



AENSI Journals

Journal of Applied Science and Agriculture

ISSN 1816-9112

Journal home page: www.aensiweb.com/jasa/index.html



Relationship of Attachment Styles with Addiction Susceptibility in Children

Ali Zeinali

Department of Psychology, Islamic Azad University, Khoy Branch, Khoy, Iran.

ARTICLE INFO

Article history:

Received 20 December 2013

Received in revised form 22

February 2014

Accepted 26 March 2014

Available online 15 April 2014

Keywords:

Attachment Styles,

Addiction Susceptibility, Children

ABSTRACT

Background: Attachment styles play an important role in children healthy and risky behaviors. The present study plans to investigate, whether different attachment styles leads to shaping various addiction susceptibility in children? **Objective:** Participants were 358 high schools adolescent with the age range of 14-19 and were chosen using cluster random sampling. Data were gathered using addiction susceptibility questionnaire- adolescent version and attachment styles questionnaire. Data were analyzed using multiple regression and partial correlation. **Results:** The results showed children's preoccupied, fearful and dismissing insecure attachment styles have a positive relationship with addiction susceptibility. Children's insecure attachment styles are direct predictors of addiction susceptibility. Children's secure attachment style has a negative relationship with addiction susceptibility. Children's secure attachment style is a reverse predictor of addiction susceptibility. **Conclusion:** Thus, secure attachment is a valid index for psychological health. Insecure attachment styles are good predictor for addiction susceptibility and they can be used as a scale for identifying of at risk individuals for drug abuse in prevention plans.

© 2014 AENSI Publisher All rights reserved.

To Cite This Article: Zeinali, A., Relationship of Attachment Styles with Addiction Susceptibility in Children. *J. Appl. Sci. & Agric.*, 9(3): 1321-1327, 2014

INTRODUCTION

Addiction is characterized by uncontrollable abuse of drugs despite its negative consequences. Several studies have shown that addiction to nicotine, alcohol and opium occurs only in a small percentage of the population who use them for a long time. For example, approximately 12-15% of the population uses alcohol, 5-10% use nicotine and 1-2% use opium, demonstrating that not all the individuals encountering addictive substances become addicted (Hiroi and Agatsuma, 2005). Addiction susceptibility develops during growth and development parallel with the formation of thoughts, opinions, behaviors, life styles, social relationships and personality traits before the individuals practically begin drug abuse (Zeinali, Vahdat and Isavi, 2008). In other words, before an individual turns to addiction, readiness for addiction develops, which is referred to as addiction susceptibility (Zeinali *et al*, 2008; Franke *et al*, 2003; Flegel, Vazquez and Robinson, 2003; Agatsuma and Hiroi, 2004).

Based on addict-prone theory, some individuals are susceptible to addiction and if they are exposed to drugs, they will become addicted; however, if an individual is not susceptible, they will not become addicted (Gendreau and Gendreau, 1970). Barnes, Murray, Paton, Bentler and Anderson (2002) introduced the addiction-prone personality (APP) concept in an extensive study, reiterating that having an addiction-prone personality characters leads to alcohol and drug abuse.

Some studies have shown a significant difference between addicts and students' scores on Addiction Potential Scale (Minouee and Salehi, 2003) and prevalence of addiction susceptibility 14.1% (Vahdat, 2005) and 4.4% (Zeinali, 2013) in high school and university students, respectively. There is consensus among studies in relation to the presence of susceptibility to and readiness for addiction; however, the reasons are attributed to different factors, including pre-existing personality traits (Hiroi and Agatsuma, 2005), the quality of parental care (Flagel *et al*, 2003), pathological development in psycho-social backgrounds (Zeinali *et al*, 2008) and psychiatric risk factors (Frank *et al*, 2003). The present study regards addiction a developmental phenomenon, with its foundations in the family structure. One of the most influential family factors is the children's attachment styles to parents.

Attachment is a close emotional relationship by which an individual feels security (Bowlby, 1998). Bowlby (1969) reported that a human child, like animals' offspring, possesses some innate behaviors, such as clawing, smiling, crying, and staring at parents' eyes...), which help keep parents near the children. Therefore, the child is protected against dangers and his/her nutrition is guaranteed (Berk, 2010).

Corresponding Author: Ali Zeinali Dept. of Psychology, Islamic Azad University; Khoy Branch, Khoy, Iran.
Tel: +98-09143409171, E-mail: zeinali@iaukhoy.ac.ir

According to Bowlby (1980), children establish a stable emotional relationship with their caregivers as a result of their experience with their parents. Differences in responses of the caregiver to the efforts made by the individual who becomes attached not only change the function of attachment system in certain short-term interactions but also they gradually induce stable and widespread changes in the function of the attachment system. These influences are saved in the long-term memory of the individual, forming the internal working models or mental representation models. This internal representation becomes an important component of personality and serves as a guide for all intimate relationships in future in the form of a mental picture.

Bowlby (1980) reported that secure and insecure attachments are characterized based on internal working models about self and others. These models are general representations of self and others, which are used by children as guides to interpret occurrences and form one's own experiences in human relations. Children with sensitive and responsive caregivers will come to the conclusion that people are reliable and they are valuable and lovable. Therefore, they will develop a positive internal working model about themselves and others. In contrast, Children with insensitive, indifferent or abusing caregivers will come to the conclusion that people cannot be trusted and they are worthless. Therefore, they form a negative internal working model about others and themselves. Bartholomew and Horowitz (1991) adopted Bowlby's concept (1980) in relation to the working models and used it in a study of attachment styles in adults. They introduced 4 different attachment styles based on two aspects of working models about self and others: secure, preoccupied, fearful and dismissing.

Individuals with secure attachment are characterized by positive working models about self and others. They believe that they are adorable and others are responsive and receptive. Individuals with preoccupied attachment have a negative working model toward self and positive working model toward others. They feel they are worthless but feel that others are positively superior; therefore, they try hard to attract other people's attention to become accepted by others. Individuals with fearful attachment have a negative working model toward self and others. They do not believe that they are worth being loved and consider others untrustworthy and dismissive. Individuals with dismissing attachment have a positive working model toward self with a negative functional model toward others. Such individuals have a sense of value but lack of trust in others results in protecting self against hopelessness by avoiding close relationships.

Although almost all the children who are brought up in a family become attached to a known caregiver, the quality of such a relationship is different from one child to another. Bowlby (1969) reported that children with insecure attachments are at a risk of developing a model of self as one who is not lovable and a model for others that are not trustworthy, a cognitive schema which will influence the future interactions of the child later in life. Therefore, inappropriate parenting experience will result in insecure attachment, which will in itself lead to abnormal and dysfunctional attitudes (Gamble and Roberts, 2005). On the other hand, when such cognitive vulnerabilities are active, they negatively affect individual's self-esteem. Such a negative effect on self-esteem is believed to make the individual susceptible to the use and abuse of drugs (Kassel, Wardle and Roberts, 2007).

Polek, Van Oudenhoven and Tenberg (2008) showed that secure attachment has a positive relationship with mental health. Fearful and preoccupied attachments have a negative relationship with mental health and dismissing attachment did not exhibit a relationship with mental health. They concluded that attachment styles are good predictors for mental health. Insecure attachment style is related with the ineffective control of emotions, guiding the individual toward maladaptive behaviors. There is a higher prevalence of drug abuse in individuals who have insecure attachments. Insecure attachment is considered a risk factor for drug abuse. Therefore, it can be used as a scale to identify individuals who at higher risk for drug abuse in plans to prevent drug addiction (Caspers, Cadoret, Langbenn, Yucuis and Troutman, 2005).

Studies show that some tendencies have a role in making individuals with insecure attachment susceptible to drug abuse. Individuals with fearful attachment resort to the use of alcohol to deal with anxiety, stress and derangement and individuals with dismissing attachment use alcohol to avoid emotional dependence or promote positive moods (Mikulincer and Shaver, 2007). In recent studies, addiction has been considered a disorder in attachments (Brook, 2006).

Lajvardi (2004) showed that there is a relationship between attachment styles (secure and insecure) and tendency toward drug abuse in university students, with a negative relationship between tendency toward drug abuse and secure attachment style and a significant and positive relationship between tendency toward drug abuse and insecure attachment style.

Studies on the subject have shown that there might be a relationship between addiction and the attachment style of children. However, before drug addiction, susceptibility and readiness develop. Therefore, addiction susceptibility serves as a mediator between attachment styles and addiction and further studies are necessary to better elucidate this construct and the quality of its relationship with other psychological constructs, including attachment styles. Studies have shown that attachment styles lead to different results in relation to healthy living and addiction of children. The present study aims to evaluate whether different attachment styles lead to the development of different susceptibilities for addiction in children or not. It is expected that secure attachment is a negative predictor for susceptibility to addiction and insecure attachments (preoccupied, fearful and dismissing) are positive predictors for children's susceptibility to addiction, which is the hypothesis of the study.

To this end, 4 different attachment styles were entered into the regression model in a correlation design as variables predicting addiction so that their effect on children's susceptibility to addiction could be evaluated.

Methodology:

Participants:

358 Iranian (urmia) adolescent high school boys (54.7%) and girls (45.3%) with the ages ranging from 14 to 19 years were participated in this study. Based on grade and gender, the sampling was performed using cluster random method (a total of 14 classes: 8 boys' classes and 6 girls' classes). Data collection was carried out based on the sample estimations and through referring to the mentioned high schools' classes. 370 questionnaires were filled in, of which, 12 questionnaires were incomplete and, therefore, were excluded from the study. Finally, 358 questionnaires were analyzed (196 male students, 162 female students; 135 students at first grade, 122 students at second grade and 101 students at third grade).

Materials:

The instruments for measuring the variables included Addiction Susceptibility Questionnaire-Adolescent Version (Zeinali, 2014) and Attachment Style Questionnaire (Van Oudenhoven, Hofstra & Bakker, 2003), which are described in the coming paragraphs:

Addiction Susceptibility Questionnaire-Adolescent Version (ASQ-AV) was developed by Zeinali (2014), includes 50 items and scores according to 3-point Likert-type scale (1=no, 2=a little & 3= high). the criterion validity of original ASQ through simultaneous implementation with the Addiction Potential Scale (APS, one of the three subscales of MMPI-2 is developed by Weed, Butcher, McKenna & Ben-Porath, 1992) was estimated as .62 (Zeinali *et al.*, 2008). The reliability of the ASQ-AV, using the Cronbach's Alpha and Guttman's split-halves method, was estimated as .87 and .82, respectively (Zeinali, 2014).

Attachment Style Questionnaire (ASQ) was developed by Van Oudenhoven, Hofstra, and Bakker (2003). The ASQ is a 22-item questionnaire, with the items rated on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). It measures four dimensions of the attachment styles (secure, preoccupied, fearful, and dismissing) based on the theoretical model of Bowlby (1980) and Bartholomew & Horowitz (1991). The ASQ assesses attachment through multiple scores (on each dimension) separately. In the study of Hofstra, Van Oudenhoven & Buunk (2005), the construct validity and the stability of the ASQ, measured after 1 year with Pearson correlation, also proved to be satisfactory: .63 for the secure style, .60 for the fearful style, .69 for the preoccupied style, and .63 for the dismissing style. Alpha coefficients of the secure scale were .71, .67, and .73; of the fearful scale .74, .71, and .80; of the preoccupied scale .70, .66, and .78; and of the dismissing scale .63, .49, and .65 in the Polish, Russian, and Hungarian samples, respectively (Polek, Van Oudenhoven & Tenberge, 2008). In this study, the ASQ was translated and validated in order to prepare an Iranian version of the instrument. The ASQ was analyzed using confirmatory factor analysis with 205 participants of Iranian students and its reliability was estimated. As a result of factor analysis, a new version of ASQ including 19 items was developed. Fit indices of the questionnaire were optimal (RMSEA=.07, NFI=.90, CFI=.91, CMIN=291.75 & CMIN/DF=1.99) and its items were well-loaded within the range of β =.36 to .81 for the four attachment styles. Alpha coefficients of the secure, preoccupied, fearful and dismissing scales were .74, .71, .70 and .69, respectively.

Procedure:

The questionnaires were completed by the students during class time at school authorities' discretion. Students were informed about the nature of the study and assured of confidentiality and anonymity by the researcher, prior to distribution of the questionnaires. During the questionnaires' filling in process, the students were required to communicate any probable questions or problems they encountered. The data obtained were analyzed using the statistical methods of partial correlation and multiple regression analysis.

Results:

A total of 358 high school students were included in the present study (196 boys and 162 girls), in the 1st, 2nd and 3rd high school grades, with an age range of 14-19 years. They were studying human sciences, natural sciences, physics-mathematics and technical courses. Table 1 presents the means and standard deviations of the scores of attachment styles and addiction susceptibility of students; Table 2 presents the differences between the variables in terms of gender.

Table 1: Means and standard deviations of the participants' attachment styles and addiction susceptibility

Variables	Mean	Standard Deviation
-----------	------	--------------------

Secure attachment	22.22	3.65
Preoccupied attachment	20.96	4.52
Fearful attachment	12.65	2.47
Dismissing attachment	10.63	2.59
Addiction susceptibility	79.52	12.32

Table 1 presents means and standard deviations of students' attachment styles and addiction susceptibilities.

Table 2: Means and standard deviations of participants' attachment styles and addiction susceptibility according to gender

Variables		M	S	t	P-value
Secure attachment	Male	22.32	3.62	0.71	0.475
	Female	22.09	3.69		
Preoccupied attachment	Male	20.49	4.23	2.79	0.007
	Female	21.58	4.82		
Fearful attachment	Male	12.32	2.52	3.46	0.001
	Female	13.08	2.34		
Dismissing attachment	Male	10.59	2.68	0.45	0.654
	Female	10.69	2.48		
Addiction susceptibility	Male	79.41	12.66	0.23	0.822
	Female	79.66	11.90		

According to Table 2, there were no significant differences in the means of addiction susceptibilities of male and female students. Female students exhibited higher scores in preoccupied and fearful attachments compared to male students; however, there were no significant differences in secure and dismissing attachments between male and female students.

To test the study hypothesis, first a partial correlation coefficient was calculated between the 4 attachment styles and students' addiction susceptibility. (In the third-order partial correlation the effects of 3 attachment styles were eliminated from the relationship of attachment style with addiction susceptibility.)

Table 3: partial correlation and coefficient of determination of participants' addiction susceptibility with attachment styles

Variables	Addiction susceptibility	P-value	r ²
Secure attachment	-0.125	0.004	0.016
Preoccupied attachment	0.298	0.001	0.089
Fearful attachment	0.139	0.002	0.019
Dismissing attachment	0.137	0.002	0.018

The results showed a negative and significant relationship between secure attachment style and addiction susceptibility. In addition, it was shown that secure attachment style was effective in decreasing addiction susceptibility of children. There was a positive and significant relationship between preoccupied, fearful and dismissing attachment styles and addiction susceptibility and these three insecure attachment styles significantly increased addiction susceptibility of children. In addition, 2%, 9% 2% and 2% of addiction susceptibility variances could be determined by the secure, preoccupied, fearful and dismissing attachment styles (Table 3).

In order to determine the effect of attachment style on prediction of the extent of children's addiction susceptibility, 4 attachment styles were entered into regression analysis as predictive variables.

Table 4: multiple regression analysis of participants' attachment styles with addiction susceptibility

Variables	Method	R	R ²	df	F	P-value	β	P-value
Secure attachment							-0.122	0.005
Preoccupied attachment	Inter	0.374	0.14	4	20.44	0.001	0.315	0.001
				353				
Fearful attachment							0.138	0.002
Dismissing attachment							0.133	0.002

Multivariate regression analysis showed that 14% of changes in the extent of children's addiction susceptibility are attributable to attachment styles. The results of ANOVA and its significance showed that the presented model was relevant and significant ($P < 0.001$, $F_4, 353 = 20.44$). In this model, the preoccupied attachment style had the greatest positive and significant effect on children's addiction susceptibility. Preoccupied, fearful and dismissing attachment styles had a positive and significant effect on children's addiction susceptibility and were direct (positive) and significant predictors of children's addiction susceptibility. Secure attachment style had a negative and significant effect on addiction susceptibility of children and was a negative and significant predictor of children's addiction susceptibility (Table 4).

Discussion and Conclusion:

It was shown in the present study that preoccupied, fearful and dismissing attachment styles have a positive relationship with the addiction susceptibility of high school students, are effective in increasing their addiction susceptibility and are direct predictors of their addiction susceptibility. Secure attachment has a negative relationship with high school students' addiction susceptibility, is effective in decreasing their addiction susceptibility and is a reverse predictor of addiction. In addition female high school students exhibited higher scores in preoccupied and fearful attachment styles compared to male students; however, there were no differences between male and female students in secure and dismissing attachment styles.

Studies have shown that adolescence has the highest risk for the initiation of drug abuse problems. The adolescents abusing drugs have negative health and problems with healthy living style (Miller, Lesting and Smith, 2001) and there is a relationship between drug abuse by adolescents and problems such as poor educational performance, absence, playing hooky from school, school dropout and dismissal from school (Chen, Sheth, Elliott and Yeager, 2004). In addition, studies have shown that there is a significant relationship between students' scores and drug addicts' on Addiction Potential Scale (Minouee and Salehi, 2003) and it is possible to identify addiction susceptibility in high school students (Vahdat, 2005) and university students (Zeinali, 2013). Based on Addict Prone Theory, some individuals are susceptible to addiction and if they have access to drugs, they will become addicted; however, if an individual has no susceptibility, they will not develop addiction (Gendreau and Gendreau, 1970). Several studies have shown that addiction in nicotine, alcohol and opium users develops in a small number of such people who use them for a long time and all the individuals facing with these addictive agents do not develop addiction (Hiroi and Agatsuma, 2005), demonstrating the fact that before development of addiction, readiness for addiction develops during life (Zeinali *et al*, 2008; Frank *et al*, 2003; Flagel *et al*, 2003; Hiroi and Agatsuma, 2004). One of the most important factors which influence an individual's growth, interactions and decisions in the family is the attachment style (Bowlby, 1980; Mikulincer and Shaver, 2007).

Bowlby (1969) reported that children with insecure attachment run a risk of developing negative cognitive schema (abnormal and atypical attitudes) toward themselves and others. When such cognitive susceptibilities develop, the individual becomes prone to the use and abuse of drugs (Kassel *et al*, 2007). The results of the present study confirm the results and hypotheses above. It was shown in the present study that insecure preoccupied, fearful and dismissing attachments have a positive relationship with addiction susceptibility and directly predict it. Secure attachment has a negative relationship with addiction susceptibility and is its reverse predictor. These findings are consistent with the results of studies on the relationship between secure attachment and insecure preoccupied, fearful and dismissing attachments and drug abuse and addiction susceptibility (Lajvardi, 2004; Mikulincer and Shaver, 2007; Caspers *et al*, 2005; Polek *et al*, 2008). In this context, attachment styles are good predictors for addiction susceptibility and can be used as criteria to identify individuals at a risk for drug abuse in preventive plans. Brook (2006) reported that experiences of early years of life (mainly with parents) determine attachment styles, which have a great role in regulating emotions during life concerning relationships with others. Drug addicts are individuals whose attachment systems have sustained damages and addiction is an attempt concerning emotional self-repair which has failed. A subsidiary finding of the present study was the half that there was a gender difference in insecure attachment (preoccupied and fearful). Female students exhibited more preoccupied and fearful attachment styles compared to male students, demonstrating that female students had more negative attitudes toward themselves compared to male students. Studies have not shown consistent gender differences in attachment styles; however, some studies have shown that females have more preoccupied attachment styles compared to males (Mikulincer and Shaver, 2007), which might be attributed to cultural and social attitudes toward genders. In a male-dominant culture in which male children are cherished more and attract more attention, the presence of such gender difference does not seem uncommon in insecure attachment style.

The collective results of the present study and studies carried out to date on the subject show that different attachment styles exert different effects on healthy living or making children susceptible to addiction. Insecure preoccupied, fearful and dismissing attachment styles have a role in increasing children's addiction susceptibility and secure attachment style has a role in decreasing children's addiction susceptibility. Based on the results of the present study, insecure preoccupied and dismissing attachment styles are factors predicting children's addiction susceptibility and a secure attachment style is a factor predicting psychological health.

REFERENCES

- Agatsuma, S., & N. Hiroi, 2004. Genetic basis of drug dependence and comorbid behavioral trait. *Japanese Journal of Psychopharmacology*, 24(3): 137-45.
- Barnes, G.E., R.P. Murray, D. Patton, P.M. Bentler & R.E. Anderson, 2002. The addiction-prone personality. In H.B. Kaplan; A. E. Gottfried; & A. w. Gottfried. (Eds), *Longitudinal research in the social and behavioural sciences* (pp. 1-320). New York, Kluwer Academic/Plenum Publishers.

- Bartholomew, K., & L.M. Horowitz, 1991. Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61: 226-244.
- Berk, L.E., 2010. *Development through the Lifespan* (5th ed.). Boston, MA: Allyn & Bacon.
- Bowlby, J., 1969. *Attachment and loss*: Vol. 1. Attachment. New York: Basic Books.
- Bowlby, J., 1980. *Attachment and loss*: Vol. 3. Loss, sadness, and depression. New York: Basic Books.
- Bowlby, J., 1988. *A secure base*. New York: Basic Books.
- Brook, D.W., 2005. Addiction as an Attachment Disorder. *International Journal of Group Psychotherapy*; 56(4): 511-515.
- Caspers, K.M., R.J. Cadoret, D. Langbehn, R. Yucuis, & B. Troutman, 2005. Contributions of attachment style and perceived social support to lifetime use of illicit substances. *Addictive Behaviors*, 30: 1007-101. doi:10.1016/j.addbeh.2004.09.001
- Chen, K., A.J. Sheth, D.K. Elliott, & A. Yeager, 2004. Prevalence and correlates of past-year substance use, abuse, and dependence in a suburban community sample of high-school students. *Journal of Addictive Behaviors*, 29: 413-423.
- Flagel, S.B., D.M. Vázquez & T.E. Robinson, 2003. Manipulations during the second week of life increase susceptibility to cocaine self-administration in a stressor and gender-specific manner. *Neuropsychopharmacology*, 28: 1741-1751.
- Franke, P., D. Neef, Om. Weiffenbach, M. Gansicke, M. Hautzinger, W. Maier, 2003. Psychiatric comorbidity in risk groups of opioid addiction: a comparison between opioid dependent and nonopioid dependent prisoners. *Fortschritte der Neurologie-Psychiatrie*, 71(1): 37-44.
- Gamble, S., & J. Roberts, 2005. Adolescents' Perceptions of Primary Caregivers and Cognitive Style: The Roles of Attachment Security and Gender. *Cognitive Therapy and Research*, 29: 123-141.
- Gendreau, P., & L.P. Gendreau, 1970. The "addiction-prone" personality: A study of Canadian heroin addicts. *Canadian Journal of Behavioral Science*, 2: 18-25.
- Hiroi, N., & S. Agatsuma, 2005. Genetic susceptibility to substance dependence. *Journal of Molecular Psychiatry*, 10: 336-344. doi:10.1038/sj.mp.4001622
- Kassel, J.D., M. Wardle & J.E. Roberts, 2007. Adult attachment security and college student substance use. *Addictive Behaviors*, 32: 1164-1176.
- Lajvardi, S., 2004. Relationship between attachment styles and substance abuse tendency in shahid beheshti medical science university students. MS Thesis. Rodehen, IAU Rodehen Branch.
- Lettieri, D.J., M. Sayers, & H.W. Pearson, 1980. *Theories on drug abuse, selected contemporary perspectives*. NIDA Research Monograph, U.S, Washington, D.C.
- Mikulincer, M., & P.R. Shaver, 2007. *attachment in adulthood*. New York: Guilford Press.
- Miller, T.R., D.C. Lesting, & G.S. Smith, 2001. Injury risk among medically identified alcohol and drug abusers. *Alcoholism, Clinical and Experimental Research*, 25: 54-59. doi: 10.1111/j.1530-0277.2001.tb02127
- Minouee, M., M. Salehi, 2003. Assessment of the scientific validity, reliability and normalization of APS, AAS and MAC-R tests for spotting vulnerable individuals exposed to drug abuse among the male high school students in the city of Tehran. *Research of Addiction*, 1(3): 77-107.
- Pellerin, L.A., 2005. Applying Baumrind's parenting typology to high schools: toward a middle-range theory of authoritative socialization. *Social Science Research*, 34: 283-303. doi:10.1016/j.addbeh.2006.08.005
- Polek, E., J.P. Van Oudenhoven, & J.M.F. Ten Berge, 2008. Attachment styles and demographic factors as predictors of sociocultural and psychological adjustment of Eastern European emigrants in the Netherlands. *International Journal of Psychology*, 43: 919-928. DOI: 10.1080/00207590701484835
- Vahdat, R & A. Zeinali, 2009. *Epidemiology of addiction susceptibility in Iran high school Adolescent*. Final Report of Research. Tehran, University of Social Welfare and Rehabilitation.
- Vahdat, R., 2005. *Study of addiction potential in Urmia high school students based on APS Scale*. MS Thesis. Rodehen, IAU Rodehen Branch.
- Van Oudenhoven, J.P., J. Hofstra, & W. Bakker, 2003. Ontwikkeling en evaluatie van de Hechtingstijlvragenlijst (HSL) [Development and evaluation of the Attachment Styles Questionnaire]. *Nederlands Tijdschrift voor de Psychologie*, 58: 95-102.
- Weed, N., N.J. Butcher, T. McKenna, & Y. Ben-Porath, 1992. New measures for assessing alcohol and other drug problems with MMPI-2: the APS & AAS. *Journal of personality assessment*, 58: 389-404.
- Wood, M.E., J.P. Read, R.E. Mitchell & N.H. Brand, 2004, "Do parents still matter? Parent and peer influences on alcohol involvement among recent high school graduates, *Psychology of Addictive Behaviors*, 18: 19-30.
- Zeinali, A., 2013. *Epidemiology of Addiction Susceptibility in the Students of West Azerbaijan Islamic Azad Universities [Project]*. Final Report of Research. khoy, Islamic Azad University khoy Branch.
- Zeinali, A., 2014. Development and validation of addiction susceptibility questionnaire- adolescent version (ASQ-AV). *Journal of clinical Psychology*. (Article in Press).
- Zeinali, A., R. Vahdat, & M. Eisavi, 2008. Pre-addiction susceptibility backgrounds in recovered drug

users. Iranian Journal of Psychiatry and Clinical Psychology, 14(1): 71- 79.