

Impact of Training High School Female Students in Ahvaz, Iran in the Social Skills Required to Avoid the Use of Drugs

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Abstract

Introduction: Gender composition and the soaring trends of drug and tobacco dependency reveal the priority of social skills training related to drug avoidance self-efficacy among female students. The aim of this study was to verify the impact training high school female students to have the social skills needed to avoid the use of drugs.

Methods: This study was conducted from September 2012 to May 2013 in two high schools in Ahvaz City in southwest Iran. The participants were divided randomly into two groups of 60 students, one experimental group and one control group using the multi-stage simple sampling method. Two questionnaires, i.e. the ASES and TISS questionnaires, were completed before and after the intervention. Descriptive statistics, chi squared, paired-samples t-test, and the independent-samples t-test were used.

Results: The participants had a mean age of 14.93 years. Among the 120 participants, 90.8% indicated that they had never smoked a cigarette, and 51.7% of the participants denied having smoked a hookah. There was no significant relationship between the self-sufficiency means of drug avoidance in the two groups of girls before intervention ($p \geq 0.05$). However, after intervention, a significant difference was found in test score of self-efficacy of drug avoidance between the two groups, i.e., 94.91 ± 8.3 for the control group versus 99.16 ± 3.8 for the experimental group, $p < 0.05$). Significant increases were observed for the pre- and post-test scores of self-efficacy of drug avoidance in the experimental group compared to the control group (99.16 ± 3.8 ($p = 0.001$) vs. 96.58 ± 6.98 ($p > 0.05$)). The mean values of the pre- and post-test scores of social skill before and after intervention increased significantly only for the experimental group (97.60 ± 19.19 vs. 100.58 ± 12.37 , $p = 0.03$).

Conclusion: Educational intervention can significantly enhance social skills for drug avoidance self-efficacy, so it is recommended that such skills be taught in the high school curriculum.

Keywords: self-efficacy, drug, students, education, Ahvaz, Iran

1. Introduction

Addiction and substance use among students are known as the most evident biological, psychological, and social disorders (1). Currently, they are major public health issues worldwide (2) targeting young people as the most severe

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threats. Thus, engaging families and authorities in public health sectors is essential (3, 4). The psychological characteristics of adolescents are quite different from other life periods; despite higher physical abilities and happiness feeling, high-risk behaviors are a dominant threat. This period of life is significantly subject to many risky behaviors, such as substance use (5) due to the fact that the age of first-experience substance use has dramatically decreased, beginning in the teenage and even childhood years (6). Previous research has shown that smoking, especially cigarettes and hookahs, has been increasingly spreading among adolescent students; furthermore, dominant rule to use substances has changed dramatically from family members to peer groups (7). The increasing trend of female students' tendency to use substances, alcohol, and cigarettes in recent years has notified the health authorities and researchers to examine the impacts of gender peer groups (8). Some literature sources have proclaimed that the statistics of addicted students ranges from 0.3 to 0.5%, around 6,000 to 10,000 in 2 million addicts in Iran (9). The latest studies in 2009-2011 on cigarette misuse reported that the statistics of drug abuse is around 35 and 26.9% among male and female high school students, respectively (10). The latest reports indicate that 43% of females and 64% of males have misused hookahs (10). A worldwide report in more than 150 countries indicated that young girls smoke roughly as much as the young boys. In Iran, the majority of smokers experience by the age 18, and 66.7% of them first became substance abusers at the age 14. The reports have added that there is no significant difference between males and females in amount of tobacco abuse (11). Consequently, there will be an extraordinary increase in cigarette smoking among young girls in the future, which leads to addiction later (8, 11). A healthy young population, especially females, will reflect in a healthy society by their educating role (11). The NGOs have warned about smoking, especially among women, as a global crisis (8, 11). The majority of unhealthy patterns of behavior in teenagers will influence their health adversely later in life. The impact factors of these mistreatments would be puberty change and trying to adjust to the physical and psychological changes (12). Accordingly, any policy making regarding health issues should address these multi-dimensional matters (13). Note that using theories of health education would virtually support the programs that prevent and change unhealthy behaviors (11).

Education is the most fundamental tool to prevent addiction (14). The research conversely shows that the most effective social skills education programs are based on theory-oriented approaches rooted in changing patterns of behavior even in the substance and inhalant misuse from adolescence to older adulthood (15). If pedagogies contain social skills education, it may encourage healthy and constructive attitudes toward better living situations, along with healthy practices to prevent social misbehaviors, such as addiction; subsequently, the next generation will be exposed to less social threats. Hence, social costs would be decreased and, consequently, stress, depression, and violence would be decreased later (16). Accordingly, the United States' factsheets have shown that those teenagers who were good at decision making could accomplish avoidance strategies very well; this means problem solving and effective communication training empower students to solve problems and increase the level of real usage of social supports. This skill predicted the high level of decisive avoidance followed by less use of cigarettes (17). Also, based on the study conducted in Iran, more self-altering and sense of inner control would be among students, and there would be more capabilities of conclusive self-denial for substance and drug use (18). According to the above-mentioned results, it seems that the lack of social skills is one of the crucial factors that cause low level of self-efficacy among teenagers and subsequently weakens their resistance against friends' temptations and fight problems; gradually, it moves them toward more drug and substance use. Social skill training may be able to empower adolescents via different approaches to obtain the ability of defending their rights during their society attendance through enhancing their avoidance self-efficacy of substances use (19). Behavioral scientists believe that, if the culture of self-efficiency and self-regulation are fostered and revived among students, fewer students would slide into unhealthy and risky behaviors, such as substance and cigarette use or even suffering from psychological diseases. In addition, students' creativity is improved since the students themselves are the regulating factor rather than encouragements or enforcement by their environment and their families (20, 21). Different approaches address the impact of social skills education on prevention of substance use; however, very little research has addressed the impact of social skills training on individuals' substance use prevention self-efficacy. Given the importance of threats facing young girls and the necessity of intervention through primary preventions to improve their specific self-efficacy on substance use prevention, the present study examined the impact of such education. Additionally, it investigated the effectiveness of educating social skills on students' self-efficacy.

2. Material and methods

2.1. Research design and setting

This quasi-experimental study was conducted with a pre- and post-test for intervention and control groups designed according to study aims, from September 2012 to May 2013, in Ahvaz in southwestern Iran.

2.2. Sample size and sampling method

Having considered error type 1= 0.05 and error type 2= 0.2, study power 80%, we used the Pokak formula (22) to determine the sample size. Based on the values obtained from other research (32), 51 participants for each group (102 in total) were selected. Having noted the number of excluded participants (20% of the total sample size), the final sample size became 124 participants in two groups, i.e., intervention and control groups, with 62 participants in each group. The participants were selected from two, all-female, government high schools in Ahvaz in the same socioeconomic background, third Educational District of Ahvaz included 22,461 students (9,621 females), were randomly allocated to one of the intervention or control groups. The teachers were all females, and all governmental high schools were from the same socioeconomic background. In each high school, the multi-stage simple random selection method was used to determine the sample size. Sampling frame was the list of girls studying at high schools of the third educational district. Two high schools were selected randomly. Among all students in these two high schools, 62 students were assigned for each intervention and control group separately chosen based on computerized random numbers.

2.3. Inclusion and exclusion criteria

The inclusion criteria for participation were being a "first year" student in the high school, at least 14 years old, consent to participate in the study, and parental written informed permission. The exclusion criteria were severely ill (those who couldn't talk and communicate), failure to participate in the pre-test, post-test, or training sessions, incomplete questionnaires, and unwillingness to continue their cooperation in every stage of the study. Two students in the intervention group (one due to the absence of training sessions and one due to incomplete questionnaires) and two in the control group were excluded because of incomplete questionnaires.

2.4. Instrument

Regarding instruments of the study, we used the Teenage Inventory of Social Skills that was developed by Inderbitzen and Foster (23) to assess adolescents' social skills. It includes 39 questions, each of which has 5 items, and answers by the participants fell in a range from 'never' to 'always' true. The scores varied between 0 and 195. If any participant scored above the average, she would be categorized as having higher social skills; however, the scores below the average were considered to indicate lower social skills. The author-determined construct validity was 0.9. Jafari, Shahidi, and Abedin reported a construct validity of 0.71 within Iranian samples (24). Adolescent Self-Efficacy Scale (ASES) and the Canadian version of the Drug Avoidance Self-Efficacy Scale (DASES) were developed to assess situational self-efficacy. Jafari reported that this questionnaire was valid and reliable for use in the Iranian population (24, 28). Cronbach's alpha of this scale was reported as 0.78. In this study, nine experts were asked to read and recommend about the suitability of the questions. The questionnaire on a Likert scale consisted of three subscales, i.e., emotional with 13 items and a score range of 13-65; social with 4 items and a score range of 4-20; and grief with three items and rating was 3-15.

2.5. Research ethics

This study has been discussed by university ethical committee in 24/12/2013 and the approval code is SDH-9201. The research team was committed to ethical considerations through using encrypted codes in the questionnaires, voluntary nature of participation in interventional education, and providing the students with an explanation of the objectives of the research. Written and verbal consent of parents was obtained before participating in the study.

2.6. Data collection and intervention

In the data collection stage, an explanation was made about the confidentiality of personal information. The participants were asked to complete the questionnaires very carefully. The criteria for exclusion were conscious dissatisfaction and reluctance to participate in the educational intervention. In the first step, a pre-test was administered for both the control and experimental groups in November 2012. Then, the interventions as educating social skills to avoid drugs were made into the experimental group in eight sessions during 45 days. No interventions were made for the control group. In the interventional group, educating social skills to avoid drugs was combined with the social cognitive theory construct. The educational schedule was set based on active learning. After presenting the necessary interventional material, a free discussion was held with the students' participation. In order to ensure the quality of the training, a pamphlet containing the interventional materials was distributed to the students. Furthermore, in a session related to training assertiveness skill, interested students were called for role playing. They also participated actively in the training sessions. The first and second sessions were devoted to the definitions of addiction, drug avoidance, drug use in Iran and the world, types of substances designated as drugs, side effects of smoking cigarettes, hookahs, and their impact on health as well as the importance of prevention. The

necessary slides were presented to the students along with necessary explanations. During eight sessions provided to the students, social skills, self-consciousness, and self-esteem skills, skills necessary for avoiding emotional situations and effective communications, critical thinking and decision-making skills, assertiveness, and problem-solving skills. Moreover, the training package of addiction prevention and healthy lifestyles was used during the intervention process. The second stage of data collection was conducted after two months in March 2013, and data were collected from both groups.

2.7. Statistical analysis

The results of the pre- and post-tests of both groups were compared. The statistical test was conducted and the significance of the hypotheses was estimated according to scales of variables by descriptive statistics, including percentage, mean, and SD for a better description of the population's traits. Due to the assumption of a normal distribution of the given variables, chi-squared, the paired-samples t-test, and the independent-samples t-test were used.

3. Results

About 120 students whose ages ranged from 14 to 17 (mean = 14.89, SD = 0.62) participated in the study. The findings indicated that 32.9% of the students belonged to families with five members; about their mothers, 24.2%: illiterates; 27.5%: primary school, 48.3%: finished secondary school. Regarding fathers' literacy, 10.80%: illiterate, 26.5%: attended primary school, 62.5% finished secondary school. About 90.8% of the mothers were housekeepers. The majority of fathers were self-employed (45.7%). About 90% of participants claimed that they had not smoked cigarette before, and 51.7% of them denied that they had smoked hookahs (Table 1).

Table 1. Demographic and general characteristics of the experimental and control groups

Students' Features		Groups		Total	t	df	p-value
		Experimental	Control				
Mean Age (year)		14.99	14.78	14.89	-	-	-
Mother's Education (%)	Illiterate	25	23.3	24.2	0.314	4	0.9
	Primary School	36.7	18.3	27.5			
	Secondary School	38.3	58.3	48.3			
Father's Education (%)	Illiterate	5	10	10.8	0.523	4	0.9
	Primary School	5	36.7	26.5			
	Secondary School	60	52.7	62.5			
Mother's job (%)	unemployed	91.7	90	90.8	1	1	0.001
	employed	8.3	10	9.2			
Smoking (%)		11.6	6.7	9.2	2.2	3	0.5
Hookah (%)		49.9	51.7	48.3	4.57	3	0.3

Among the participants who smoked hookahs, 30.8% smoked for leisure, 17.5% smoked only to test the taste. They also declared 81.2% of their close family and relatives smoked usually and 96.2% of their relatives have already had the experience of substance use. According to Table 2, there was no significant difference between the mean of the pre-test score of social self-efficacy test among girls in the control group (94.70 ± 4.5) and in the experimental groups (96.58 ± 6.9) ($p = 0.18$). Table 3 indicates that the members of the experimental group who received training in social skills scored higher in avoidance social self-efficacy (from 18.75 ± 2.36 to 19.75 ± 1.09 , $p=0.01$) than the control group (from 17.80 ± 3.21 to 18.00 ± 3.21 , $p = 0.15$). The findings also indicated that girls in the two groups in pre-test had no significant difference in self-efficacy in grief situations; however in the post-test, there was a significant difference between the groups ($p = 0.04$; $t = 2.05$) (Table 2). The results also addressed that there was no significant difference between the two groups pre-test in their self-efficacy in emotional situations, but there was a significant difference post-test ($p < 0.05$; $t = 2.64$). Thus, according to Table 3, the experimental group who received training in social skills as interventions scored higher in self-efficacy in emotional situations than the control group; this confirms our hypothesis that there was a significant difference (mean = 64.33 versus 62.5) between receiving training in social skills and the control group that did not receive the training. Additionally, there was no significant difference between the two groups in terms of their overall drug avoidance self-efficacy scores pre-test. However, the groups significantly differed post-test ($p < 0.05$; $t = 3.6$). According to Table 3 (mean = 99.16 versus 94.91), the experimental group that received social skills training scored higher in overall drug avoidance self-control than the control group who received no intervention; therefore, the hypothesis was confirmed that there was a significant

difference between students receiving social skills training and the control group in terms of overall drug avoidance self-efficacy.

Table 2. Comparison of the means of situational self-efficacy and overall self-efficacy components of drug avoidance in the experimental and control groups

Component	Tests	Group	Mean	SD	t	df	p-value
Self-Efficacy in social situations	Pre-Test	Control	17.80	3.2	1.84	118	0.06
		Experimental	18.75	2.3			
	Post-Test	Control	18.00	3.2	3.98	67	0.01
		Experimental	19.75	1.0			
Self-Efficacy in grief situations	Pre-Test	Control	14.66	1.2	0.83	118	0.4
		Experimental	14.83	0.90			
	Post-Test	Control	14.66	1.2	2.05	118	.04
		Experimental	15.00	0.01			
Self-Efficacy in emotional situations	Pre-Test	Control	62.25	4.5	1.03	118	0.30
		Experimental	63.08	4.2			
	Post-Test	Control	62.50	4.5	2.64	118	0.01
		Experimental	64.33	2.83			
Overall self-efficacy score	Pre-Test	Control	94.70	4.5	1.32	118	0.18
		Experimental	96.58	6.9			
	Post-Test	Control	94.91	8.3	3.60	118	0.01
		Experimental	99.16	3.8			

Table 3. Comparison of the means of drug avoidance self-efficacy and its subscales in the experimental and control groups before and after intervention

Self-efficacy component	Groups	Test	Mean (n=60)	SD	t	p-value
Social situations	Experimental	Pre-Test	18.75	2.36	3.84	0.01
		Post-Test	19.75	1.09		
	Control	Pre-Test	17.80	3.21	1.42	0.15
		Post-Test	18.00	3.21		
Grief situations	Experimental	Pre-Test	14.83	0.90	1.42	0.15
		Post-Test	15.00	0.00		
	Control	Pre-Test	14.65	1.25	1.00	0.32
		Post-Test	14.66	1.25		
Emotional situations	Experimental	Pre-Test	63.08	4.22	3.80	0.001
		Post-Test	64.33	2.82		
	Control	Pre-Test	62.25	4.54	1.76	0.08
		Post-Test	62.50	4.55		
Overall score	Experimental	Pre-Test	96.58	6.98	4.30	0.001
		Post-Test	99.16	3.81		
	Control	Pre-Test	94.70	8.3	1.85	0.06
		Post-Test	94.91	8.3		

According to the Table 3, when we tested through paired-samples t-test the difference of means of drug avoidance self-efficacy scores and related subscales in each group, the difference between drug avoidance in social situations in the experimental group was significant pre-test and post-test ($t = 4.128, p < 0.001$); that is, training social skills had an impact on drug avoidance self-efficacy scores improvement in social situations, while there was no significant difference in scores of drug avoidance self-efficacy in social situations in control groups pre-test and post-test. Furthermore, there was a significant difference between scores of drug avoidance self-efficacy in grief situations in control group pre-test and post-test ($t = 2.477, p < 0.01$), indicating that training social skills had significant impact on improving drug avoidance self-efficacy in grief situations in control groups; whereas, there was no significant difference in drug avoidance self-efficacy scores for grief situation in control group pre-test and

post-test with $t=1.00$, ($p = 0.06$). There was also a significant difference in scores of drug avoidance self-efficacy in emotional situations in experimental group pre-test and post-test ($t = 4.64$, $p < 0.001$), indicating that social skills training had an impact on improving drug avoidance self-efficacy in emotional situations; while a significant difference was not seen in the scores of drug avoidance self-efficacy in emotional situations in control group pre-test and post-test ($t = 1.65$, $p < 0.001$). The significance in difference is seen in total scale ($t = 4.44$, $p < 0.001$), with the conclusion that social skills training improved the scores of drug avoidance self-efficacy. The present study tested independent variables of adolescents' social skills. Accordingly, Table 4 illustrates that the mean of their social skills was 97.6 in pre-test, rising to 100.58 after the educational intervention, which is significant ($t = 2.16$, $p < 0.05$), while there was no significant difference in mean of adolescents' scores in social skills in the control group ($t = 0.349$, $p > 0.05$).

Table 4. Comparison of the mean scores of social skills in the experimental and control groups before and after intervention using the paired-samples t-test

Groups	Tests	Mean	SD	t	p-value
Experimental	Pre-Test	97.60	19.19	2.16	0.03
	Post-Test	100.58	12.37		
Control	Pre-Test	95.48	23.60	0.34	0.72
	Post-Test	95.25	21.77		

4. Discussion

The adolescents with lower self-efficacy and poor social skills would use drugs as an adopted confrontational strategy, and they were highly interested in drug use (25). The study examined the impact of social skills training as interventions on drug avoidance self-efficacy among a group of first-year high school female students in Ahvaz, the capital of Khuzestan Province in south western Iran from September 2012 to May 2013. The drug avoidance self-efficacy components examined situations in which a student was likely to seek drug and substance use, such as emotional situations. It is a reflection of individual's emotional response against drug use (26). This provides an important premise that effective measures must be taken to judge and control the student's emotions. Students should know that their emotions could stimulate them in the following issues: A. ability in group living in school environment and relations with peers; B. responsibility and self-confidence; and C. coping with different living and environmental issues (27). Social situation reflects inner emotional situations and anxieties experienced by adolescents in their recreation, during parties, and ceremonies. Grief situation is a reflection of adolescents' voluntary response to grief situations (21). According to the fact that the most vital target in educational intervention plans is change in behaviors and their related consequences, here, the major limitation was not to study the effect of social skills training on abstinence behaviors of students. However, through adding the component of exclusive self-efficacy for drug use avoidance, which has been added to prevention related part, the limitation was considered. The strong point of this study was using a gender-oriented, specific questionnaire.

The study findings indicate that overall drug avoidance self-efficacy and also in components of emotional, grief, and social situations displayed no significant difference before social skills training as intervention between control and experimental groups. However, there is a significant difference after the intervention. This indicates that social skills training had an impact on students' drug avoidance self-efficacy improvement through enhancing their ability to avoid substance use. This finding can be interpreted as follows: social skills training induces a feeling of capability and healthy behavior in students to avoid drugs and improve their drug avoidance self-efficacy. It seems likely that social skills training and its usage in drug avoidance lead students to successful resistance against internal and external pressure factors fostering their self-efficacy and self-confidence (24). Our findings often were consistent with the body of research focused on the effectiveness of education on prevention of addiction. For example, LaRosa (8), Jafari (28), Cuijpers (29), and Botvin (16, 30), confirmed the effectiveness of a preventive method based on social skills and training material on the change of negative attitudes toward drug and substance use. However, through entering a specific component of drug avoidance self-efficacy and adding a new domain to preliminary prevention practices, our study was more consistent with the findings of Jafari et al. (24, 28), who demonstrated that meta-cognitive and meta-theoretic interventions, were effective on drug avoidance self-efficacy improvement among adolescents. In another study, Koiso et al. found that social skill training could have an impact on increasing interest in drug use significantly (31). A study conducted by Livingston, Testa, Hoffman, and Windle (32) revealed that alcohol consumption attitudes were decreased by social skill training. Thomas, McLellan, and Perera (33) also found improved negative position toward drug use in the experimental group after interventions.

Students training to play preventive role could influence positively on behavioral factors, including drug avoidance self-efficacy (32). The research shows that prevention programs underlined by theoretical bases were more effective than other programs. If a prevention program works according to theoretical bases and free discussion and analogous trainers are involved with different and various training instruments in frequent sessions, they would achieve higher effect. It could be more effective in the adolescent substance use outcomes (34).

The results of this study were inconsistent with the results of Di Noia (2003) and Skiba (2004) (35, 36). Both of these researchers examined different prevention methods; they addressed that traditional training models could not impact on preliminary prevention of addiction significantly, which is probably due to differences in material and focus on effective factors. These researchers used new methods, such as "Internet and Short Message Service," a factor facing constraint in Iranian schools, focusing on different effective variables, such as attitudes and self-controls, resulting in self-efficacy as a factor of importance and impact. In addition, their time of study and the gap between training and evaluation were longer. It is also highly probable that in our study, re-evaluation in a longer period would indicate a decreased self-efficacy score, indicating decreased training impact. Consequently, we can assume that, although classical methods of training would have little impact in the short term, after intervention periods, a mechanism for recalling the presented materials, secure the long-term effect by interventions made (34). To eliminate the above-mentioned limitation, it seems likely that data collection should be made in different stages. Hence, making any comments about the effectiveness of such interventions in experimental research was intended to assess the impact of training intervention. This has been emphasized by many theoreticians, such as Procheska (37). However, scientists, such as Botvint, believe that a great challenge in any prevention program for alcohol, cigarette, and substance use is related to the level of effectiveness of the interventions that are used (16). Thus, further, extensive research is required in this field.

Social skills include a series of socio-psychological abilities for an effective adoptive behavior enabling individuals to cope effectively with challenging situations in their daily lives (30). Training these skills contributes to improve social and personal enhancement, protecting individual rights, and preventing social and psychological damages (8, 11, 25). In this study, we also tested the independent variable and found that the mean score of students' social skills improved significantly after the intervention in the experimental group. Thus, it could be assumed that through training of these skills, a more socially-accepted behavior acquisition is triggered in students, enabling them to interact with peer groups and reference groups. Hence, we invited their positive responses and protected them against negative reactions (38). To provide any explanation of these findings, we admit that substance use is a behavior that is learned socially; it is a behavior that is an outcome of interactions between social (interpersonal) and individual factors. That is, a propensity to substance use is learned through social processes, but it is modified by individual factors, such as personal beliefs and self-efficacy (1, 39, 40). In fact, individuals are in frequent contact with others who use substances (i.e., important individuals in their lives, friends, and in parties). Furthermore, drug use behaviors are under the effect of inner individual factors, such as self-efficacy, attitudes, and the individual's beliefs (25, 27).

Although this is the first study to be conducted in the area of social health education for female students at Ahvaz high schools, there were limitations, such as the relatively small target population of students in the Third Educational District. For this reason, these findings cannot be generalized to the broader community based on this study alone.

5. Conclusions

It could be concluded that training social skills in female pupils reinforced their drug avoidance self-efficacy. Regarding the literature, increasing self-efficacy is accompanied with decreasing misuse of drugs to face traumatic situations. It has been suggested that future research provide more of an emphasis on divergent preventive interventions as well.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

References:

- 1) Botvin GJ, Griffin KW, Diaz T, Ifill Williams M. Drug abuse prevention among minority adolescents: Posttest and one-year follow-up of a school-based preventive intervention. *Prev Sci.* 2001; 2(1): 1-13. doi: 10.1023/A:1010025311161, PMID: 11519371.
- 2) Ozturk FO, Ekinci M, Ozturk O, Canan F. The Relationship of Affective Temperament and Emotional-Behavioral Difficulties to Internet Addiction in Turkish Teenagers. *ISRN Psychiatry.* 2013; 2013: 961734. doi: 10.1155/2013/961734, PMID: 23738226, PMCID: PMC3658434.
- 3) Masse LC, Tremblay RE. Behavior of boys in kindergarten and the onset of substance use during adolescence. *Arch Gen Psychiatry.* 1997; 54(1): 62-8. PMID: 9006402.
- 4) Flora K, Stalikas A. Factors affecting substance abuse treatment in Greece and their course during therapy. *Addict Behav.* 2012; 37(12): 1358-64. doi: 10.1016/j.addbeh.2012.07.003, PMID: 22958870.
- 5) Jackson C, Geddes R, Haw S, Frank J. Interventions to prevent substance use and risky sexual behaviour in young people: a systematic review. *Addiction.* 2012; 107(4): 733-47. PMID: 22151546.
- 6) Steinberg L, Monahan KC. Age differences in resistance to peer influence. *Developmental psychology.* 2007; 43(6): 1531. doi: 10.1037/0012-1649.43.6.1531, PMID: 18020830, PMCID: PMC2779518.
- 7) Shek DT, Yu L. A review of validated youth prevention and positive youth development programs in Asia. *Int J Adolesc Med Health.* 2011; 23(4): 317-24. doi: 10.1515/IJAMH.2011.028, PMID: 22416499.
- 8) La Rosa J. *New Dimensions In Women's Health.* Jones & Bartlett Learning; 2009. ISBN: 1-978-1-4496-9813-3.
- 9) Rahimimovaghar A, Saheimeh A, Uenesian M. A review studies the status of drug use among student. *Payesh.* 2005; 5 (2): 83-104.
- 10) Momtazi S, Rawson R. Substance abuse among Iranian high school students. *Curr Opin Psychiatry.* 2010; 23(3): 221-6. doi: 10.1097/YCO.0b013e328338630d, PMID: 20308905, PMCID: PMC4479403.
- 11) Pletcher JR, Schwarz DF. Current concepts in adolescent smoking. *Curr Opin Pediatr.* 2000; 12(5): 444-9. doi: 10.1097/00008480-200010000-00004, PMID: 11021408.
- 12) Baratvand M, Soodani M, Zarei E, Asadollahi A. Sexual Abuse and Drug Abuse Among Homeless Children in Ahvaz, Iran. *Child Abuse Review.* 2013; 22(6): 408-18. doi: 10.1002/car.226313.
- 13) Bandura A. Perceived self-efficacy in cognitive development and functioning. *Educational psychologist.* 1993; 28(2): 117-48. doi: 10.1207/s15326985ep2802_3.
- 14) Shope JT, Copeland LA, Marcoux BC, Kamp ME. Twelfth grade follow-up of the Effectiveness of a middle school-based substance abuse prevention program. *J Drug Educ.* 1998; 28(3): 185-97. PMID: 9816805.
- 15) Asadollahi A, Ahmad N, Hosein Zadeh AH, Faraji N. Volatile Substance Use Within Aged Population of Ahwaz City/Iran, Epidemiologic View. *Middle East J Sci Res.* 2011; 8(1): 244-52.
- 16) Botvin GJ, Griffin KW, Paul E, Macaulay AP. Preventing tobacco and alcohol use among elementary school students through life skills training. *J Child Adolesc Subst Abuse.* 2003; 12(4): 1-17. doi: 10.1300/J029v12n04-01.
- 17) Botvin GJ. Preventing drug abuse in schools: Social and competence enhancement approaches targeting individual-level etiologic factors. *Addict behav.* 2000; 25(6): 887-97. doi: 10.1016/S0306-4603(00)00119-2, PMID: 11125777.
- 18) Mohamadkhani SH, Jazayeri A, Rafiey H. Direct and indirect impact of attitude, locus of control, self-management skills and social commences on drug use among at risk adolescents. *Journal of Research on Addiction.* 2007; 11(3).
- 19) Nouri R, Chinian M, Navidpour R. *life skill-based education for HIV/AIDS prevention A guideline for teachers 4st, editor.* Tehran Ravi. 2008.
- 20) Olson MH, Hergenhahn BR. *An introduction to theories of learning.* Pearson/Prentice Hall; 2009.
- 21) Abuhewajj M. *Principles of Modern Educational Psychology.* Trafford Publishing; 2010.
- 22) Hajizadeh E, Asghari M. *Statistical Methods and analyses in health and biosciences, a research methodological approach ISBA.* 2012; 460-2. Tehran Jahad e Daneshgahi. 2011.

- 23) Inderbitzen HM, Foster SL. The teenage inventory of social skills: Development, reliability, and validity. *Psychological Assessment*. 1992; 4(4): 451. doi: 10.1037/1040-3590.4.4.451.
- 24) Jafari S, Shahidi A, Abedin B. Comparing the effectiveness of Cognitive Behavioral Therapy and Trans-theoretical Model on improving abstinence self-efficacy in substance dependent adolescents. *Iran J Psychiatry Behav Sci*. 2009. PMID: 24644477.
- 25) Griffin KW, Botvin GJ. Evidence-based interventions for preventing substance use disorders in adolescents. *Child and adolescent psychiatric clinics of North America*. 2010; 19(3): 505-26. PMID: 20682218.
- 26) Martin GW, Wilkinson DA, Poulos CX. The drug avoidance self-efficacy scale. *Journal of substance abuse*. 1995; 7(2): 151-63. PMID: 7580226.
- 27) Obiakor F. Developing emotional intelligence in learners with behavioral problems: Refocusing special education. *Behavioral Disorders*. 2000; 26(4): 321-31.
- 28) Jafari M, Shahidi S, Abedin A. Comparing the effectiveness of Cognitive Behavioral Therapy and Trans-theoretical Model on improving abstinence self-efficacy in substance dependent adolescents. *Journal of Research in Behavioural Sciences*. 2010; 7(1).
- 29) Cuijpers P. Effective ingredients of school-based drug prevention programs: A systematic review. *Addict behav*. 2002; 27(6): 1009-23. PMID: 12369469.
- 30) Botvin GJ, Griffin KW. Life skills training: Empirical findings and future directions. *J Prim Prev*. 2004; 25(2): 211-32. doi: 10.1023/B:JOPP.0000042391.58573.5b.
- 31) Koiso T, Koyama H, Suzuki K, Ohsawa S. Evaluation of drug abuse prevention program by utilizing of CD-ROM material. *J Sch Health*. 2006; 3(1): 7-14.
- 32) Livingston JA, Testa M, Hoffman JH, Windle M. Can parents prevent heavy episodic drinking by allowing teens to drink at home? *Addict behav*. 2010; 35(12): 1105-12. doi: 10.1016/j.addbeh.2010.08.005, PMID: 20805017, PMCID: PMC2942998.
- 33) Thomas RE. School - based programmes for preventing smoking. *Cochrane Database Syst Rev*. 2002; (4): CD001293. PMID: 12519553.
- 34) Brown EC, Catalano RF, Fleming CB, Haggerty KP, Abbott RD. Adolescent substance use outcomes in the Raising Healthy Children project: a two-part latent growth curve analysis. *J Consult Clin Psychol*. 2005; 73(4): 699. PMID: 16173857.
- 35) Noia JD, Schwinn TM, Dastur ZA, Schinke SP. The relative efficacy of pamphlets, CD-ROM, and the Internet for disseminating adolescent drug abuse prevention programs: an exploratory study. *Prev med*. 2003; 37(6): 646-53. doi: 10.1016/j.ypped.2003.09.009, PMID: 14636798, PMCID: PMC2836853.
- 36) Skiba D, Monroe J, Wodarski JS. Adolescent substance use: Reviewing the effectiveness of prevention strategies. *Soc Work*. 2004; 49(3): 343-53. PMID: 15281689.
- 37) Kelly JF, Myers MG, Brown SA. A multivariate process model of adolescent 12-step attendance and substance use outcome following inpatient treatment. *Psychol Addict Behav*. 2000; 14(4): 376. PMID: 11130156, PMCID: PMC1945122.
- 38) Elliott SN, Malecki CK, Demaray MK. New directions in social skills assessment and intervention for elementary and middle school students. *Exceptionality*. 2001; 9(1-2): 19-32. doi: 10.1080/09362835.2001.9666989.
- 39) Baheiraei A, Hamzehgardeshi Z, Mohammadi MR, Nedjat S, Mohammadi E. Alcohol and drug use prevalence and factors associated with the experience of alcohol use in Iranian adolescents. *Iranian Red Crescent Med J*. 2013; 15(3): 212-7. doi: 10.5812/ircmj.4022, PMID: 23984000, PMCID: PMC3745749.
- 40) Afkari ME, Ghasemi A, Shojaeizadeh D, Tol A, Foroshani AR, Taghdisi MH. Comparison Between Family Function Dimensions and Quality of Life Among Amphetamine Addicts and Non-Addicts. *Iranian Red Crescent Med J*. 2013; 15(4): 356-62. PMID: 24083013, PMCID: PMC3785914.