



## Artículo de investigación

# The relationship between psychopathology by abusing smoking, alcohol, and drugs in boy teenagers of Ahvaz city

La relación entre la psicopatología y el abuso del tabaco, el alcohol y las drogas en los adolescentes varones de la ciudad Ahvaz

A relação entre a psicopatologia e a droga do tabaco, o álcool e as drogas nos adolescentes varones da cidade Ahvaz

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## Abstract

The prevalence of abusing cigarette, alcohol, and drugs have changed to the social matters among teenagers and youth of Iran and has made deep concerns in various managerial, academic, and public levels of society.

In studies, the mean age of starting cigarette in Iran is 6.16 years old and the highest ratio of addicts of state (7.45%) started abusing drug since the age of 17-22 years old. Therefore, one of the most significant preventive approaches is the identification of the risk factors in the risk populations. Therefore, the main objective of this research is comparison the cigarette, alcohol, and drug abuse in boy teenagers with and without drug abuse background.

The methodology of this research was case-control study and analytical which was conducted on the boy teenagers who abuse cigarette, alcohol, and drugs and dwelled in correction and rehabilitation center of Ahvaz and non-abusing teenagers. Data was collected using demographic information form and standard inventory including global appraisal of individual needs-short screener (GAIN-SS), youth self-report scale (YSR) of children behavioral problems, and strength and difficulties questionnaire (SDQ) of self-reporting study of children and teenagers. The findings of this study were analyzed using SPSS software.

## Resumen

La prevalencia del abuso del cigarrillo, el alcohol y las drogas ha cambiado a los asuntos sociales entre los adolescentes y jóvenes de Irán y ha causado profundas preocupaciones en diversos niveles administrativos, académicos y públicos de la sociedad.

En los estudios, la edad media de inicio del cigarrillo en Irán es de 6,16 años y la proporción más alta de adictos de estado (7,45%) para el inicio del abuso de drogas se da desde los 17 a 22 años de edad. Por lo tanto, uno de los enfoques preventivos más importantes es la identificación de los factores de riesgo en las poblaciones de riesgo. Por lo tanto, el objetivo principal de esta investigación es comparar el consumo de cigarrillos, alcohol y drogas en adolescentes varones con y sin antecedentes de abuso de drogas.

La metodología de esta investigación fue un estudio de casos y controles analítico que se llevó a cabo en adolescentes varones que abusan del cigarrillo, el alcohol y las drogas que vivían en el centro de corrección y rehabilitación de Ahvaz y adolescentes que no abusan. Los datos se recogieron utilizando información demográfica e inventario estándar, incluida la evaluación global de las necesidades individuales: evaluación breve (GAIN-SS), escala de autoinforme de jóvenes (YSR) de problemas de conducta infantil y

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There is a significant relationship between hyperactivity problems with a defect in attention and behavior disorders in teenagers with drug abuse.

Result of this research showed the relationship between mental disorders background in the child involved in abusing smoking, alcohol, and drugs.

**Keywords:** abusing smoking, alcohol, and drugs, GAIN-S screener, YSR test, SDQ test, a teenager.

cuestionario de fuerza y dificultades (SDQ) de autoinformación estudio de niños y adolescentes. Los hallazgos de este estudio fueron analizados utilizando el software SPSS.

Existe una relación significativa entre los problemas de hiperactividad con un defecto en los trastornos de atención y conducta en adolescentes con abuso de drogas.

El resultado de esta investigación mostró la relación entre los antecedentes de trastornos mentales en el niño involucrado en el abuso de tabaco, alcohol y drogas.

**Palabras clave:** abuso de tabaco, alcohol y drogas, GAIN-S screener, prueba YSR, prueba SDQ, un adolescente.

## Resumo

A prevalência do abuso de cigarro, álcool e drogas mudou as questões sociais entre os adolescentes e jovens do Irã e causou profundas preocupações em vários níveis administrativos, acadêmicos e públicos da sociedade.

Em estudos, a idade média de início de cigarro no Irã é 6,16 anos e a maior proporção de Estado viciados (7,45%) para o início do abuso de drogas ocorre de 17 a 22 anos idade. Portanto, uma das abordagens preventivas mais importantes é a identificação de fatores de risco em populações de risco. Portanto, o objetivo principal desta pesquisa é comparar o consumo de cigarros, álcool e drogas em adolescentes do sexo masculino com e sem histórico de abuso de drogas.

A metodologia desta pesquisa foi um estudo analítico caso-controle que foi realizado em adolescentes do sexo masculino que abusam de cigarros, álcool e drogas que residiam no centro de correção e reabilitação de Ahvaz e adolescentes que não abusam. Os dados foram coletados por meio de informações demográficas e de inventário padrão, incluindo avaliação global das necessidades individuais: breve avaliação (GAIN-SS), a juventude escala de auto-relato (YSR) de problemas de comportamento da criança e questionário força e dificuldades (SDQ) de estudo de auto-informação de crianças e adolescentes. Os achados deste estudo foram analisados utilizando o software SPSS.

Existe uma relação significativa entre problemas de hiperatividade e um defeito nos transtornos de atenção e comportamento em adolescentes com abuso de drogas.

O resultado desta investigação mostrou a relação entre a história de transtornos mentais na criança envolvida no abuso de tabaco, álcool e drogas.

**Palavras-chave:** tabaco, abuso de álcool e drogas, rastreador GAIN-S, teste YSR, teste SDQ, adolescente.

## Introduction

Abusing drugs and addiction is one of the most important problems of this era with the global extension and has changed to the mental, social, and family dilemma. According to studies, most risky behaviors including cigarette, alcohol,

and drugs, and insecure sexual relationship happen before 18 years (1). Crime and the drug controlling office of UN in Iran (United Nations' office of drug and crime control) named addiction as one of the fourth crises in the world and classified Iran in the risky countries. This office has mentioned addiction prevalence more





than 0.5% in the world, 1-2% in Iran, and incrementally resulted in death by addiction (2).

The prevalence of risky behaviors among teenagers and youth in Iran has changed to the social issue in recent years and made deep concerns in the society. In the conducted studies, the mean age of starting cigarette is 6.16 in Iran and the maximum addicts of the state started abusing drugs in 17-22 years old (6).

According to the prevalence of mental and behavioral disorders with drug abuse by teenagers, many agreements have arranged about the psychological disorders caused by drug abuse (7). A review research of Keshtkar (2017), Godwin and Jameson (1990), Saffer (1987) about the youth and chronic diseases mentioned to simultaneousness of psychological disorders and drug abuse from 10-65% (8). The most satisfying related evidence is for institutes that were conducted by Keshtkar (2018). People, particularly with psychological problems, are more vulnerable to attachment to drugs (9).

Metunen et al. (2013) in a research showed that externalizing problems in 8 years old were related to drug abuse in the next periods (10). National Center of addiction and abuse of Colombia University (2011) showed that nicotine abuse even in low assumption can make important changes in teenagers' brain. Results of the studies of this center showed that high school students who experienced cigarette recently had the principal depression period than the ones without this experience in the previous year (4.16% against 6.7%) (11). Keshtkar and Dadkhoda zadeh (2018), in a research in US with aim at determination of the hyperactive role and defect in attention and mediating role of behavior disorders in making drug abuse disorder showed that teenagers show more probability of drug abuse by discerning hyperactivity and defect in attention twice more than ones without this discerning, and are more probable to abuse alcohol and drug in elder years (12).

Studies in Iran have been mainly about the prevalence of cigarette and drug abuse among students and no research has been observed about psychopathological factors and drug protection among teenagers. Therefore, according to the psychological and cognitive diseases at the beginning of drug abuse, improper response to the treatment methods in people with these disorders, and also the role of drug abuse in making mental disorders in people, it seems that research in this field is significantly important and social disorders discerning is essential in teenagers.

**-Population, sample, and sampling method.** This research is case-control. The research population includes the abuser teenagers from cigarette, alcohol, and drugs who dwelled in correction and rehabilitation center in Ahvaz and drug non-abuser teenagers including school students and other teenagers based on the health files in medical and health centers. The research sample was selected using NCSS and considering 80% power and sig. the coefficient of 95% based on literature, and OR=3 that was 63 samples in each group which increased to 100 persons in the sample research. The sampling method was convenience sampling. A t-test was used to analyze findings and the relationship between cigarette, alcohol, and drugs abuse, and psychological disorders. In addition, the Chi-2 square test was used to analyze the qualitative data, and logistic regression was used to find the relationship between the intervening and significant variables obtained from t-test and chi-2 tests with dependent and independent variables. ( Keshtkar and Talbizadeh 2017).

**-Tool.** Demographic information registration form, children behavioral problem checklist, youth self-report scale (YSR), strength, and difficulties questionnaire of children, and teenagers (SDQ), and GAIN-SS inventory have been used in this research. Descriptive statistics of the studied variables by group separation are shown in table I.

Table 1: Demographic characteristics of the two groups compared

| Variables          |                     | No. | Control No. (%) | Total |
|--------------------|---------------------|-----|-----------------|-------|
| Age                | 14                  | 26  | 26              | 52    |
|                    | 15                  | 20  | 20              | 40    |
|                    | 16                  | 22  | 22              | 44    |
|                    | 17                  | 32  | 32              | 64    |
| Education          | Illiterate          | 16  | 16              | 32    |
|                    | Elementary          | 31  | 31              | 62    |
|                    | Guidance school     | 47  | 47              | 94    |
|                    | High school         | 6   | 6               | 12    |
| Father education   | Lower than diploma  | 57  | 59              | 66    |
|                    | diploma             | 17  | 35              | 52    |
|                    | Associated degree   | 4   | 3               | 7     |
|                    | Bachelor and higher | 4   | 3               | 7     |
| Economic condition | weak                | 55  | 52              | 107   |
|                    | Relatively good     | 30  | 37              | 67    |
|                    | good                | 15  | 11              | 26    |
| Settlement         | Urban               | 81  | 81              | 162   |
|                    | Rural               | 19  | 19              | 38    |
| Settlement type    | Native              | 85  | 88              | 173   |
|                    | Non-native          | 15  | 12              | 27    |
| Mental background  | Have disorder       | 54  | 16              | 70    |
|                    | Not have disorder   | 46  | 84              | 130   |
| Mental background  | Have disorder       | 57  | 17              | 74    |
|                    | Not have disorder   | 43  | 83              | 126   |

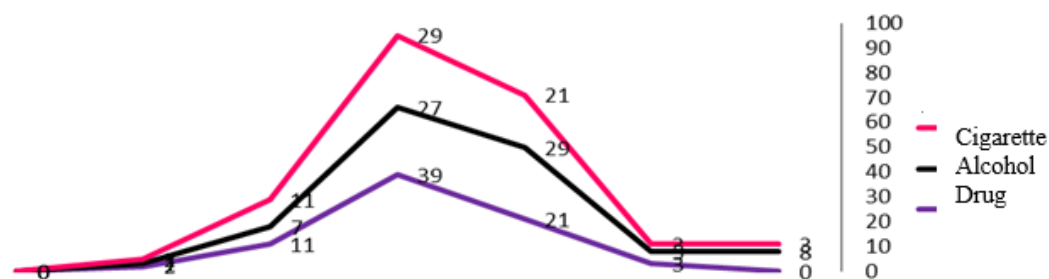


Figure 1. Comparative Study of the age of starting drug abuse by the type of drug

Table 2: comparing tests results in two groups

|         |            | Gain-ss |             | YSR     |             | SDQ     |             |
|---------|------------|---------|-------------|---------|-------------|---------|-------------|
|         |            | healthy | Non-healthy | healthy | Non-healthy | healthy | Non-healthy |
| Case    | Frequency  | 0       | 100         | 12      | 88          | 30      | 70          |
|         | Percentage | 0       | 100         | 12      | 88          | 30      | 70          |
| Control | Frequency  | 30      | 70          | 77      | 23          | 91      | 9           |
|         | Percentage | 30      | 70          | 77      | 23          | 91      | 9           |

The relationship between YSR and SDQ was studied using Cochran statistical test. Test consistency was significant in 0.001 level. According to the answers in case group in GAIN-SS test, most people have



signed. This test was investigated based on sensitivity and characteristics. Results showed that this test is at an acceptable level based on sensitivity and characteristics.

Table 3: calculation of sensitivity and characteristics of GAIN-SS test

| Sensitivity | Characteristics | st.dev | AUC   | Confidence interval | Sig. level |
|-------------|-----------------|--------|-------|---------------------|------------|
| 1           | 0.633           | 0.089  | 0.005 | 0.325-0.675         | 1          |

Table 4: comparison the mean and standard deviation of participants in SDQ

| Variables | Emotional problems          | Behavioral problems | Hyperactivity | Problems with peers | Desirable behavior | Total | p-value |
|-----------|-----------------------------|---------------------|---------------|---------------------|--------------------|-------|---------|
| Group     | Mean and standard deviation |                     |               |                     |                    |       |         |
| Case      | 6.27                        | 6.27                | 6.79          | 4.31                | 5.45               | 22.34 | 0.0001  |
|           | 1.59                        | 1.59                | 1.74          | 1.61                | 1.17               | 4.58  |         |
| Control   | 3.46                        | 3.01                | 4.18          | 3.31                | 7.39               | 13.99 |         |
|           | 1.78                        | 1.54                | 1.92          | 1.30                | 1.25               | 4.12  |         |

In table 4, mean and sub-scales of both studied groups were compared by student *t*-test, and significant statistical difference was observed based on behavioral disorders and all its aspects in both groups ( $P \leq 0.05$ ).

Table 5: comparison the mean and standard deviation of scores on both groups in GAIN-SS test

|                        | Case                  |                        |            |       | Control               |       |            |       |
|------------------------|-----------------------|------------------------|------------|-------|-----------------------|-------|------------|-------|
|                        | Mean and st. dev      |                        | Drug abuse | Crime | Mean and st. dev      |       | Drug abuse | Crime |
| Internalizing problems | Externalizing problem | Internalizing problems |            |       | Externalizing problem |       |            |       |
| Last month             | 1.51                  | 2.22                   | 2.14       | 1.17  | 0.91                  | 1.21  | 0.12       | 1.33  |
| Last year              | 0.904                 | 0.99                   | 1.74       | 0.805 | 0.676                 | 0.868 | 0.640      | 0.865 |
| In                     | 2.24                  | 2.94                   | 3.5        | 2.23  | 1.33                  | 1.43  | 0.16       | 1.42  |
| lifetime               | 1.11                  | 1.11                   | 0.759      | 0.952 | 0.865                 | 0.977 | 0.748      | 0.955 |
| Total                  | 2.30                  | 3.10                   | 3.52       | 2.26  | 1.42                  | 1.44  | 0.91       | 1.21  |
|                        | 1.106                 | 1.15                   | 0.759      | 0.939 | 0.955                 | 0.978 | 0.676      | 0.868 |
|                        | 11.16 (3.91)          |                        |            |       | 3.5 (2.09)            |       |            |       |

Mean, sub-scales, and total score of test were observed in table 5. Two studied groups were compared to each other and significant statistical difference was not observed based on behavioral disorders and all its aspects in  $p \leq 0.05$  level.

Table 6: comparing means and standard deviation of participants in YSR test

| group Variable         | Case                      | Control          | P value |
|------------------------|---------------------------|------------------|---------|
|                        | Mean $\pm$ mean deviation |                  |         |
| Withdrawal             | 60.49 $\pm$ 5.68          | 53.55 $\pm$ 6.45 | 0.0001  |
| Physical problems      | 55.17 $\pm$ 8.06          | 56.65 $\pm$ 5.81 | 0.164   |
| Anxiety /depression    | 59.01 $\pm$ 5.19          | 55.63 $\pm$ 6.70 | 0.0001  |
| Social problems        | 65.19 $\pm$ 6.40          | 55.73 $\pm$ 5.57 | 0.0001  |
| Problems of attention  | 64.99 $\pm$ 4.53          | 55.15 $\pm$ 5.72 | 0.0001  |
| Thinking problems      | 63.75 $\pm$ 3.5           | 57.12 $\pm$ 5.77 | 0.0001  |
| crime                  | 69.67 $\pm$ 5.70          | 58.46 $\pm$ 6.01 | 0.0001  |
| aggression             | 62.56 $\pm$ 3.14          | 53.07 $\pm$ 6.36 | 0.0001  |
| internalizing problems | 61.21 $\pm$ 3.07          | 57.06 $\pm$ 5.60 | 0.0001  |
| Externalizing problems | 67.24 $\pm$ 4.45          | 56.50 $\pm$ 5.51 | 0.0001  |
| Total                  | 68.10 $\pm$ 2.99          | 60.03 $\pm$ 4.92 | 0.0001  |

According to table 6 and comparing two groups by student t-test, no significant statistical difference was observed based on behavioral disorders and all its aspects except physical problems ( $P \geq 0.164$ ) ( $P \leq 0.0001$ ).

This research was conducted by case-control and analytical-sectional method with an aim at finding the relationship between behavioral and emotional disorders with cigarette, alcohol, and drug abuse in teenagers of Ahvaz city. According to the obtained results from this research, 39.5-55.5% of cigarette, alcohol, and drug abusing teenagers in this research showed behavioral and emotional disorders based on self-report YSR and SDQ tests. Kessler et al. (1996) concluded that the prevalence of mental disorders with cigarette, alcohol, and drug abuse in a lifetime is about 50% (13). US Department of Health and Human Services (1999) has estimated mental disorder prevalence among teenagers and youth about 41-65% (14). According to the mental disorder background, 54% in the test group and 16% in control group reported mental disorder background. Results of this research are in agreement Tarter (2002) results that showed the inserted teenagers in drug abuse in pre-elementary and elementary school era experience mood problems, disorder and aggression, impulsive behavior, and impatience (15). Arnett et al (2007) research about Psychopathology among cannabis users and the association with subsequent treatment of drug abuse showed that the addicts to cannabis had psychological treatment background 8 times more than the control groups (16).

According to the high prevalence of cigarette abuse among the studied teenagers, it seems that cigarette is the gate of entering to drug abuse. In Mousavi (1999) research about the evaluation of drug abuse addiction among high school students of Iran, 14% boys abused cigarette and 5.7% abused other drugs. In other words, teenagers that recorded the background of cigarette have 27 time chance of drug abuse (17). Eskandari (2001) and Aghaei (2001) reported cigarette abuse in Iranian students 8-17% (18).

Storr et al. in a research under the title of "drug abuse and psychopathology of teenagers" in 2012 showed that nicotine is used daily and repeatedly by teenagers. In addition, the extra alcohol abuse is the problem of some teenagers (19).

According to the UN office of drug and crime in 2011, cannabis is one of the most popular drugs among European and American countries youth. In this research, crystal drug with 64% prevalence is the most popular drug in the group (20).

According to Storr research (2011), abuse of some prescribed drugs is considered as a danger alarm in the world, while only 4% has been recorded in this research (21).

In this research, the mean age of starting cigarette abuse was at the beginning of maturity and about 13 years old, while the studied case was the dwelled teenagers in correction and rehabilitation center, this difference in starting age in both studies can be related to the dwelling condition in this center.

In this research, the emotional and behavioral problems in teenagers was observed by drug abuse significantly that is in agreement with another research by Abraham et al. (2003) under the title of "simultaneity of psychiatric disorders in the arrested teenagers" that showed 56.5% of arrested female and 45.9% of arrested male had psychiatric disorders such as alcohol and drug abuse, and about 30% of female and 20% of male sowed the main psychiatric disorder who abused drug (23).

This research showed the significant relationship between the problem of withdrawal, hyperactivity with a defect in attention and disorder in behavior with drug abuse. It was shown in Diez – Nesmith et al (1998) research that 73% of teenagers had depression diagnosis symptoms and was treated as an outpatient, abused alcohol, and drugs and 80% of them had depression symptoms before alcohol and drug abuse. It means depression and withdrawal





disorders can be a precaution of alcohol and drug abuse (24). In addition, according to the research of Substance Abuse and Mental Health Center in 2011 (SAMHSA) (2011) people with drug abuse and externalizing and internalizing behavioral disorders showed 53% involvement in heavy crimes (25).

There was 8 times more chance in case group to involve in behavioral disorders in this research by  $p=0.0001$  that is in agreement with Dadin et al (2010) research under the title of "clinical correlation and social disorders of drug abuse disorders in teenagers" that is a psychiatric bed and showed behavior disorders in addicted teenagers is 70% and non-addicted teenagers is 10% ( $P=0.019$ ) (26). In Cowanberg et al. (2006) research under the title of "pathology in seeking teenagers and youth for drug abuse misbehavior treatment", externalizing disorders particularly behavioral disorder has been the most important disorder in drug abuser teenagers who sought for treatment (27).

In this research, one of the most popular disorders in the studied group was hyperactivity disorder ( $P=0.041$ ) in which case group had 2.5 times more chance than the control group. Grilla et al. (2001), Keravali et al. (2005) and Pacheco et al., (2017) research showed that one of the most important disorders related to the drug abuse in teenagers in hyperactivity (28, 29, 30), but Murderi et al. (2011) and Antón Chávez, (2017) research under the title of "hyperactivity disorders effects and behavior in childhood and criminality in adolescence" showed that hyperactivity alone to cause the criminal behavior is discussable and the simultaneous affliction to behavior disorder and hyperactivity will cause criminal behaviors (31 and 32).

Therefore, this research shows that cigarette, alcohol, and drug abuse in the abuser teenager is with mental and emotional defects, and the early starting of drug abuse is tied to the severe behavioral disorders. The most popular disorders among internalizing ones are withdrawal ( $P\leq 0.037$ ), and hyperactivity ( $P\leq 0.041$ ) and behavior disorder ( $P\leq 0.0001$ )

among the externalizing ones are the most popular one among teenager abusing cigarette, alcohol, and drug.

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### References

Abolghasemi A, Pourkord M, Narimani M. Communication, social skills and self-efficacy in adolescents with addiction. *J Sabzevar University of Medical Sciences*. Winter 1388; 16, 4 (54): 181-188.

Agha Bakhshi H. *Atyadv family pathology*. Fst ed, Tehran: *publisher Welfare Organization*; 1378.

Antón Chávez, A.D.P (2017). Influencia de la noticia en la imagen corporativa de una municipalidad desde la percepción del ciudadano. *Opción*, Año 33, No. 84 (2017): 90-119.

Barrett AE, Turner RJ. (2012) Family structure and substance use problems in adolescence and early adulthood: examining explanations for the relationship. *Addict behav*. 2006; 101(1): 109-120  
Bashirian, S., Haider-Nia, A., Verdi M, Hamid R.; Hajizadeh, E. Examine the relationship between adolescents' desire to control their drug use. *Hamadan Journal of Midwifery*; 20 (1) :53-45.

Bergman M M, Scott, Y. (2000). Adolescent well being and health risk behaviors : Gender and socioeconomic differences. *journal of Adolescence*. 2000; 24 : 183-197.

Brook, D. W., Brook, J. S., Zhang, C., & Koppel, J. (2010). Association between attention-deficit/hyperactivity disorder in adolescence and substance use disorders in adulthood. *ArchPediatrAdolesc Med*. 2010; 164(10):930-4.-7

Bukstein, O.G., Cornelius, J., Trunzo, A.C., Kelly, T.M. and Wood, D.S. Clinical predictors of treatment in a population of adolescents with

alcohol use disorders. *Addictive Behaviors*. 2005; 30:1663–1673.

Carney T, Myers B. (2017). Effectiveness Of early interventions for substance – using adolescents: findings from a systematic review and meta -analysis .*Substance Abuse Treatment, Prevention and Policy*;7:25. available from : <http://www.biomedcentral.com>

Delaveri M, Ahmadi A, Nori M. (knowledge of Management Student about Effects of Ecstasy in the Tehran and Iran Medical Universities). *J Babol Univ Med Sci* 2006;9(3):43-46. (persian)

Erikson, E. H. *Identity: Youth and crisis* 1968. New York: W. W. Norton & Company, Inc

European Monitoring Centre for Drugs and Drug Addiction, 2009. Preventing later substance use disorders in at-risk children and adolescents. [publications@emcdda.europa.eu](mailto:publications@emcdda.europa.eu) <http://www.emcdda.europa.eu>. 45.

Feldman S. S ; Elliott, G. R. (1990). *At the threshold: The developing adolescent*. Cambridge: *Harvard University Press*.

Furstenberg F. F. The sociology of adolescence and youth in the 1990s: A critical commentary. *Journal of Marriage and the Family*. 2000; 62: 896-910.

Goodwin, F.K., and Jamison, K.R. *Manic Depressive Illness*. New York: Oxford University Press, 1990

Safer, D.J. Substance abuse by young adult chronic patients. *Hosp Community Psychiatry* 1987; 38:511-514

Habibi M, Besharat M, Bahrami-Ehsan H, Rostami R, Ferrer-Wreder L. Predicting Substance Use in Adolescents Based on Risk Indices and Individual Protective Preventing, Family, Peers and Location. 3. 2012; 4 (1) 4 (1) :43-54

Harris K N, Duncan G J, Boisjoly J. Evaluation the role of nothing to lose, attitudes on risky behavior in adolescence *Social Forces*. 2002; 80: 1005 -1039

Horton EG. Racial differences in the effects of age of onset on alcohol consumption and development of alcohol-related problems among males from mid-adolescence to young adulthood. *Jethnisubstabu*. 2007; 6(1):1-13.

Johnston LD. Monitoring the future: National results on adolescent drug use: Overview of key findings: *DIANE Publishing*. 2010

J. Miettunen, G. K. Murray P. B. Jones P. Mäki, H. Ebeling, A. Taanila, M. Joukamaa, J. Savolainen, S. Törmänen M.-R. Järvelin, J. Veijola and I. Moilanen. Longitudinal associations between childhood and adulthood externalizing and internalizing psychopathology and adolescent substance use.

Keshtkar (2018). Numerical analysis of transcritical carbon dioxide compression cycle: a case study, 7 (1), 1-6.

Keshtkar M. M., (2017). Energy, exergy analysis and optimization by a genetic algorithm of a system based on a solar absorption chiller with a cylindrical PCM and nano-fluid, *Int. Journal of Heat and Technology*, 35 (2), 416-420.

Keshtkar M. M., Talebizadeh, P., (2018). Investigation of transient conduction–radiation heat transfer in a square cavity using combination of LBM and FVM, *Sadhana*, 43 (4), 145-155.

Keshtkar M. M.; Dadkhoda Zadeh M. (2018). Thermal Simulation of the Symmetric and Asymmetric Arrangement of Barriers on Heat Transfer Enhancement in a Porous Gas Heat Exchanger, *Journal of Thermal Science and Engineering Applications*, 10 (1), 120-135.

Mason WA, Kosterman R, Haggerty KP, Hawkins JD, Redmond C, Spoth RL, et al. Gender moderation and social developmental mediation of the effect of a family-focused substance use preventive intervention on young adult alcohol abuse. *Addict Behav*. 2009; 34(6-7): 599-605.

Ministry of Health and Medical Education in collaboration with the Secretariat Stadmbarzh drugs. *Substance abusers treated Practical Guide*, Second Edition (1381), pp. 27-20.

Mueser, K.T.; Drake, R.E.; and Noordsy, D.L. Integrated mental health and substance abuse treatment for severe psychiatric disorders. *Journal of Practical Psychiatry and Behavioral Health*, 4:129-139, 1998<sup>a</sup>

Pacheco, M.M., Ramírez García, A., Martos Ruano, M.D & Anguita López, V (2017). El absentismo escolar en Andalucía (España): balance y propuestas de futuro en el marco de la







Unión Europea. Opción, Año 33, No. 84 (2017): 65-90.

Plüddemann A, Flisher AJ, Mathews C, Parry CDH, Lombard CA: Methamphetamine use, aggressive behaviour and other mental health issues among high-school students in Cape Town, South Africa. *Drug Alcohol Depend* 2010; 109: 14–19.

Prinstein, M. J. & La Greca, A. M. . Childhood depressive symptoms and adolescent cigarette use: A six-year longitudinal study controlling for peer relations correlates. *Health Psychology*. 2009; 28:283-291.

Sotodeh H A. Social pathology. 4th ed, Tehran: *Avaye noor*; 1376.

Storr CL ; Wagner FA ; Chen CY ; Anthony JC. Childhood predictors of first chance to use and use of cannabis by young adulthood 2011;117(1):7-15.

The National Center on Addiction and Substance Abuse (CASA) at *Columbia University*. 2011.

*United Nations Office On Drugs and Crime In Islamic Republic In Iran*; UNODC Iran supports enhancing a scientific based approach on ATS and HIV .2013.

World Health Organization. Maternal, New born ,(2013). *Child and Adolescent Health ; Adolescent and Mental Health*.

Zadeh Mohammadi, A; Ahmad Abadi, Z. (Risk-taking Behaviors among Adolescents: the Strategies to Prediction Crimes Commitment. *Iranian Journal Family Research*.5(4):467-485.