

ORIGINAL PAPER**Influence of Socioeconomic Factors and Family Social Support on Smoking and Alcohol Use among Health School Students****Figen Çavuşoğlu,**

Mental Health Hospital, Ondokuz Mayıs University, Public Health Nursing Department, Samsun, Turkey

Zuhal Bahar, PhD,

Professor Dokuz Eylül University, Public Health Nursing Department, Izmir, Turkey

Correspondence:

Figen Çavuşoğlu, Ondokuz Mayıs University, Public Health Nursing Department, Samsun, Turkey

e-mail: figencavusoglu55@hotmail.com**ABSTRACT****Background:** Substance dependence is a global problem threatening individuals and communities alike by negatively influencing public health and social cohesion.**Objective:** The aim of this study was to investigate the influence of socioeconomic factors and family social support on substance use and/or dependence among health school students.**Results:** A significant difference was found between student substance users and nonusers in terms of age, grade level, educational level and vocational status of the student's mother and father, and substance use among family members ($p < 0.05$). On the other hand, it was determined that there was no influence of departments of the students, receiving any training on substance use, perceived family social support, and educational level of the student's father on the substance use ($p > 0.05$).**Conclusion:** The findings of our study suggest that family social support is an important determinant of students' substance use and therefore families need to be aware of the consequences of such behaviors. Trainings on overcoming the stress and information about use and/or abuse of substances should be given to the first-grade students in Samsun Health School to prevent the onset of substance use, and the frequency of such training sessions should be increased especially at the fourth grade.**Key Words:** Substance dependence, nursing students, social support, tobacco**Introduction**

Substance dependence constitutes a global problem, which affects both individuals and communities alike. It also affects both public health and social cohesion in a negative way. The American Psychiatric Association has divided substance use disorder into two groups: substance dependence and substance abuse. Substance dependence is usually diagnosed when an

individual cannot stop to use a substance despite trying repeatedly to quit. In addition, the dose of the substance increases by each use and withdrawal symptoms occur when the substance use is terminated. Substance dependent individuals persist in use of substance despite being aware of the harm, spend most of their time by searching for the substance, have a feeling of desire and demand to continue to use tobacco and alcohol, and cannot avoid using tobacco and/or

alcohol. However, substance abuse is the most harmful use of substance, which is detrimental to the health, life, and social environment of the individual. Using tobacco and alcohol continues despite having certain problems by the effects of the substance (Ogel, 2002).

According to DSM-IV diagnostic classification, substances causing dependence are alcohol, amphetamine, caffeine, cannabis, cocaine, hallucinogens, nicotine, opioids, phencyclidine, sedatives, hypnotics or anxiolytics, inhalants, multiple substances and others (Oz, 1996, p:82). According to the World Health Organization (WHO), the most important health problem is smoking dependence. According to WHO data, one person dies from smoking in every eight seconds worldwide and 4.9 million people die each year from smoking (<http://195.142.135.65/who/dgbrundlandrapor.htm>, 2003).

Several studies in the scientific literature have demonstrated the severity of this problem. Of the general population in Brazil, 68.7% report having used alcohol, 41.1% use tobacco, 6.9% cannabis, and 5.8% solvents. Of 1.1 billion smokers worldwide, 32 million of them live in China and 9 millions of the smokers in China are young teenagers aged 15-19 years. In the Scandinavian countries, 24% of the teenagers aged 15-18 years (Denmark and Norway), and 16% in Finland and Sweden are heavy smokers (Rassool, 2006; Pirskanen, Pietila et al., 2006; Grenard & Guo, 2005).

According to the Global Youth Tobacco Survey conducted by the Ministry of Health (2003), 29.3% of the students used tobacco between 7th - 8th grade of middle school and first-grade of high school. Of them, 9.1% are still smokers (www.ssuk.org.tr/ppt/toker_ergüder.pps).

Furthermore, according to the Family Structure Survey conducted in Turkey (2006), 33.4% of the individuals aged 18 years or older are current smokers. Whereas, 50.6% of men used tobacco, only 16.6% of women used tobacco (<http://www.aile.gov.tr/tr/?Sayfa=Detay&Id=2006122862127>).

In studies conducted among nursing students in other countries, the smoking rate was found to vary between 23% and 52% (Suziki et al., 2004; Gorin, 2001; Clark et al., 2004; Ahmadi et al., 2003). In Turkey, studies show that the smoking rate among nursing students varied between 17.5% and 42.9% (Capik, Ozbicakci, 2007; Azak,

2006; Pirincci, Erdem, 2003; Picakciefte et al., 2007; Kilic, Ek, 2006; Kutlu, Civi, 2006).

Thoits defined the term social support as an aid to the individual provided by the social environment under conditions of stress or mess (Yuncu et al., 2005; Okanli, 1999; Orford et al., 1998). Family plays an important role in social support. Implementing open and continuous communication between all family members and supporting each other have a great influence on other parameters in substance use (Wills & Yaeger, 2003; Litrownik et al., 2000; Aversa, Hesselbrock, 2001; Geckova et al., 2005).

In general, studies on substance use among Turkey are focused on smoking (Koc, Saglam, 2008; Peksen, Canbaz, Sunter, Tuncel, 2005; Nehir et al., 2007). Altay (2007) investigated the smoking rate of students in Samsun Health School; however, rates on other substance use were not assessed. Additionally, in a study, which assessed the relation between substance dependence and family, factors such as education level and smoking status of mother and father were investigated; however, the findings contain insufficient information on family social support. Many surveys have demonstrated that the substance use of students could be affected by the substance use of their family members (Inal, Yildiz, 2006; Telli et al., 2004; Nehir et al., 2007). Due to the relatively limited number of studies in the literature, we planned to examine the effect of social support on substance use. In consequence, the substance use status, and the effect of social support were investigated in this study, with the aim of informing future studies on this topic. In addition, we aimed at using the results of this study to develop training programs for the particular population of our academic institution.

Material & Methods

Type of the Study

This study was based on a cross-sectional / observational design in order to examine the association between family social support and certain variables of substance use among the students in Ondokuz Mayıs University, Samsun Health School.

Place and Time of the Study

It was conducted between 01.03.2008 and 31.04.2008 in Ondokuz Mayıs University, Samsun Health School.

Sample of the Study

A total of 446 students (200 midwife and 246 nursing students) in Ondokuz Mayıs University, Samsun Health School in 2007-2008 academic year constituted the study population. All eligible students were invited to participate in the study, however, the questionnaire was completed by 422 students (94.6% response rate). The remaining students were absent and could not be contacted on a different occasion.

Data Collection Instrument

Data collection was based on a questionnaire that included introductory information as well as information on a family social support scale. Furthermore, we used a questionnaire that consisted of 28 items on substance use and/or dependence (9 items questioning descriptive characteristics and 19 items related to the status of smoking, alcohol, and drug use). In Figure 1, we present a schematic framework of the hypothesized associations between the dependent and independent variables in our study.

In a study conducted by Procidano and Heller (1983), Cronbach's Alpha value was found to be .90. In addition, Eskin performed a reliability and validity study using a Turkish population living in Switzerland. Cronbach's Alpha value was determined to be .89 by Eskin, test reliability .90 and internal consistency .85. In our study, Cronbach's Alpha value was found to be .83.

The scale consists of 20 questions with response categories being "no", "yes" and "partially." All questions were scored according to the response categories as "no = 2", "yes = 0" and "partially=1." The total score obtained from the scale varies between 0 and 40 points. Higher scores indicate better family support.

Data Analyses

The data were analyzed using SPSS 12.0 software package.

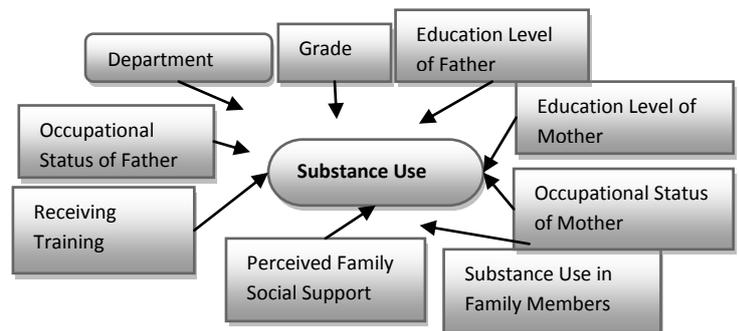
When substance use was evaluated, students who were using any substances were considered as substance users. Chi-square and Mann-Whitney U test were also used. Socio-demographic characteristics of the students were presented as number and percentage distributions.

Ethical Issues

Survey implementation took place after the study was approved by Ondokuz Mayıs University, Medical School, Ethical Committee following a formal application process including information about the aim and scope of the study. In addition, informed consent was obtained from school administration of Health School. The students participated in the survey on a voluntary basis after they were informed about the scope of the study and were included in the study population.

Dependent and Independent Variables

Figure 1. Variables of the study



Results

Characteristics of the Sample

The mean age of the students in Ondokuz Mayıs University, Health School was 21±1.7 years. Of them, 97.4% were female and 98.6% were single. Of the students, 54% were in nursing department and 46% were in midwife department. It was determined that 28.4% of the students were first-grade, 25.1% second-grade, 20.4% third-grade and 26.1% fourth-grade.

We also documented that 64.5% of the students had received training on substance dependence. The mean score of the students obtained from the scale of perceived family social support was

33.3±6.1. Of all the family members of the students, 44.8% were smokers, 8.2% were both smokers and alcohol users, and 1.7% were only alcohol users. There was no substance use in family members of 45.3% (191 individuals) of the students.

Of all the mothers of the students, 96% was not working, 78.4% had an education at elementary school or at a lower level, and 21.6% had an education at a high school or higher level. Of all the fathers of the students, 26.3% was not working, as a matter of course, 73.7% had a regular job, 46.7% had an education at elementary school or at a lower level, and 53.3% had an education at a high school or higher.

Of the students, 17.8% (n=75) stated that they were using substance, as a matter of course, 82.2% (n=347) stated that they were not using (Table 1).

Substance use	N	%
Users	5	17.8
Nonusers	47	82.2
Total	22	100.0

Examination of Variables Affecting Substance Use of Students

In Table 2 we present information on the association between the substance use among students and various characteristics of the students and their families. In terms of grades; 12.5% of first-grade students, 13.2% of second-grade students, 20.9% of third-grade students, and 25.5% of fourth-grade students were using substances. According to this finding, a statistically significant difference was found between the grade of the students and the substance use ($p < 0.05$). In Chi-square analysis, this difference was found to be due to the higher rate of substance use of fourth-grade students than other grades.

While 20.2% of the students who had training were using substance, 13.3% of the students who did not have any training were using substance. No statistically significant difference was determined between the substance use status of students and receiving training ($p > 0.05$). With

respect to family members, 16.4% of the students who had smokers in their family, 28.6% of the students who had alcohol users in their family, and 54.3% of the students who had both smokers and alcohol users in their family were substance users. A significant difference was found between substance use among students and substances that family members were using. In Chi-square analysis, it was determined that both tobacco and alcohol use in family members increases the substance use of students ($p < 0.05$).

With respect to mother's employment status, 16.8% of the students who had unemployed mothers and 41.2% of the students who had working mothers were using substances. A statistically significant difference was found between the occupational status of the mother and the substance use ($p < 0.01$). In addition, 14.8% of the students whose mothers had an education at elementary school or lower were using substance; whereas 28.6% of the students whose mothers had an education at high school or higher were using substance. A statistically significant difference was found between the education level of student's mother and substance use ($p < 0.01$).

Besides, 24.3% of the students who had unemployed fathers, and 15.4% of the students who had working fathers were using some substance. A statistically significant difference was found between the occupational status of the father and the substance use ($p < 0.05$). Furthermore, 15.7% of the students whose fathers had an education at elementary school or lower level were using substance; whereas 19.6% of the students whose fathers had an education at high school or higher level were using substance. No statistically significant difference was found between the status of education level of the student's father and substance use ($p > 0.05$).

Finally, we examined the potential association between family social support and substance use. In Table 3 we found no significant different between the mean score of family social support scale and substance use among the students.

Discussion

The grade and the substance use of the students

A significant difference was found between the grade of the students and the substance use (Table

2). It was determined that as the grade increased, the rate of substance use increased.

Parameters	The Status of Substance Use		p
	Users	Non users	
Grade			
First-grade	15 (12.5)	105 (87.5)	0.032 $\chi^2=8.823$
Second-grade	14 (13.2)	92 (86.8)	
Third-grade	18 (20.9)	68 (79.1)	
Fourth-grade	28 (25.5)	82 (74.5)	
Educated			
Yes	55 (20.2)	217 (79.8)	0.076 $\chi^2=3.138$
No	20 (13.3)	130 (86.7)	
Substances used by family members			
Tobacco	31 (16.4)	158 (83.6)	p<0.001 $\chi^2=24.449$
Alcohol	2 (28.6)	5 (71.4)	
Both tobacco and alcohol	19 (54.3)	16 (45.7)	
Occupational status of mother			
Not working	68 (16.8)	337 (83.2)	0.010 $\chi^2=6.639$
Working	7 (41.2)	10 (58.8)	
Education level of mother			
Elementary school and lower	49 (14.8)	282 (85.2)	0.004 $\chi^2=8.340$
High school and higher	26 (28.6)	65 (71.4)	
Occupational status of father			
Not working	27 (24.3)	84 (75.7)	0.050 $\chi^2=3.837$
Working	48 (15.4)	263 (84.6)	
Education level of father			
Elementary school and lower	31 (15.7)	166 (84.3)	0.306 $\chi^2=1.049$
High school and higher	44 (19.6)	181 (80.4)	

The above finding was also observed in many previous studies (Abdullah et al., 2002; Picakciefe et al., 2007; Suzuki et al., 2004). On

the contrary, a study conducted by Capik and Ozbicakci (2007) demonstrated that there is no significant difference between the grade and the substance use.

	Users	Non users	p
\bar{X}	32.00	33.51	0.474 Z=-0.715
SX	7.97	5.63	
n	75	347	

Higher levels of substance use by the students' grade may be explained by the higher stress levels and worry about finding a job and increased anxiety levels about future problems regarding employment. Students may choose to overcome the above challenges based on wrong choices, which may consequently lead to substance use.

Receiving training and the substance use of the students

It was observed that receiving training on substance use did not affect the level of substance use (Table 2). In studies conducted by Picakciefe et al. (2007), and Koc and Saglam (2008), it was also observed that even though the students are informed of the harms of smoking, they continue to smoke leading to the observation that knowledge obtained from training programs cannot usually be adapted into everyday life. In the developing countries, the causes of this finding can be listed as insufficient legal precautions for the children under 18 years or ineffective auditing, intensive campaigns by cigarette suppliers, and an inability to overcome peer pressure.

Substance use of family members and the students

Our study showed that especially in situations that family members were both using alcohol and tobacco, the rate of substance use among students increased substantially (Table 2). Similarly, studies conducted by Nehir et al. (2007) and Telli et al. (2004) demonstrated that the substance use of family members leads to increased substance use of children. However, the results of the studies performed by Azak (2006), and Kilic and Ek

(2006) conflicted with our results. Performing the surveys in different regions, the higher rate of female subjects in our study population and different family characteristics of the subjects may be considered as possible explanations for this discrepancy.

The increase of substance use of children depending on the substance use of their family members can be explained by a combination of circumstances. The family members become a bad model to their children by using substances. Their children express a reaction to their mother and father, and the family members cannot warn their children about substance use due to their substance use status.

Occupational status of the mother and the substance use of the students

The rate of substance use among students was found to be higher in the students whose mothers were working (41.2%) than the students who had unemployed mothers (16.8%). This finding might be related to the educational level of the mothers. Contrary to our study, the results of studies conducted by Geckova et al. (2005) and Kutlu and Civi (2005) demonstrated that there is no influence of mother's occupational status on substance use of the children. In our survey, the findings that conflicted with literature were considered to be due to the characteristics of the student's families, given that the students could not adapt to have mothers in working life, and due to the easy finding of substances because of having higher socio-economic level in the children whose mothers were working.

Educational level of the mother and the substance use of the students

The rate of substance use of the students whose mother had an education at high school or higher was found to be higher. Similarly, in a study performed by Orak et al. (2004), a significant difference was observed between the educational level of the mother and the substance use of the children. On the other hand, a study conducted by Pirincci and Erdem (2003) determined that there is no significant difference between mother's educational level and the substance use of the children, and also the rate of substance use of children who have illiterate mothers are higher. The above discrepancy may be explained by the

fact that higher educated mothers can be working mothers. Additionally, it is well known that mothers, educated or not, do not carry conversations with their children about taboo subjects especially sexuality and substance use due to the Turkish traditions.

Occupational status of the father and the substance use of the students

The rate of substance use was found to be higher in the students with unemployed fathers than the students whose fathers were working and this difference was found to be statistically significant. In a study conducted by Geckova et al. (2005), it was determined that there was no significant difference for the same association. Unemployment status of the father would cause financial problems in the family as well as increase the level of family stress. Because of the problems, the fathers would increase the substance use. This would be a bad example for the children and the communication of the children and father would be corrupted.

Educational level of the father and the substance use of the students

A total of 15.7% of the students whose fathers had an education at elementary school or lower were using substances; whereas 19.6% of the students whose fathers had an education at high school or higher were using substances. The educational level of the father was found to have no influence on the substance use of the students. In the studies performed by Boyd et al. (2003), Capik and Ozbicakci (2007) and Pirincci and Erdem (2003), similar results were observed.

Family social support and the substance use of the students

The scores of perceived family social support scale of the students who were using substances and the students who were not were found to be similar. This finding may suggest that students in our school, whether substance user or not, have a good social support and the social support has no influence on the status of substance use. In a study by Averna and Hesselbrock (2001), no difference was detected between the scale scores of

perceived social support provided by family or friends on the individuals who had an addiction of alcohol in their family history. Furthermore, in a study conducted by Herken et al. (1997), which investigated the effect of the attitudes of mother and father and the socio-cultural level on smoking behavior among youths, the score of the mother and father attitude scale of the smoker students was found to be lower than the non-smoker students. The rate of smoking is observed to increase when the families become stricter.

The limitations of the Study

The study was based on a cross sectional design and has the limitations of its design. In addition, due to the cross sectional design, no causal inferences may be inferred from the examined associations. Furthermore, the information obtained were based on self report and the validity of this methodology also has its own limitations. More accurate results may have been obtained from a focused interview.

Conclusions

Youths should be informed about the methods to overcome stress and especially fourth-grade students should be supported. Family members should also be informed on substance use among youths, reasons, signs, importance of family and their function, preventive methods, attitudes of mother and father and other related subjects. Family members should be advised to take care of their children and to implement open and continuous communication.

Cohort studies are needed on substance use among youths based on training theories using active education methods. New training methods should be developed to provide positive changes on the substance use among youths and to decrease the substance use. The onset of these trainings should be at first-grade and they should continue at fourth-grade and after graduation.

According to the results of these studies, nursing interventions should be planned and applied and these interventions should be compared. In addition, further studies are needed which will follow the consequences of these interventions.

It is recommended that health officers, who are considered as role models in our society, should be well informed on substance use in their students' life in order to prevent future substance

use. Additionally, information on family social support and the effect of this support on substance use in midwife and nursing students is an important parameter when considering the primary effect of family social support on tobacco and alcohol use.

References

- Abdullah S., Fielding R., Hedley A. (2002). Patterns of cigarette smoking, alcohol use and other substance use among Chinese university students in Hong Kong. *The American Journal on Dependences*, 11, 235–246.
- Ahmadi J., Maharlooy N., Alishahi M. (2004). Substance abuse: prevalence in a sample of nursing students. *Journal of Clinical Nursing*, 13, 60–64.
- Averna S., Hesselbrock V. (2001). The relationship of perceived social support to substance use in offspring of alcoholics. *Addictive Behaviors*, 26, 363–374.
- Azak A. (2006). Factors affecting tobacco use of students of health officer department. *Turkish Thoracic Journal*, 7(2): 120–124.
- Boyd C. J., Esteban S., Arcy H. (2003). Ecstasy use among college undergraduates: gender, race and sexual identity. *Journal of Abuse Treatment*, 24, 209–215.
- Brundtland G. H. (2003). *Dünya Sağlık Örgütü Genel Direktörü Dr. Gro Harlem Brundtland'ın 1998-2003 Raporu*, <http://195.142.135.65/who/dgbrundlandrapor.htm>
- Erişim Tarihi: 12.06.2008
- Clark E., Mccann T. V., Rowe K., Lazenbatt A. (2004). Cognitive dissonance and undergraduate nursing students knowledge of, and attitudes about, smoking. *Journal of Advanced Nursing*, 46(6): 586–594.
- Capik C., Ozbicakci S. (2007). The level of smoking dependence of students in nursing school and affecting factors. *Journal of International Human Sciences*, 4(2): 1–11.
- Ergüder T. (2003). *Global Youth Tobacco Survey*, www.ssuk.org.tr/ppt/toker_erguider.ppt. Access date: 15.12.2008.
- Geckova A. M., Stewart R., Dijk J. P., et al. (2005). Influence of socio- economic state, parents and pers on smoking behavior of adolescents. *European Dependence Research*, 11: 204–209.
- Gorin S. S. (2001). Predictors of tobacco control among nursing students. *Patient Education And Counseling*, 44: 251–262.
- Grenard J. L., Guo Q., Jasuja G. K., et al. (2006). Influences affecting adolescent smoking behavior in China. *Nicotine & Tobacco Research*, 8(2): 245–255.
- Herken H, Ozkan I, et al. (1997). The effect of mother and father's attitude and the socio-economic level in smoking behavior of youth. *6th Anatolia Psychiatry Days Symposium Scientific Researches Book*, Istanbul.
- Inal S., Yildiz S. (2006). The investigation of the knowledge and belief of smoking in elementary school students and the smoking status of the family members and teachers. *Journal of Ataturk University Nursing School*, 9(1): 1-9.

- Kilic N., Ek H. N. (2006). The knowledge of smoking, attitude, and behavior of the students in Adnan Menderes University, Health School and health services vocational school. *Journal of Health Sciences*, 15(2): 85–90.
- Koc Z., Saglam Z. (2008). Determination of the smoking frequency of nursing students and affecting factors. *Journal of Dependence*, 9(11): 18-24.
- Kutlu R., Civi S. (2006). The smoking status of students in Seydişehir vocational school and affecting factors. *Journal of Dependence*, 7: 71–79.
- Litrownik A., Elder J., Campbell N., et al. (2000). Evaluation of a tobacco and alcohol use prevention program for hispanic migrant adolescent: promoting the protective factor of parent-child communication. *Preventive Medicine*, 31: 124–133.
- Nehir S., Demet M. M., Dinc G. (2007). The smoking status of nurses working at Manisa city center and related risk factors. *Journal of Dependence*, 8: 3–10.
- Okanlı A. (1999). The relation of anxiety level with perceived social support provided by family and friends in nursing students. Ataturk University Health Sciences Department, Thesis of Master's Degree, Erzurum.
- Orak S., Ozen T., Orak M. E. (2004). Investigation of the smoking and alcohol habits, and socio-cultural characteristics of students in Suleyman Demirel University. *Medical School Journal*, 11(3): 1–7.
- Orford J., Natera G., et al. (1998). Social support in coping with alcohol and drug problems at home: findings from Mexican and English families. *Dependence Research*, 6(5): 395–420.
- Ogel K. (2002). *Handbook to prevent addiction for mother-fathers, teachers*. Hunkar Press, Second edition, Istanbul, 16-17.
- Peksen Y., Canbaz S., Sunter A.T., Tuncel E. K. (2005). The smoking frequency of students in Ondokuz Mayıs University, Yasar Dogu physical training and sports school and affecting factors. *Journal of Dependence*, 6: 111-116.
- Picakciefte M., Keskinoglu P., Bayar B., Bayar K. (2007). The smoking frequency of students in Mugla School and the reasons increasing smoking. *TAF Preventive Medicine Bulletin*, 6(4): 267–272.
- Pirincci E., Erdem R. (2003). The smoking frequency of Students in Firat University Health services vocational school. *University of Ondokuz Mayis Journal of Medicine*, 20(4): 193–201.
- Rassol G.H., Luis M., Carraro T. E., Lopes G. (2006). Undergraduate nursing students perceptions of substance use and misuse: A Brazilian position, *Journal of Psychiatric And Mental Health Nursing*, 13: 85-89.
- Suzuki K., Ohida T., Yokohama E., Kaneita Y., Takemura S. (2005). Smoking among Japanese nursing students: nationwide survey. *Journal Of Advanced Nursing*, 49(3): 268–275.
- Telli C. G., Aytemur S. Z., Ozol D., Sayiner A. (2004). The smoking habits of new university students. *Respiratory Journal*, 6(3): 101–106.
- Wills T. A., Yaeger A. (2003). Family factors and adolescent substance use: models and mechanisms. *American Psychological Society*, 12 (6): 222–226.
- Yuncu et al. (2005). Evaluation of social support systems of cases with alcohol use disorder. *Dependence Journal*, 6(3): 129-135.