has shown that children of addicted parents are usually easily-irritated, aggressive, anxious, shy and less self-esteemed than children with non-addicted parents. The non-addict's emotional parenting styles differ from that of the addicted group. Non-addict's parents treat their families emotionally warmer, despite the cold and unstable emotional status seen in addicts' families. Accordingly, more violence and cold relationships is observed in families with an addicted parent, and this is a serious and continuous issue. Violent and unstable punishments are one of the factors effective in juvenile delinquency. Hard physical punishments cause mood complications, and a child undergoing physical punishment severely loses their self-esteem and suffers from various fears [21]. In affected families, parents' behavior is unstable, children cannot understand the reason for being punished, and they feel insecure and guilty. Children, on the one hand, are concerned about the health of their parents. On the other hand, they believe they are not lovely enough so that their parents would abandon substance abuse for them. These children are ashamed to bring their friends home or go out with their parents. Some of them even lose their self-esteem to the extent that they are not able to communicate with others because they have not learned the basic communication skills or are appalled by others being aware of the truth about their parents.

The study also showed that the overall risk-taking including hazardous driving, violence, smoking, drug abuse, alcohol consumption, and high-risk sexual behavior in the offspring of the

affected families is higher than that of non-drug users. However, the tendency towards friendship with the opposite sex did not differ significantly between the two groups. This may indicate that since 2008, considering the cultural conditions and social constraints of the Iranian society and according to the Iranian Adolescent Risk Measures (IARS) [19], the tendency towards friendship with the opposite sex is socially accepted and not considered a dangerous behavior anymore. The findings of this study are consistent about the high-risk behavior of the offspring of addicted parents with the previous studies. In the study by Hoffmann and Cerbone [11], the influence of parents' addiction on children was emphasized. When parents consume drugs, it is more likely that their children become addicted and the incidence of behavioral disorders in such children is directly related. Another study showed higher susceptibility to depression and substance abuse in adolescents living in families with addicted parents [22]. There was a significant relationship between smoking and using other substances in parents and children. Children with addicted fathers have more emotional disturbances than children of non-addicted fathers do [23]. In families with an addicted father, the likelihood of the children and even the mother is much higher to become addicted to drugs than those who the father is not addicted [24]. The tendency towards committing risky behaviors may also be hereditary, parental addiction would pave the way.

Previous studies have shown that the children of substance abusers are at an increased risk of developing psychological diseases in their future life; including substance use disorder, as well as being more prone to stressful events during their life than those with normal [8]. Black and Mayer [25] in the study show that children in all of the families with an alcohol or opiate addicted parent experienced some degree of neglect. Also, Children exposed to drugs of abuse prenatally, including those adopted away, and children who grow up in low SES backgrounds, may be at risk of relatively reduced cognitive functioning (though still within the normal range) in adolescence [26]. Bays [27] in his study show that Parental addiction has long-lasting detrimental effects on the health and safety of children. The findings of this study

are consistent with previous studies on the mental health of the offspring of substance abuser parents. The prevalence of mental illnesses such as depression, anxiety, obsessive-compulsive disorder, practical suicide, sleep disturbances and sexual dysfunction in opiate dependent drug families is significant [28]. On the other hand, Guillem, Pelissolo [29] studies have shown that in families with a genetic basis of mental illness, people with substance abuse have lower mental health than other families. In other words, despite the fact that substance abuse may be due to the genetic background of people with a history of family mental disorders, virtually the consumer is a disruptive factor in the mental health of the family. In addition, the use of drugs by a person in the family has profound effects on the behavior and other aspects of their life and their surroundings, for example, anger, feelings of rejection, and disability, which could cause the spouse, feel guilty and depressed. Many specialists believe that the prevalence of physical impairment such as colitis, etc. is higher in the family of addicts [3].

Studies have shown that substance abuse by parents is a risk factor for many negative psychosocial outcomes for children [7,30]. The children of these parents are at increased risks of developing higher psychological disorders in their future life, including drug abuse, and also experience more stressful events during their life than those who do not have parents with substance abuse problems [8]. The case-control study of Lee, Manning [31] also showed that in the family members of addicts, depression, stress and psychological disturbances and a weaker health status were significantly higher than the control group. Also, a study of Ray, Mertens [32] showed that psychiatric disorders are more common in addicted people than in non-addicted people and can be due to the effect of drugs on the health of the individual and of the family, which will affect their compatibility and health. Researches in Iran have shown that the dependence of one's family members plays an important role in the mental health of the other members of the family [33]. Another research has reported that most of the families of addicted people in this study had moderate anxiety and depression. Also, 36% of them had low aggression and 35.8% had moderate interpersonal sensitivity [34]. The same research also showed that psychiatric disorders in the addicted families were significantly different from non-addicted families, and anxiety disorders, aggression, paranoid thoughts, and depression were more common in the addicted ones. Also, a study aimed to investigate the relationship between 'substance abuse and drug dependence' with family members' mental disorders, showed that the risk of other family members' depression is higher than other disorders [35]. There is a significant difference between the mental health of female adolescents in non-addicted and addicted families. Adolescents belonging to non-addicted families were mentally healthier. One of the most important complications of addiction was familial consequences. Violence against children, divorce, separation etc., is among the painful consequences of this phenomenon. Of course, such incidents cause serious problems and disorders for children and adolescents [36]. There is a significant difference in the educational status, interpersonal disturbance and anxiety of the adolescents of addicted fathers and non-addicted fathers [20]. There is a significant relationship between father's addiction and psychosocial problems of their offspring [20]. In terms of educational status, a higher percentage of children affected from parental addiction, had elementary and high school educations and also a higher percentage of children of non-drug-dependent parents, had bachelor's degree and higher, which could indicate their better status in terms of education. As shown in previous studies, children of drug

abuser parents are more likely to fail educational courses than others do [23].

Children with a family history of substance abuse may also be genetically more susceptible to substance abuse [37], which is a genetic predisposition, combined with family history or other risk factors [38]. In this study, as noted earlier, it was observed that the tendency of people with a family history of substance abuse to addiction was greater, but due to the cross-sectional nature of the study, the possibility of examining the effect of genetics on such a tendency was not possible.

Conclusion

In the present study, the mental health of both groups was evaluated, indicating that the children of drug abusers were more likely to suffer from physical disorders, obsessive compulsive disorder, hypersensitivity to interpersonal behavior, anxiety, depression, aggression, anxiety, paranoid thoughts, psychotic disorder, and sleep disorders comparing to those with normal parents. It also showed that these people are more suspected of having mental disorders than the children of non-addicted parents. Therefore, since the abuse of drugs in parents, in addition to the negative consequences for themselves, has psychological and social consequences for children, it is crucial to recognize these consequences and examine them to increase the quality of life of these children and help them to cope with their problems.

There were several limitations to this study, for example, the effect of the different substances abused by the parents has not been assessed. This study only focused on the children of abusers consuming meth and opium, and other substances and alcohol has not been investigated. Another limitation is, we don't have any history of parent's substance abuses. This study is a cross-sectional study, not an etiologic one; therefore, we cannot understand that whether the training of these families has caused these effects on children, or genetics or the environment and poverty. A bio psychosocial and longitudinal study could be helpful with this regard. The samples collected in our study were drug addicts who had the most severe form of addiction and the effects of lower stages of parental addiction on their children were not assessed. This study did not investigate the onset of parental addiction with childhood, adolescence, or young children. The impact of the socio-economic level of substance abusers on children has not been studied. However, due to the limitations mentioned, more research is needed with this regard.

References

1. Douglas-Siegel JA, Ryan JP (2013) The effect of recovery coaches for substance-involved mothers in child welfare: Impact on juvenile delinquency. *J Subst Abuse Treat* 45: 381-387.
2. Hitchens K (2011) All rights reserved addiction is a family problem: The process of addiction for families. *J Primary Health Care* 6: 12-17.
3. Sadock BJ, Sadock VA (2011) Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry: Lippincott Williams & Wilkins.
4. Havnen KS, Breivik K, Stormark KM, Jakobsen R (2011) Why do children placed out-of-home because of parental substance abuse have less mental health problems than children placed for other reasons? *Child Youth Serv Rev* 33: 2010-2017.
5. Kyzer A, Connors-Burrow NA, McKelvey L (2014) Environmental risk factors and custody status in children of substance abusers. *Child Youth Serv Rev* 36: 150-154.

6. Ornoy A, Segal J, Bar-Hamburger R, Greenbaum C (2001) Developmental outcome of school-age children born to mothers with heroin dependency: Importance of environmental factors. *Dev Med Child Neurol* 43: 668-675.
7. Christoffersen MN, Soothill K (2003) The long-term consequences of parental alcohol abuse: a cohort study of children in Denmark. *J Subst Abuse Treat* 25: 107-116.
8. O'Connor L, Forrester D, Holland S, Williams A (2004) Perspectives on children's experiences in families with parental substance misuse and child protection interventions. *Child Youth Serv Rev* 38: 66-74.
9. Giancola PR (2003) Constructive thinking, antisocial behavior and drug use in adolescent boys with and without a family history of a substance use disorder. *Pers Individ Dif* 35: 1315-1330.
10. Hill SY, Shen S, Lowers L, Locke-Wellman J, Matthews AG, et al. (2008) Psychopathology in offspring from multiplex alcohol dependence families with and without parental alcohol dependence: A prospective study during childhood and adolescence. *Psychiatry Res* 160: 155-166.
11. Hoffmann JP, Cerbone FG (2002) Parental substance use disorder and the risk of adolescent drug abuse: An event history analysis. *Drug Alcohol Depend* 66: 255-264.
12. Moshki M, Ashtarian H (2010) Perceived health locus of control, self-esteem, and its relations to psychological well-being status in Iranian students. *Iran J Public Health* 39: 70.
13. Mohammadi N (2005) The preliminary study of validity and reliability of Rosenberg's self-esteem scale. *J Iran Psychol* 1: 55-62.
14. Robins RW, Hendin HM, Trzesniewski KH (2001) Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg self-esteem scale. *Pers Soc Psychol Bull* 27: 151-161.
15. Derogatis LRJL (1979) NJ: NCS Pearson. Symptom checklist-90-revised (SCL-90-R).
16. Noorbala AA (2015) Investigation process into prevalence of mental disorders in Iran. *Arch Iran Med* 18: 74.
17. Anisi J, Babaei S, Barani M, Mohammadlo H, Ebrahimi F (2016) Determine the psychometric properties by symptom checklist-90-revised (SCL-90-R) among military forces. *EBNESINA* 17: 13-18.
18. Schmitz N, Hartkamp N, Kiuse J, Franke GH, Reister G, et al. (2000) The symptom check-list-90-R (SCL-90-R): A German validation study. *Qual Life Res* 9: 185-193.
19. Mohammadi AZ, Ahmadvani Z, Panaghi L, Heidari M (2011) Validity and reliability of Iranian youth risk-taking scale. *J Psychol* 15: 129-146.
20. Dalvandi A, Sadrosadat SJ (2001) A survey on psychosocial problems in adolescents with. *Arch Rehabil* 2: 26-34.
21. Raisi F, Anisi J, Yazdi M, Zamani M, Rashidi S (2008) Comparison of mental health and child rearing between addicts and non-addicts. *J Behav Sci* 2: 33-41.
22. Amin A, Mojarad A, Jamali S, Sareban M (2009) The effect of parental addiction on children's behavior. *The Journal of Toloo-e-behdasht* 8.
23. Godarzi M, Zarnaghash M (2003) The perception of substance abuser from disciplinary disciplines of parents. *J Clin Psychol andishe va rafater* 10: 241-249.
24. Gholizadeh A (2005) Survey of Psychological and social characteristics of the spouses of addicts and their coping strategies with the addiction of their spouse. *J Educ Psychol* 2: 43-64.
25. Black R, Mayer J (1980) Parents with special problems: Alcoholism and opiate addiction. *Child Abuse Negl* 4: 45-54.
26. Ornoy A, Daka L, Goldzweig G, Gil Y, Mjen L, et al. (2010) Neurodevelopmental and psychological assessment of adolescents born to drug-addicted parents: Effects of SES and adoption. *Child Abuse Negl* 34: 354-368.
27. Bays J (1990) Substance abuse and child abuse: Impact of addiction on the child. *Pediatr Clin North Am* 37: 881-904.
28. Brennan PA, Hammen C, Katz AR, Le Brocque RM (2002) Maternal depression, paternal psychopathology, and adolescent diagnostic outcomes. *J Consult Clin Psychol* 70: 1075-1085.
29. Guillem E, Pelissolo A, Vorspan F, Bouchez-Arbabzadeh S, Lépine JP (2009) Facteurs sociodémographiques, conduites addictives et comorbidité psychiatrique des usagers de cannabis vus en consultation spécialisée. *L'Encéphale* 35: 226-233.
30. Haugland BSM (2003) Paternal alcohol abuse: Relationship between child adjustment, parental characteristics, and family functioning. *Child Psychiatry Hum Dev* 34: 127-146.
31. Lee KMT, Manning V, Teoh HC, Winslow M, Lee A, et al. (2011) Stress-coping morbidity among family members of addiction patients in Singapore. *Drug Alcohol Review* 30: 441-447.
32. Ray GT, Mertens JR, Weisner C (2009) Family members of people with alcohol or drug dependence: Health problems and medical cost compared to family members of people with diabetes and asthma. *Addiction* 104: 203-214.
33. Mancheri H, Neyestanak NS, Seyedfatemi N, Heydari M, Ghodoosi M (2013) Psychosocial problems of families living with an addicted family member. *Iran J Nurs* 26: 48-56.
34. Salehi B, Solhi H, Fotovat A, Motamedi D, Moradi S, et al. (2012) The comparison of the psychiatric disorders between opium addicts' families referring to opium withdrawal clinics and non-addicts' families referring to blood transmission centers. *Arak Medical University Journal* 15: 32-38.
35. Solati S, Abedin Zadeh MR, Nikfarjam M, Deris F (2004) Relationship between substance abuse and mental disorders of family (2001). *Journal of Shahrekord Uuniversity of Medical Sciences* 6: 1-8.
36. Etemadi A, Masteri Farahani F (2012) The comparison of mental health status and locus of control of female adolescents of addicted and nonaddicted families. *Journal of Instruction and Evaluation* 4: 137-152.
37. Enoch MA (2012) The influence of gene-environment interactions on the development of alcoholism and drug dependence. *Curr Psychiatry Rep* 14: 150-158.
38. Kendler KS, Prescott CA, Myers J, Neale MC (2003) The structure of genetic and environmental risk factors for common psychiatric and substance use disorders in men and women. *Arch Gen Psychiatry* 60: 929-937.